International Forum on
QUALITY & SAFETY in HEALTHCARE

Conference Proceedings

(containing abstracts submitted for presentation at the postponed International Forum New Delhi July 2020)

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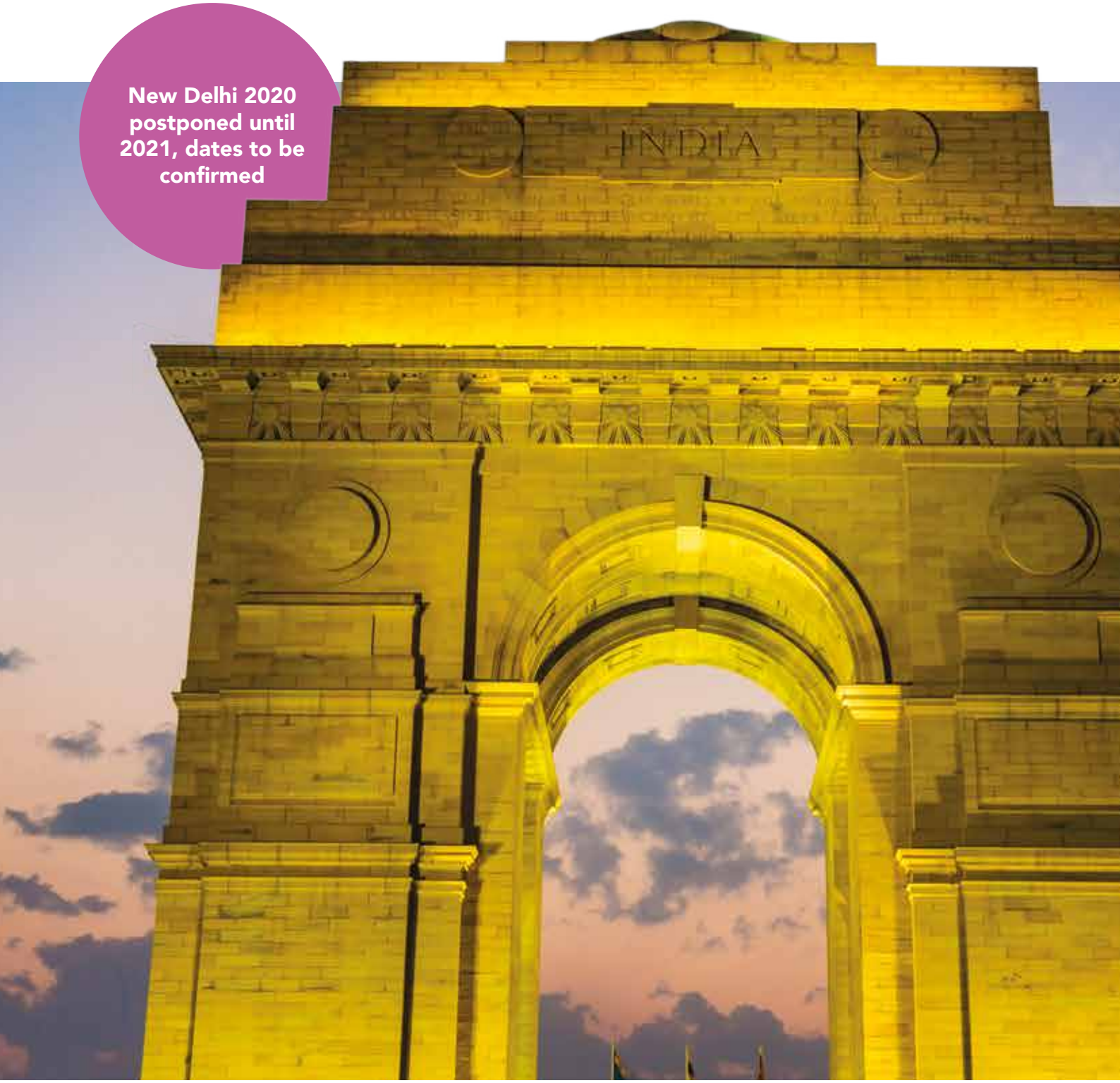

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One of the aims of the International Forum is to showcase improvement work from real and diverse healthcare settings to allow our attendees to learn and take away practical ideas that they can implement in their own organisation.

This Conference Proceedings contains work submitted to us via our Call for Posters for the International Forum originally scheduled to take place in New Delhi, India, in July 2020.

Due to the spread of COVID-19 around the world, including in South Asia, this International Forum is now postponed until 2021, dates to be confirmed.

A big focus of the now postponed conference is to increase the awareness of the improvement work that is happening in the region. One of the key ways we do this is via the poster displays and abstract presentations available during the International Forum. We look forward to hosting these in 2021 and in the meantime we are pleased to bring to your attention a selection of projects submitted for presentation at the postponed July conference.

Thank you to all those who have shared their work and have made it available in this digital format.

We hope you enjoy this selection of abstracts and will join the International Forum improvement community to share your experiences, challenges, improvement successes and failures at our future events.

Find out more about future International Forums at **internationalforum.bmj.com**.

A QUALITY IMPROVEMENT STUDY ON IMPLEMENTATION OF PARTOGRAPH AND ITS EFFECT ON CLINICAL OUTCOME

Call for Posters topic: Building Capability through Improvement Methods

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Background

Obs & Gyne department, Eden hospital, Medical College, Kolkata, India.
Even after years of policy by government of India, challenges to implementation exists. Problems analysed using 4Pmodel & Fishbone chart which were dealt step by step:
PLACE: nonavailability of partograph in LR, less no. of labor beds
POLICY: no order from authorities on compulsory filling of partograph, no sensitization lectures on partograph, lack of audits
PEOPLE: less PG trainees on LR duty,no fixed LR team, no participation of Nurses & Internees in labor monitoring
PROCEDURE: Lack of following:

- knowledge among trainees on Use & Benefits of partograph
- positive attitude toward partograph filling
- structural Organization & Supervision of labor monitoring
- proper handover during change of duty shift

BASELINE DATA: Dec'17 of 9LR duty shifts,12 Hrs each, was:

- Total filled partographs in 122 parturients: 0
- SNCU admission: 33.6% (birth asphyxia: 15.6%)
- Maternal complications:

Prolonged labour: 45.1%, PPH:16.4%, Em CS:32.8%, Operative VD:0.8%

Methods

Interventions done using POCQI model:
Step 1: Problem identified from Dec'17 baseline data and a team comprising of leader, communicators, doers, recorder, analyzer & strategy modifiers was formed.
AIM formulated: at least 80% increment in implementation of partograph & 80% reduction in Obstetric & Perinatal complications from baseline.
Step 2: Problems were analysed using 4Ps and fish bone chart as mentioned in background.
Step 3: 5 PDSA cycles: 1 for each month and weekly data analysis using run charts:
JAN'18: sensitization of residents, proper handover system
FEB'18: new OBS BHT with inbuilt partograph, LaQSHYA program, more no. of labor tables
MARCH'18: sensitization & involvement of new internees, structural organization of labour monitoring, supervision of LR
APRIL'18: involvement of nursing staffs, weekly audits
MAY'18: fixed LR pool team
Step 4: Sustaining improvement: June'18 & July'18

Outcome

Availability of partograph increased from 0% to 100%
Implementation of partograph increased from 0% to 89.47%
Total no. of deliveries in my study period (Jan'18 to July'18): 793
Total no. of partographs filled: 642 (80.95%)
[Jan: 67.9%, Feb: 75%, March: 84.4%, April:82.7%, May:84.8%, June: 83.6%, July:89.5%]=>RISING TREND
Total no. of completely filled partographs: 496 (62.5%) [Jan:39.1%, Feb: 49%, March: 56.0%, April:62.6%, May:75.2%, June:75.6%, July:82.4%]=>RISING TREND
Birth asphyxia reduced gradually from 13 (Jan'18) to 0 (May'18) [p-value<0.0001]
Apgar score improved significantly in partographed labour (p<0.0001)
SNCU admission decreased over time (p-value<0.0001)
Maternal complications reduced significantly in those with completed partographs (p-value<0.0001)

Prolonged labour decreased over time (p-value<0.0001)
PPH reduced over time (p-value<0.0001)
% of Em CS deliveries decreased over time (p-value<0.0001)
Operative VD increased over time due to timely intervention but statistically insignificant.

Conclusion

Improving partograph documentation required adequate resources, structural organization, constant monitoring, proper handover & supervision by seniors in LR.
Regular review of performance & feedback meetings helped staffs develop a sense of ownership. Regular Tutorials & Workshops helped to enhance knowledge & skills.
The problems faced during implementation were:

- not all team members attended tutorials
- training was conducted in small rooms failing adequate demonstration. Huge disparity in knowledge among HCWs on partograph required tiresome harmonization of these group.

Partograph filling should be mandatory for all woman given trial of labor & implementation policy be strong to involve as many HCWs as possible. This study's success was because of correct problem analysis, change ideas, continuous data recording & timely actions. Hence achieving best practices of care in healthcare in most times does not require overhauling an entire heath system or requiring sophisticated technology.

ADMINISTRATION OF INJECTION OXYTOCIN WITHIN 1 MIN AFTER DELIVERY OF BABY

Call for Posters topic: Building Capability through Improvement Methods

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Background

This work was carried out in the Department of Obstetrics and Gynaecology, PGIMS, Rohtak, Haryana, India. WHO recommends the active management of the third stage of labour (AMTSL) for prevention of PPH, one of the components, includes administration of an uterotonic agent within one minute of delivery of the baby. In our institute, although injection oxytocin was administered after every delivery it was not being administered within one min after delivery of the baby. Keeping this in mind, we decided to undertake this simple but important project aimed at the administration of injection oxytocin within 1 min after delivery of the baby. In the baseline data it was observed, injection oxytocin was being administered within one minute of delivery of baby in only 20% of deliveries. The plan was to identify and evaluate the reasons for non-compliance with this policy.

Methods

A quality improvement team of 6 members including the consultant, trainees and nursing staff was made. On fishbone analysis, the following causes were identified:

a) Lack of awareness among trainees and staff nurses
b) Increased workload and inadequate manpower.

All trainees and nursing staff were sensitized, motivated and emphasized the importance of the concept in meetings twice a week (07-09-2019 to 15-09-2019) and also through Whatsapp group messages (23-09-2019 to 30-09-2019). In order to reduce the workload, prefilled oxytocin syringes were kept ready in labour ward (at least 5 at one time) and undergraduate students posted in labour ward were trained for oxytocin administration if doctors and nursing staff were busy (16-09-2019 to 22-09-2019). To measure the effect of change, PDSA (plan-do-study-act) method was used to test every change idea. The feedback was taken from undergraduate students in the labour ward for an unbiased opinion. The results were analyzed weekly.

Outcome

A favourable outcome of an increase in the correct practice of administration of injection oxytocin during the third stage of labour among the trainees was observed. The primary outcome indicator improved gradually from a baseline of 20% to 87.3% in week 1 to 94.3% in week 2, 93.3% in week 3 and eventually to 95.7% after 4 weeks. During the first week, just a small change of spreading awareness and constant motivation led to around four-fold rise in the primary outcome indicator as compared to the baseline. The benefit of this work would be a reduction in the incidence of PPH, thus indirectly reducing maternal mortality.

Conclusion

After the start of the project, all the trainees and nursing staff are now sensitized and aware of this important concept of AMTSL. This simple and low-cost intervention can help avoid a major complication of PPH. The correct administration of this life-saving intervention in every delivery will help a long way in reducing the maternal mortality rate. At the start of the project there was a reluctance to change seen among the trainees, this problem was rectified by taking motivational lectures. The main message from our experience, just a small effort of creating awareness leads to a big leap and helps in a long way. Work as a team, keep motivating and encouraging and collect data from unbiased personnel. This practice will ensure safe maternal health in the long term.

ASSESSMENT OF A STRUCTURED AWARENESS PROGRAMME ON ANTIMICROBIAL RESISTANCE AND GOOD ANTIMICROBIAL PRACTICES FOR UNDERGRADUATE MEDICAL STUDENTS

Call for Posters topic: Building Capability through Improvement Methods

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Background

To strengthen the undergraduate teaching and training with regards to antimicrobial resistance and antimicrobial practices, a structured awareness programme was initiated. Dedicated lectures were designed and included in the undergraduate curriculum of second- and third year. Annual awareness programme for faculty and MBBS students including poster and slogan competition and role plays was organised as well.

The present study was conducted to assess the knowledge, attitude and practices of MBBS students (first to final year) with regard to antimicrobial resistance (AMR) and good antimicrobial practices to understand impact of the awareness programme.

Methods

A self-administered 20-point questionnaire was devised. The questionnaire was based on Likert scale and had three parts. Questions on burden, development and spread of AMR were included in knowledge part. Attitude of students towards over-the-counter antibiotic availability, Schedule 'H' drugs and antimicrobial use in self-limiting viral illnesses like sore-throat and diarrhoea were asked in second part. Third part was based on good antimicrobial practices (like self-medication, following dosage instructions etc.). Overall, 208 students participated in the study. KAP scores of each year were compared through logistic ordinal regression. To see the association between knowledge, attitude and practices Kruskal-Wallis (KW) test was applied.

Outcome

1. Using ordinal regression scale, steady improvement was observed in knowledge scores from first year (-0.441) to final year (0.00) with p value ≤0.5.
2. Attitude score of the students had a direct correlation to the knowledge score on KW test ($\chi 2$ =29.6, p≤0.5) but had no significant correlation with antimicrobial practices ($\chi 2$ =3.9, p≥0.5).
3. Self-medication was observed in 27% of students, more commonly in sore throat compared to diarrheal illnesses.
4. Majority (84%) of students identified antibacterial abuse in humans rather than in animals as the commonest cause of AMR development and spread.

Conclusion

Knowledge of medical students regarding AMR was strengthened through the years. The gaps identified included awareness about development of AMR, self-medication, skipping of dosing, hoarding of leftover medication etc. These will be areas of focus in future training programmes. To conclude, continuous training programme are essential to translate knowledge into good antibiotic practices. UG medical curriculum should include AMR as a focus area to ensure good antibiotic prescribing practices of future practitioners.

BARRIERS AND FACILITATORS TO NATIONAL QUALITY ASSURANCE STANDARDS (NQAS) IMPLEMENTATION IN URBAN PRIMARY HEALTH CENTRES OF HARYANA: AN IMPLEMENTER'S PERSPECTIVE

Call for Posters topic: Building Capability through Improvement Methods

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Background

National Quality Assurance Standards (NQAS) for Urban Primary Health Centres (UPHC) in India was developed to measure and improve the quality of healthcare services at UPHCs. Since the NQAS is new in the healthcare delivery system, this qualitative study aimed to identify the barriers and facilitators to the NQAS implementation.

Methods

We conducted in-depth interviews with 15 concerned programme officials involved in the implementation process at different levels – State (3), District (8) and facility (4). The interviews were recorded and transcribed. Thematic content analysis was done based on the WHO health systems framework.

Outcome

The major barriers identified for implementation of the NQAS were space constraint, challenging recruitment of medical officers, staff deputation, mistrust on public health facilities, high attrition rate, staff quoists, NQAS checklist not in the local language, overburdened staff, inappropriate training schedule, increased documentation, and budget constraints. The major facilitators identified were thematic checklist approach in NQAS, cooperative staff, dedicated local leadership, good coordination between MOs and the staff, effective teamwork at all levels, sharing responsibility, financial support from HSHRC and ULBs, and ownership of the program.

Conclusion

We identified major barriers and facilitators for effective NQAS implementation in UPHCs in Haryana. Despite, small sample size, this study provided important insights for better QI implementation and underscored the need for research in this area.

Keywords: Quality improvement, NQAS, urban health, primary health care

CODE WHITE PROTOCOL FOR STROKE READY HOSPITAL

Call for Posters topic: Building Capability through Improvement Methods

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Background

Usually in busy emergency department, it is difficult to prioritize stroke patients and hence their outcomes get affected for various reasons like failure to detect probable stroke patients (stroke mimics) early, delay in radiological imaging, delayed response of neurology and neuro-intervention, challenges in operational aspects of early management, delayed IV thrombolysis etc. A detailed analysis of all these factors was done and we reached to conclusion that applying Code White protocols will help remove all these obstacles & make process much efficient. Stroke pathway is task oriented structured multidisciplinary care plan which details essential steps and interventions during period of care of a typical stroke patient. It includes clinical assessment, investigations, pharmacological treatment, rehabilitative therapy, nursing measures and patient education.

Methods

By activating “CODE WHITE” for stroke pathway, we basically tried to coordinate things for suspected stroke patients coming to emergency department. Managing stroke patients is a time sensitive issue to improve their neurological outcome. Time is brain. Until now it was taking time to do radiology and laboratory investigations. Also, coordination of radiology & cathlab technician was being done manually which delayed the whole process many times. We activate “CODE WHITE” for all suspected stroke patients & then manage as per International Stroke Protocol (AHA). We have taken Emergency consultants, Radiology consultants, Radiology technicians, Neurology Consultants, Pharmacists, Nursing In charges, Cathlab coordinator and Cathlab technicians in the loop of “CODE WHITE” to perform stroke pathway smoothly.

Outcome

We have achieved the results as per stroke protocol benchmarks (i.e. medical assessment and nursing assessment within 5 minutes, CT / MRI / Angio within 25 minutes, Door to Needle within 60 minutes, etc). We also found significantly improved processes in ER diagnosis, thrombolysis, Cathlab intervention etc. When we are providing treatment to patient as AHA stroke protocol and reduced operational delay at every step of management, patients’ neurological outcomes have improved significantly and having very good satisfaction from patients and relatives.

Conclusion

This has really uplifted the existing readiness to take care of stroke patients in emergency department. We envisage that this will have higher impact in whole Gujarat state to have first of its kind stroke ready hospital. It will definitely help other hospitals to improve stroke clinical practices.

ESTABLISHING BIRTH COMPANION PRACTICE IN LABOUR ROOM OF A TERTIARY CARE CENTRE- A QUALITY IMPROVEMENT INITIATIVE

Call for Posters topic: Building Capability through Improvement Methods

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Background

The study was conducted in the Department of Obstetrics and Gynaecology, All India Institute of Medical Sciences, New Delhi. Birth Companion(BC) is a key component of providing respectful maternity care and has been recommended by World Health Organization and Government Of India. They are the women who have experienced the process of labour and child birth and provide continuous one to one support to other women in labour.

In our labour room, we never allowed BC in the past and there was a felt need to take this initiative to improve quality of maternity care. The idea behind taking up the project was that BC would not only provide emotional support, but also other benefits like providing comfort (e.g. massage), adequate hydration, facilitate communication, reduction in caesarean rates and postpartum depression. Hence, we aimed to establish the practice of allowing birth companion during labour in all eligible women in the labour room of our hospital from 0 to 50% within 6 weeks time.

Methods

Fish bone analysis was done to identify the causes behind non implementation of birth companion during labour at our centre. There was no existing policy of allowing birth companion during labour and delivery and doctors and nurses were not aware of the importance of allowing Birth Companion. Meeting of all doctors and staff nurses posted in labour room was held along with team members to discuss the need to bring about a change in the current scenario.

First, a policy decision of allowing Birth Companion during labour and delivery in one unit was made. Sensitization and training of doctors and staff nurses of labour room was done using power point presentations, posters and regular meetings. The other interventions planned were counselling of women in antenatal clinics and in labour room at the time of admission, addition of column in birth register for easy recording of the data, dress code for birth companions, maintaining privacy, and periodic reinforcement by labour room team.

Outcome

The outcome indicator was percentage of eligible women accompanied by birth companion during labour and delivery. Daily data was collected and reviewed weekly. Various change ideas were tested through sequential Plan-Do- Study-Act (PDSA) cycles.

After first PDSA cycle, data was plotted on run chart and showed substantial improvement in first week (up to 80%). Later it dropped down to 14 % at the end of one month. Afterwards, seniors were involved and necessary administrative permissions were sought. The team again enthusiastically took up the project with a more methodical approach. The problem areas were identified and after subsequent PDSA cycles, it gradually rose to 80% over next 6 months. There were other benefits like improvement in skin to skin contact after delivery and early initiation of breast feeding.

Regular team meetings were planned to sustain the change. Feedback was taken from delivered mothers and their birth companion.

Conclusion

Birth Companionship was ultimately achieved in 70-80% of eligible deliveries. But there was serious fall in numbers after the initial success due to various reasons like, administrative issues, change in labour room team, culturally unacceptable to many etc. Planned counselling and repeated act of creating awareness is needed to establish and maintain birth companionship during labour. Structured patient counselling of woman and her birth companion during antenatal period is vital for the success. Sustainability of any project requires a motivated team under the able leadership of team leader. It also requires active participation of patients and their family members and taking their feedback is essential. It resulted in benefits like improved overall patient satisfaction, reduction of anxiety and early initiation of breast feeding.

It has now become a standard practice in our labour room for all normal deliveries. Planned group effort has helped in bringing out a highly useful change.

HAMAD HEALTHCARE QUALITY INSTITUTE (HHQI)- CAPACITY AND CAPABILITY BUILDING PROGRAMS
Call for Posters topic: Building Capability through Improvement Methods

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Background
The capacity and capability (C&C) operational goal in Hamad Healthcare Quality Institute (HHQI), Doha, Qatar is one of its strategic priorities: The goal is to increase C&C of healthcare professionals across Qatar with focus on Hamad Medical Corporation professionals to support improvement initiatives. Building improvement capability is identified by HHQI as one of its core activities & seeks to encourage & spread it across Qatar As HHQI progresses towards meeting the healthcare improvement needs of Qatar, multiple initiatives and programs of different magnitude are needed to serve capability building. HHQI's vision around C&C building is aligned to HMC's strategic plan of applying evidence-based decision making, integration of effort and existing improvement initiatives. It meets the need to fill the current gaps through developing the needed improvement education & training programs that focuses on quality improvement, value improvement, hospital-wide flow, leading improvement.

Methods
Based on the IHI The Dosing Approach stating: "not everyone in an organization needs the same depth of knowledge about QI concepts, methods and tools", the programs were launched categorized into HHQI offered local programs like FQIC launched in September 2018 and CCITP relaunched in 2019 respectively and in collaboration with IHI like Improvement Leadership, Improvement Advisor, Improvement Coach Program, NVIC and NPSC collaborative learning sessions as per the level of skills of the staff across HMC. In response to the National priority for COVID-19, a virtual Fundamentals of Quality Improvement Course (FQIC-V) is launched.
Timelines:
FQIC: September 2017 and ongoing
CCITP: 15 cycles completed
2018-National Patient safety collaborative learning sessions
2019-Improvement Advisor
2018-Improvement leadership
2019-HHQI-IHI Open school group seminars
2019-Improvement Coach Program, National value Improvement Collaborative learning sessions
2019-Al Majlis
2020- FQICVirtual

Outcome
FQIC a monthly course has also completed 19 sessions & the total number of participants is 900+, CCITP has completed 14 cycles with a total number of participants exceeds more than 600.
CCITP 2 re-launched in Jan 2019, 107 participants, 16 teams, 13 Facility, 23 Faculty & Coaches
An average of 1000+ in IHI collaborative courses, healthcare professionals are trained each year across different facilities of HMC.
10,000+ Graduates from IHI Open School across HMC
5 Boston IHI fellows
65 local HMC fellows
34 Improvement Advisors
46 Improvement leadership programs graduates
36 Improvement Coaches
FQIC Virtual- 105 participants scheduled till September 2020.
The capacity & capability building programs has made significant impact to patients and families as it has shown improved patient outcomes by building the
capabilities of the staff to carry on the improvement initiatives. The trained personnel are involved in coaching & facilitating quality initiatives & value improvement projects

Conclusion

Data reveal, HHQI led programmes are timely delivered and effectively develop capacity and capability within and outside of the organization to support improvement.
The trained personnel are involved in coaching and facilitating quality initiatives in different facilities who can independently run, facilitate and support Quality Improvement initiatives and collaboratives. It has thus led to improving quality & patient safety across HMC.
5 IHI Fellows, 10 master's in Health Systems Improvement grads, 34 Improvement Advisors, 46 improvement Leaders, 1000+ Improvement Champions (CCITP and Collaboratives) thousands with basic quality training (General Orientation, FQIC, Open School and Middle East Forum)
Lessons learnt:
Qatar's vision and National Health Strategy is a main driver
strategic partnership with IHI is a key success factor
leadership support is pivotal
ability to successfully deliver high level programs that meet the needs of healthcare professionals and passionate HHQI team

IMPLEMENTING A QUALITY MANAGEMENT INITIATIVE IN LABOUR ROOMS OF PRIVATE SECTOR FACILITIES - LESSONS FROM INDIA

Call for Posters topic: Building Capability through Improvement Methods

DR. TAPAS SADASIVAN NAIR, DR. MESHACH KUJUR, DR. GULNOZA USMANOVA, DR. SURANJEEN PRASAD PALLIPAMULA
Jhpiego India

Background

India has achieved substantial improvement in the coverage of institutional deliveries, however reduction in maternal and newborn mortality is disproportionately slow. The private sector accounts for nearly 40% of institutional deliveries across the country. Evidence has shown that quality of care in private sector is sub-optimal, contrary to popular belief. Hence, there is a need for ensuring quality care in the private sector. The Manyata program is a quality improvement and assurance initiative for private sector maternity care facilities across the states of Uttar Pradesh, Jharkhand, and Maharashtra. It focuses on skill and competency building of service providers for care around childbirth, and is being implemented by Jhpiego, a Johns Hopkins University affiliate, with support from MSD for Mothers and in collaboration with the Federation of Obstetric and Gynaecological Societies of India (FOGSI). This abstract presents the lessons learnt from implementation of the Manyata program.

Methods

Private sector facilities were sensitized about the program and interested facilities volunteered to become a part of this quality initiative. Initially, a baseline assessment was conducted and gaps were identified. Facility in-charges and providers were then involved in action planning to close these gaps. The QI journey consisted of nearly six months and consisted of two phases – an intensive three days training for providers on evidence-based practices related to maternity and immediate newborn care followed by a structured package of mentorship and support visits (MSVs) conducted by Jhpiego program staff to ensure the translation of skills to practice at the intervention facilities. During MSVs, program officers used the PDCA (Plan-Do-Check-Act) approach to improve quality regarding facility processes, and conducted obstetric team-based drills to improve staff competencies on complications management. Facilities also submitted monthly service delivery data during this period.

Outcome

Facilities were assessed at the beginning of the intervention by a Jhpiego program officer and at the end by a trained external assessor from FOGSI using a structured checklist based on the WHO standards for improving quality of maternal and newborn care in health facilities. Results from the implementation across 386 facilities in three states of India from 2017 to 2019 indicate an increase in average facility score from 30% in the baseline assessment to 97% in the Manyata assessment. More than 3,000 providers have been trained and more than 200,000 deliveries have been conducted in the Manyata facilities. Time trend analysis of the facilities' monthly service delivery data revealed an increase in monthly delivery load, improvement in adherence to evidence-based practices, decrease in complication rates, improved management of complications (in terms of reduced referred out rates) and reduction in adverse maternal and newborn outcomes such as stillbirth rates.

Conclusion

The Manyata program has brought quality improvement and assurance to the forefront in the private sector. The program demonstrated that professional bodies and federally affiliated local societies can work in unison for realising a common purpose by developing their capacity and creating operating mechanisms to deliver high impact programming on maternal and newborn care. Capacity building of providers on relevant knowledge and skills was facilitative for readiness for change, while the periodic structured mentoring was crucial for sustaining quality of facility management and service delivery. Designing and rolling out a certification system helped ensure sustenance of standards and provider satisfaction. Now the focus of the program is on scaling this initiative to 2000 facilities across the country, ensuring the sustainability of quality improvement processes by developing business models, and utilizing a digital platform for better program management and process efficiency.

LESSONS LEARNED FROM IMPLEMENTATION OF THE EMEN/WHO QUALITY OF CARE STANDARDS IN GHANA

Call for Posters topic: Building Capability through Improvement Methods

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Background

Maternal and newborn deaths in Ghana remain high due to poor quality of care especially around the time of birth, even though the number of pregnant women delivering in health facilities continue to increase. In 2016, WHO published eight standards for improving quality of care for mothers and newborns in health facilities. These standards were preceded by nine similar standards UNICEF developed under the Every Mother Every Newborn (EMEN) initiative. With funding from Bill and Melinda Gates Foundation, UNICEF collaborated with the Ghana Health Service to implement the Mother Baby Friendly Health Facility Initiative (MBFHI) in 24 health facilities in the Upper East Region of Ghana. This was a pilot programme to test the feasibility of implementing these quality of care (QoC) standards within health systems and document the clinical outcomes and lessons learned to inform scale-up.

Methods

The QoC standards were also used to assess health facilities before, during and after implementation. The intervention was from October 2016 to December 2018. National MBFHI/QI implementation guide and tools were developed. QI teams were reactivated and regional/district QI coaches trained to support implementation. These quality improvement teams used the Plan-Do-Study-Act cycle to address quality improvement gaps in care and the 5S approach to address problems that needed quick fixes. Newborn care units/Kangaroo Mother Care units were established in hospitals, WASH facilities were also provided. Regional/District QI review meetings were held to review progress, identify challenges and solutions and share best practices. QI teams established networks with Specialists who provided on-site and remote clinical mentoring for staff, obstetric triage systems and perinatal death audit processes were established in health facilities. Community dialogue and feedback sessions on QoC were held.

Outcome

Fewer deaths were reported among mothers and newborns; maternal and neonatal mortality dropped by over 40%, and still births dropped by 13%. Many women had testimonies to share about the improvement in the attitude of health workers, which showed that the guidelines were being adhered to. This is one report from a very young mother during a mother to mother support group focus group discussion: “I was afraid to return to the hospital when I became pregnant with my second born, but with assurance from the community mother to mother support group and the nurses, I decided to attend antenatal care when I became pregnant. I was surprised at the quality of care I received at the health center. My age was no longer a reason for me not to receive the best of care. In fact, it was the reason I received the best of care from the Midwife who took care of me.”

Conclusion

The EMEN/WHO QoC standards are feasible to implement in LMICs and can contribute to improving maternal and newborn survival. Though staff attrition rate was high, requiring systematic and continuous retraining and on-the-job coaching, health staff generally had a better understanding of patients’ rights and respectful care. The MBFHI/QI implementation model has been adapted nationally and being scaled up. Message to others: Quality care cannot be improved without good leadership and community engagement; they are pivotal to the success of any quality improvement intervention. When implementing quality improvement activities, data capture and quality tends to improve and hence,

mortality rates may increase before reductions are seen. Coaching and mentorship models when integrated into national strategies and systems, allows for availability of expertise from higher level facilities to support lower level facilities; and QoC is definitely an entry point for strengthening health systems.

PRE-IDENTIFICATION OF HIGH-RISK PREGNANCY IN ANTENATAL PERIOD TO IMPROVE TRIAGING AT THE TIME OF ADMISSION AT A SECONDARY CARE HOSPITAL IN DELHI

Call for Posters topic: Building Capability through Improvement Methods

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Background

BhagwanMahavir Hospital (BMH), New Delhi, India is a secondary care hospital catering to low socioeconomic group. Average deliveries per month are around 350. Here all types of pregnancies; low risk, high risk and referral cases from nearby dispensaries, hospitals and private nursing homes are dealt with very limited human resources.The 24x7 labour room services including operative services are provided by one postgraduate, one undergraduate and two staff nurses. At times labour room is left with undergraduate junior doctor and staff nurse.

In such situations we were facing problems in managing High Risk Pregnancies (HRP) coming for delivery in labor room with unidentified high-risk factors. Preparedness to manage high risk pregnancies and complications timely and efficiently was poor as they were unidentified during antenatal period and unanticipated.

Methods

A quality improvement team involving staff working in OPD and labor room applied Plan-Do- Study-Act based POCQI methodology for root cause analysis and to identify possible change ideas.

The aim was to admit pregnant women in LR from OPD and emergency area of our hospital with pre-identified high-risk pregnancy factor (s) from existing 0% to 80% in 2 months (from 01/01/19 to 28/02/19). Several small-scale change ideas were tested as PDSA cycles-

1. Sensitization of all doctors in OPD to identify HRP and to give them HRP No. Adapted as PDSA-2.
2. One common register to record all HRPs in one place instead of different OPD rooms.Adopted
3. Doctor/ Staff Nurse on-duty in LR / casualty to attend pregnant women with HRP No first.Adopted
4. Doctor/ Staff Nurse to document all complications.Adopted
5. To start putting RED/YELLOW sticker on ANC Card with severe/moderate high-risk factor respectively.Adopted

Progress of project discussed in fortnightly QI meetings.

Outcome

The changes led to achieve the goal of admitting women in LR with pre-identified high-risk pregnancy factor(s) from baseline 0% to 80% in 4th week of February'2019 and sustained since then; median-97.3%. Almost all High Risk Pregnancies(HRPs) are identified and given HRP No. in OPD. Treatment starts in OPD itself. This is easier now for doctor/staff on-duty in labor room to identify and manage HRP due to allotted HRP No. Support staff is also playing a role in triaging because of colour coding of ANC cards.

Complications are managed well and magnitude has reduced both in terms of major and minor complications. Major life-threatening complications like APH, PPH, severe preeclampsia/eclampsia also decreased from median 4.02% to 1.86%.

Pregnant women and their relatives are aware and prepared for their high-risk pregnancy status because of HRP No. and colour coded stickers pasted on their ANC card.

This has led to increase in patient satisfaction rate in the facility also.

Conclusion

This QI intervention helped our facility to provide timely and appropriate services to pregnant women and newborns and prevented potential complications in resource limited settings.

Initially there was hesitation among doctors in getting HRP No. for patients as an additional step but gradually got convinced as OPD rooms are adjacent and the process is assisted by support staff.

Putting a sticker on ANC card of some patient led to questioning but later on helped in bringing awareness about HRP. They were explained about significance of HRP No. and RED/YELLOW stickers pasted on their ANC card and were encouraged to share the information to other pregnant women and family members to spread awareness about HRP and their role in managing such pregnancy.

Change ideas should be invited and tested from all concerned staff as an ongoing process to sustain improvement. Appreciation and sharing success stories motivate staff and helps in sustenance of any QI project

QUALITY IMPROVEMENT INITIATIVE - PREVENTING HYPOTHERMIA AT ADMISSION TO SNCU

Call for Posters topic: Building Capability through Improvement Methods

DR. SMRITI ARORA
Amity University Haryana, NQOCN, India
DR. KEDAR SAWLESHWARKAR
Deogiri Children's Hospital, Aurangabad, NQOCN, India

Background

NMR of India is 23 (SRS 2017) and in Madhya Pradesh (MP) it is 33 (SRS 2017). To achieve the goals set out by MoHFW and Government of India, under NQOCN (Nationwide Quality of Care Network) Quality Improvement (QI) teams were formulated to facilitate the improvement process at MP. Our team was responsible for Narsinghpur District hospital where, the Special Newborn Care Unit (SNCU) caters to a population of approximately 10,92,000 people, have 6-7 admissions/day. Common conditions addressed are hypothermia, RDS, birth asphyxia and neonatal sepsis. First visit done by our team was in Sept 2018. QI team was formed consisting of nurses from labour room (LR), SNCU, postnatal nurses and doctors on duty from SNCU. Several problems were identified. After working on baseline data and prioritization matrix it was decided to work upon prevention of hypothermia as 66% of neonates admitted to SNCU were hypothermic on admission using Point of Care Quality Improvement (POCQI) methods.

Methods

Process flow discussed from the time of delivery till the baby received at SNCU; Roles of QI team members defined (data collector, communicator and recorder); Causes of hypothermia analysed using a fish bone diagram (staff awareness of hypothermia, environmental factors, supply issues, and challenges in transportation od babies).

SMART AIM- To decrease the percentage of hypothermia (< 36.5OC) among inborn neonates brought to SNCU from LR from current 66% to <35 % by 8 weeks.

To achieve the above aim several change ideas were explored

Three Plan Do Study Act (PDSA) cycles conducted to achieve the aim. PDSA 1- Recording temperature of newborns at exit from LR.

PDSA 2- Recording of temperatures of all babies at 2 hours after admission to PNC ward.

PDSA 3- Counselling of caregivers about warm clothings. For sustaining the changes, hindi colored posters on prevention of hypothermia were displayed at LR, PNC ward and SNCU.

Outcome

During the eight weeks there were 96 deliveries. Within two months of starting this QI project, the proportion of neonates who were hypothermic on admission decreased from 66% to 20%. POCQI methods provide health workers with the skills to identify the key factors contributing to hypothermia in their facility and to develop strategies to address them. Addressing processes of care can lead to improved thermal care and save lives. Repeated meeting with various HoDs were held in each visit to win their cooperation. No major costs were incurred during this project, focus was on changing processes of care to make it easier for staff to do those things that contributed to keeping babies warm. Two nurses and two doctors were previously trained in POCQI methodology at New Delhi. The mentors refreshed the idea of POCQI methodology to all other staff nurses involved in care and motivated them to provide high quality care which was finally successful.

Conclusion

Thus, it was found that hypothermia at admission to SNCU can be resolved with simple interventions. To bring a change in the system it is essential that all health workers including doctors, nurses, paramedics and housekeeping staff are on same page. Initially there were many hindrances in the implementation of this project. There were issues in maintaining the motivational level of staff throughout the project. The mentors followed up with the team using whatsapp group, zoom meeting, uplifting their spirits regularly. Some nurses shared that they don't feel like putting in extra effort due to disparity in salaries, delay in the procurement of new building, irregular maintenance of equipment like radiant warmers; and shortage of manpower. Hence in order to give quality care to our newborn babies it is essential that minute details are being taken care of. Employee recognition and timely appreciation is indeed an important ingredient for better results.

QUALITY IMPROVEMENT OF THE LABORATORY HANDOVER PROCESS TO IMPROVE PATIENT CARE
Call for Posters topic: Building Capability through Improvement Methods

TAPASYAPREETI MUKHOPADHYAY, ARULSELVI SUBRAMANIAN
JPNATC, AIIMS, New Delhi, India

Background
The efficient handover process in the clinical laboratory during a shift change is as essential as it is in the wards, to ensure the highest standards of patient care. The handover process done with a primary aim to ensure continuity of information useful for patient care and safety, failure of which may lead to disastrous consequences.
A clinical handover refers to 'the transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patients, to another person or professional group on a temporary or permanent basis'. The same holds true for the laboratory handover process. The laboratory handover process ensures not only the round the clock transfer of accurate information about the testing process of the patients but also facilitates the shift workers to provide timely reports thereby maintaining a lower turnaround time (TAT) of the laboratory.
We planned this novel study with the SMART aim of improving the percentage of satisfactory laboratory handover process to over 95% in 45 days by the application of the principles of Quality Improvement (QI), identifying the local barriers to a satisfactory laboratory handover process.

Methods
This was a pre /post-intervention study done over four months by undertaking three Plan-Do-Check-Act (PDCA) cycles. A quality improvement (QI) team constituted by the Laboratory Director, a senior resident and two senior medical technologists was formed. Consecutive handovers were studied in both the Clinical Biochemistry and the Haematology sections over a month.
The handover process between the 3 shifts was studied in the Clinical Biochemistry and the Haematology sections:

i. Night to Morning
ii. Morning to Evening
iii. Evening to Night.

At the end of every shift, the respective outgoing medical technologist is expected to handover the laboratory task to the next incoming medical technologist by filling up a checklist in the handover register.

- A satisfactory laboratory handover was defined as physically handing over the handover register with a completed checklist, by the outgoing medical technologist to the incoming medical technologist.
- Unsatisfactory laboratory handover was defined as any deviation from a satisfactory handover as defined above.

Regular rounds and daily audit of the handover register was planned by the QI team
Interventions:
PDCA 1
Initial meetings were held with the working staff to discuss the lacunae in the system for the handover process in the laboratory if any. Suggestions were welcomed to improve the process.
PDCA 2
Regular rounds and daily audit of the handover register was planned by the QI team. Senior staff was briefed separately to ensure all handovers in their respective shifts to be 'satisfactory'.
PDCA 3
Anonymous written feedback was collected from every staff on the handover process. Potential barriers to the process were evaluated for possible changes.

Outcome
A total of 636 laboratory handovers were analyzed, of which 186 were studied in the pre-intervention phase, 270 in the post-intervention phase I for quality improvement, and 180 handovers for sustainability. The level of satisfactory handover process improved from 91.3% (170/186) to 98.8% (267/270) over 45 days. Thus, the QI team achieved the goal within the time frame successfully.
Section-wise analysis of the post-intervention phase

Unsatisfactory handover process was observed on three occasions out of 270 handovers (1.1%); one in the Hematology section, two in the Biochemistry section. All were between the Morning to Evening shift handover.

Responses from all 18 participants on the potential barriers to the handover process were included in the rank order analysis in Table 1. The increased workload was attributed to being the topmost barrier by 18 medical technologists.

Feedback of the medical technologists on the laboratory handover process:

The participants in this study expressed being highly motivated to carry out the handover process, considered it essential and also showed a willingness to improve the process. Most were convinced that the handover process guarantees the continuity of work.

Conclusion

QI is a continuous process and is a product of team effort. In order to achieve this in the laboratory, an equal commitment from the medical technologists and the laboratory physicians is required. The study identified the local barriers to conducting satisfactory handovers during a shift change in a clinical laboratory. The topmost barrier was found to be the sense of increased workload. QI team successfully achieved the goal within the time frame. Regular dialogue and discussions between the QI team and the medical technologists successfully helped to improve the compliance of the staff to learn and incorporate values in the handover process in their daily routine. Participants acknowledged the importance of a laboratory handover process which could add value to their contribution to providing quality patient care. We suggest that the laboratory handover process could be strengthened by better work organisation, adequate staffing, regular supervision, effective communication and effectively addressing the local barriers.

QUALITY INTERVENTIONS FOR LAQSHYA ACCREDITATION IN 25 ASPIRATIONAL DISTRICT OF INDIA

Call for Posters topic: Building Capability through Improvement Methods

DR. NAMIT SINGH TOMAR, DR. VIBHOR KUMAR, DR. DINESH JAGTAP, MR. ASHWIN DESHMUKH, MR. RUPESH SINGH
Piramal Foundation, New Delhi, India

Background

Piramal Foundation, a philanthropic arm of Piramal Enterprises under "Transformation of Aspirational Districts" initiative with the National Institution for Transformation in India (NITI Aayog-a premier think-tank of the Government of India) is the institution where the study was conducted.
Specific problems comprised of the (i) gaps and challenges in undertaking maternal, perinatal, and child death audits and driving quality improvement within the LaQshya program under the aegis of Ministry of Health & Family Welfare, (ii)To use the information to prioritize and plan improvements in the quality of care at health facilities, including staffing, clinic organization, equipment requirements, drug and material supplies, and case-management practices, training, and (iii) Identify best practices and gaps to reinforce the facility and staff to provide sustainable quality services by setting benchmarks for other institutions.

Methods

A multi-method strategy was employed by quality improvement through “LaQshya" accreditation is a long process as it involves process improvements which include timely procurement, adequate infrastructure, streamlining of the supply chain, rigorous training of the staff and adequate staffing. The Piramal team adopts the following steps to identify gaps and provided high impact solutions in the facilities in the change model.

1. Advocacy with the stakeholders : District Collector as nodal officer to guide district health officials.
2. Infrastructure Redesigning: Landscaping of the DHs and First Referral Unit, Procurement of necessary surgical instruments, drugs & consumables, and Restructuring LR & OT as per Govt. norms.
3. QI Tools & methods: LaQshya checklist, Analyzing and brainstorm with district and facility level stakeholders & Process mapping - value streaming of critical processes.
4. Manpower Capacity building: by ensuring availability of specialist doctors and OSCE trainings.

Outcome

The National & State QI teams of Piramal Foundation measured the effect of change by analyzing the scores obtained during baseline assessment followed by State level and finally National level assessment. The National Transformation Manager & Chief Manager QA supported the entire process of implementing the practice using the Model for Improvement.
The outcome of the interventions was that 06 facilities got LaQshya Certification at National level in 03 states of India Assam being on highest 03 facilities and 07 facilities received State level certification with Madhya Pradesh on highest 05 facilities.

Conclusion

Accreditation involves a process to assess performance in relation to established standards and to implement ways to improve continuously. During the period of one year, the Piramal Foundation extended the support to 13 public health facilities across 7 states, out of which 6 facilities have LaQshya certified at “National level” and rest 7 have certified at “State Level”.
Lessons learnt are that aspirational districts have lot of potential and zeal to learn n grow if provided with necessary inputs as per the requirements. There is a need to understand the actual and potential mechanisms of change model in order to emphasize the impact on better quality in healthcare systems. Though every facility has its own challenges in terms of infrastructure, manpower, training and supplies, understanding the mechanisms through which accreditation has an impact on quality will help to shape future evaluations of effectiveness to ensure that they measure appropriate outcomes.

RAASTA – RMNCHA ACTION AGENDA USING STRATEGIC APPLICATION

Call for Posters topic: Building Capability through Improvement Methods

DR ENISHA SARIN, DR JAYA SWARUP MOHANTY, DR NITIN BISHT, DR HARISH KUMAR
IPE Global Ltd. USAID Vriddhi Project, India

Background

The work was done in the states of Jharkhand and Uttarakhand targeting district and state health program managers to improve their capacity in health planning, with the goal to finally scale it up in other states. Currently, district health planning has certain limitations: despite the process being decentralized most plans take final form at the state level and are merely a revised version of the previous plan; it is variable depending on techno managerial capacity; and there is a proliferation of indicators and assessments in health systems which are rarely used. There is provision of guidelines and templates to follow while preparing Program Implementation Plan (PIP), however, arriving at the work plans is more or less based on perception of priorities of key functionaries. The RMNCH+A Action Agenda using Strategic Approach (RAASTA) uses a step wise process to arrive at work plans, using data and harnessing local knowledge and experience of district and block health functionaries.

Methods

Following a pre-planning phase of collation of national health policies, surveys and district level data, 3 days state level workshops were conducted with state and district health managers in Oct 2019 coinciding with PIP preparation, with the goal to improve planning capacity using the RAASTA tool. RAASTA tool was used in six steps:

1. review national and state RMNCH+A goals to set state priorities
2. review coverage data of intervention packages under maternal, neonatal and child health and family planning
3. review availability, accessibility and quality of services of district and link with district data on HR, trainings, supplies, supervision, referral pathways and data quality
4. assess strength and weakness of district and identify additional resources for improving program at community, primary and referral facility
5. propose solutions and recommendations for action plan
6. present and discuss action plans with key functionaries including MD and obtain consensus.

Outcome

The districts drafted work plans which were consequently integrated into the state PIP. Actions suggested were presented to Mission Director and key health decision makers at the state and obtained consensus. The districts mainstreamed them as action plans which could potentially be included in the state PIP. Although many of the activities and priorities identified at the workshop were a continuation of the previous state work plan, newer activities or strengthening of existing activities were identified and included in PIP

Number of recommendations included in PIP (new activities plus previous activities):

	Maternal Health	Child and Newborn Health	Adolescent Health and Family Planning
Jharkhand	5	14	1
Uttarakhand	9	7	4

Feedback from district functionaries revealed involvement, satisfaction and perceived capacity improvement in planning through RAASTA.

Conclusion

The current work is an example of locally driven priority setting and planning based on available evidence. The work demonstrates a systematic process of planning by bringing district health programmers and other stakeholders together to use available data, and capacitating them to analyze problems jointly and arrive at solutions.

One of the limitations was the unavailability of accurate local data which created some level of complexity. It is essential that improvement in the collection and quality of local data goes hand in hand in order to fully adhere to the fidelity of the RAASTA tool. While working towards data quality has been on the radar of the government and is an ongoing process. The RAASTA tool can be used as a way to collect more authentic data. Using an e RAASTA platform to reach out to maximum districts in India is the way forward.

TO IMPROVE THE RATE OF INITIATION OF BREASTFEEDING WITHIH 1 HOUR FROM 0% TO 60% IN BABIES DELIVERED VAGINALLY

Call for Posters topic: Building Capability through Improvement Methods

DR.SMRITI ANAND, DR.PUSHPA DAHIYA
Pt B.D Sharma PGIMS Rohtak, Haryana, INDIA

Background

Breast feeding significantly reduces the risk of death especially from diarrhea and pneumonia in infants compared to formula fed babies.

To reduce neonatal mortality, various strategies have been employed globally, one of which is early initiation of breastfeeding. Early initiation of breastfeeding refers to initiate breast feeding within one hour of birth ensures that they receive essential nutrients in the colostrum.National Family Health Survey (NFHS-4), revealed that only 41.6% of newborns in India were breastfed within one hour of birth. With this premise, we planned a quality improvement process involving a series of Plan-Do-Study-Act (PDSA) cycles to improve the rate of initiation of breastfeeding within 1 hour from 0% to 60% in babies delivered vaginally.

Methods

The study was started in Labor Room of Pt B.D sharma PGIMS Rohtak over a period of six months (Jan-june, 2020).All stable newborns more than 34 weeks of gestation born by normal vaginal delivery. The babies in NICU admission ,were excluded. Also, in whom mother was sick (e.g., eclampsia, or comatosed) or where breastfeeding was otherwise contraindicated were excluded.

a) Measuring baseline rates of first hour breastfeeding in normal vaginally delivered patients
b) Forming a team of obstetricians, pediatricians, and nurses
c) Eliciting possible reasons for delayed initiation of breast feeding within 1 hr by fish bone analysis,
d) Conducting a series of multipe Plan-do-study-act (PDSA) cycles to test change ideas.

The effect of change ideas was assessed by QI team every 2 week by recording the proportion of newborns receiving breast feeds during first hour of life. Run-charts were used to display and interpret the serial measurement of indicators and to study the impact of changes.

Outcome

After discussing above factors with team the only way to initiate breast feeding with in 1 hour was to start breast feeding on the table,so we proposed change idea to put baby to breast just after delivery. After 1 wk of 1st PDSA cycle,71% of babies were breastfed which was very good result and met our target but we came to know that doing this process pediatrician had to wait till the end and one more staff is required. so in next PDSA cycle we change our plan in such a way that baby will be handed over to pediatrician after delivery and when the staff nurse and pediatrician done their job then again baby will put to mother's breast. After 2 weeks of 2nd PDSA 78.8% of babies were breastfed within 1 hour. Throughout the study various obstacles came which were rectified through subsequent PDSA cycles, rate of early initiation of breastfeeding was increased from 0% (baseline) to 85%. After completion of last PDSA we found that early initiation of Breastfeeding sustained at 85%.

Conclusion

We demonstrated a sustained improvement in first-hour breastfeeding initiation rates in neonates born by normal vaginal delivery in a busy government hospital, by using sequential PDSA cycles and the model for improvement. As with any change in practice, initially there was reluctance to adapt to this change among staff members. However, by various techniques- telephonic/ What's app reminders, posters, group discussions and one-to-one discussions-doubts were clarified and staff members gradually adapted the change idea. In this quality improvement initiative, we involved representatives of all stakeholders and frontline staff right from the beginning and used scientific methods to first diagnose the root causes of the problem in the local context. We were able to integrate the change within the existing processes, without increasing the workload. We believe this helped us achieve sustained improvement.

TO INCREASE THE PRACTICE OF CLEANING AND DRAPING OF WOMEN UNDERGOING VAGINAL DELIVERY
Call for Posters topic: Building Capability through Improvement Methods

NISHA MALIK, NIRMALA DUHAN, ROOPA MALIK
Pandit B.D Sharma Postgraduate Institute of Medical Sciences, Rohtak, Haryana, India

Background
This work was carried out in the labor ward of the Department of Obstetrics and Gynaecology, Pt. B.D Sharma Postgraduate Institute of Medical Sciences, Rohtak, Haryana, India which is a tertiary care teaching institute. The client or patient group was women who underwent vaginal delivery in the labor ward. The focus group were the trainees in our department. The cleaning and draping are a routine initial step while conducting a vaginal delivery. Although a mandatory step, but the policy was not being followed in all cases of vaginal delivery. We aimed to improve this practice among doctors conducting vaginal delivery from baseline to 30% over 4 weeks which will help in overall reduction of the infection rate. The baseline data was calculated and found that cleaning and draping were practiced in only 46.6% of women undergoing vaginal delivery. The plan was to identify and evaluate the reasons for non-compliance with this policy.

Methods
A quality improvement team was constituted and fish bone analysis of the problem was done. Firstly, there was need for creating awareness and motivation among target groups. Secondly, ensuring an adequate supply of linen in labour room. The changes made were:

a) awareness and motivation classes for doctors and nursing staff were fixed on every Monday and Thursday at 2 pm in labour ward by consultant (11/02/2020 to 11/03/2020)
b) Orientation class by consultant in charge labour ward on 1st of every month when the new team of trainees join (1/03/2020).
c) Nursing staff in charge of labour ward was instructed to estimate the extra requirement of linen in every shift duty for 5 days (15/02/2020 to 20/02/2020).
d) To send the demand for extra linen requirement to hospital management authorities by the labour ward consultant (24/02/2020).
e) Extra linen sheets were put in each delivery set from 11/03/2020 to 17/03/2020.

PDSA (plan-do-study-act) method was used to test every change idea.

Outcome
The primary outcome indicator was calculated by dividing the numerator (number of deliveries in which cleaning and draping was done) from the denominator (total number of deliveries observed). The source of information about the data was in the form of written feedback from undergraduate students observing the deliveries during their training posting. A favourable change of an increase in practice of cleaning and draping during vaginal deliveries among the trainees was observed. The primary outcome indicator improved gradually from 45.4% in week 1 to 61.1 % in week 2, 81.2 % in week 3 and eventually to 86.6% after 4 weeks. The benefit of this work would be a reduction in infection rate among mothers and babies, thus indirectly reducing the hospital stay and overall burden on health care.

Conclusion
After this project, all the faculty, trainees and nursing staff are now sensitized and aware about the good practice of cleaning and draping before conducting vaginal delivery. Another project to study the impact of this practice on infection rate among mothers and babies is ongoing. At the start of the project there was reluctance to change seen among the trainees. This problem was rectified by taking motivational lectures and emphasizing its importance in clinical practice. The main message to others is that even a small change like spreading awareness and persistent motivation can lead to significant changes. Constant encouragement and appreciation without any scolding can achieve major changes in the attitude of the target groups. Root cause analysis and rectifying problems by step to step approach helps in achieving the positive changes. This practice will ensure safe maternal health in the long term.

TRAINING EMERGENCY MEDICAL STAFF TO APPROPRIATELY HANDLE PATIENTS WITH CHEST PAIN

Call for Posters topic: Building Capability through Improvement Methods

SARAYOO RAVISHANKAR VAIDYA
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Background

Coronary artery disease (CAD) is a common cause of morbidity and mortality in the world and many patients with CAD present with chest pain in an emergency setting as a first presentation. In emergency settings in India, the burden of diagnosis and treatment of patients with chest pain often falls on the emergency physician alone, who also has to deal with other life threathening conditions at the same time. Thus, many acute presentations of chest pain can be missed or not receive the necessary treatment on time, in a busy, understaffed department. This significantly increases the mortality and future morbidity due to delays in the healthcare service provision to the patient. One way to mitigate this is by training healthcare workers like Nurses, paramedics and other emergency healthcare staff to appropriately categorise a patient with chest pain as emergent and requiring ECG, so that the investigations needed can be carried out before the physician is able to clerk the patient.

Methods

This project was carried out in a tertiary care centre in Bangalore Urban, Karnataka India. First, the number of patients presenting with chest pain to the emergency department in a one-week setting were reviewed according to severity of symptoms using a 1-10 pain scale, other associated symptoms and presence of comorbidities or risk factors for Heart and lung diseases. The response time of the emergency staff to the patient from entry to the facility until appropriate management (shift to Intensive care unit, higher center referral, immediate prophylaxis, discharge) given was measured. A teaching session was conducted by emergency physicians involving all emergency staff following this. Using the data collected, a simple algorithm was devised to help staff make decisions regarding the treatment protocol. Training regarding reading an ECG, immediate prophylaxis for STEMI/NSTEMI patients and respiratory causes of chest pain was given to Nurses and senior Emergency non-medical staff.

Outcome

The process was carried in the hospital premises. The level of knowledge regarding chest pain as an emergency presentation was assessed before and after the presentation using qualitative methods like focus group discussions, response to questionnaires and an informal Pop-quiz using an online application. There was a significant improvement in the knowledge among the participants, with a majority answering all the questions correctly. To cement the knowledge, print outs of the chest pain algorithm were placed in common areas of the emergency department, and the nursing station. There was an overall increase in the response time to a patient with chest pain in the emergency department of the hospital.

Conclusion

Training nurses and other hospital staff to recognise common warning signs in a patient with chest pain helps reduce the burden of diagnosis and management on doctors, and ensures timely response to life threatening conditions. This improves patient care in emergency departments.

VIRTUAL PROGRAM BEST PRACTICES AT A TIME OF CRISIS – IMPROVEMENT LEADERSHIP PROGRAM
Call for Posters topic: Building Capability through Improvement Methods

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Hamad Medical Corporation Qatar
KUSH BADSHAH, MICHAEL PUGH, JIM BENNEYAN, LAURA NUNLEY
IHI, USA

Background
In response to "National Priority against COVID-19", Hamad Healthcare Quality Institute (HHQI) postponed many education and training programs. This decision was taken as healthcare professionals were required to prioritize their time managing care during the COVID-19 pandemic.
The "Improvement Leadership (IL)" program co-designed by HHQI & IHI comprises with three in-person workshops and monthly webinars followed by group discussion spread over 12 months.
Third and final three day in-person workshop and participants graduation was due. As we faced the emergent situation of COVID 19, we had to come up with contingency plan or there was a risk that participants will lose the interest.
Our objectives was to:

- Plan means of delivering the workshop 3 on time
- Develop methods, how to conduct graduation ceremony

Also we had to keep in mind that we design the alternative means which is best for participants were physicians, nurses and administrators.

Methods
HHQI with IHI faculty discussed multiple options to meet our objectives. One of the option, we agreed after analyzing all aspects was to develop a virtual delivery platform to ensure completion of the third & final workshop and to celebrate graduation ceremony with distribution of certificates.
The planned workshop 3 pivoted to be divided into four webinars and three independent learning sessions spread over four weeks. The content was pre-recorded and divided into three packets. Each packet contains 3 videos, sent to participants for Independent work followed by webinars.
A virtual graduation ceremony was conducted. There was leadership message followed by individual participant's name; picture and IL certificate sample.

Outcome
Participants were very engaged and provided positive feedback on structure, activities and content. We have seen more than 80% attendance in all the 4 webinars. The participants viewed the independent work videos and responded with key points in the webinars. We recorded the number of views of each topics too. IHI and HHQI teams are discussing methods for supporting program graduates in applying their skills and building a local network of improvers and leaders ongoing.
Participants pre and post program self assessment was done and compared. We found positive progress in all the following topics.
The Model for Improvement
Deming's System of Profound Knowledge
Learning Systems
Driver Diagrams
Run Charts
Just Culture & Psychological Safety
Human Factors
High Reliability Organizations
IHI BTS Collaborative model
IHI Safety & Reliability Framework
Leadership Behavior: Person-centeredness, Front Line Engagement, Relentless Focus, Transparency & Boundarilessness

Conclusion
Key factors to program success were:

1. Resiliency of the team to the situational needs - The operational team acted immediately to develop alternative program after having enough feedback from all the stakeholders
2. Leadership support was pivotal - Timely decision from top management was vital to deliver the content on time.
3. Participants' willingness to demonstrate applied learning - The willingness to learn from the participants side was commendable. Apart from their busy schedule with added responsibilities they took out time to go through the videos and prepare key notes and discuss the same during the webinars. The program success ultimately dependent on the feedback of the participants. They provided positive feedback and this was encouragement for us.
4. A new found ability to successfully deliver high level improvement leaders program through virtual platforms which we are willing to continue to develop a more hybrid version.

ABSTRACT TITLE: TIMELY POST-OPERATIVE PATIENT TRANSFER: DECREASING DELAY, IMPROVING CARE
Call for Posters topic: Leadership and Culture for Change

DR SHILPI NAIN, DR MANJU PURI, SISTER DARSHANA, SISTER LYLAJA
Lady Hardinge Medical College & Smt S S K Hospital, New Delhi, India

Background

- The project was done at Department of Obstetrics and Gynaecology in a busy public sector Hospital (Lady Hardinge Medical College and Smt Sucheta Kriplani Hospital, New Delhi) conducting large number of deliveries and surgeries
- Problem identified was that patients were not getting transferred from shifting trolley to post-operative bed after the operative procedure
- Due to overcrowding of postoperative ward with patients lying on trolley, patient and relatives repeatedly complained about lack of appropriate nursing care.
- Also, as the shifting trolleys were occupied, new cases could not be shifted to Operation theatre causing undue delays in caesereans.
- A base line analysis was done to assess the average time taken to shift the patient which was 2 hours and only 67% postoperative patients shifted within 10 minutes of arrival.
- Aim was to increase the percentage of post LSCS patients from trolley to bed with in 10 minutes from existing 67% to 100% over next 3 weeks

Methods

- Team Leader Shilpi Nain team members Nursing staff and ward orderly
- Reasons for delay: information was not sent to the postoperative ward prior to shifting the patient from OT, non-availability of vacant beds on patient's arrival and non-availability of concerned doctor to write transfer note and of orderly to shift with resultant delay
- Staff and residents were sensitized following steps initiated:
  a) Telephonic call by Staff from OT to postop ward as soon as patient was wheeled in for LSCS.
  b) Preparation of a priority list for patient shifting by duty doctor and display on notice board.
- As the percentage of patients being shifted in stipulated time increased, further interventions done were:
  a) Information sent to postoperative ward when the patient was being prepared for CS in addition patient reaching OT.
  b) An intern was posted in Postop ward round the clock to facilitate transfer of patients as per priority list.
  c) One bed was kept vacant always.

Outcome

Impact of intervention:

- Patients got immediate postoperative care with appropriate drugs and fluids being administered in time.
- Patients were satisfied with the nursing care
- The nursing staff was saved of the hassle of organizing the shifting and receiving the operated patient simultaneously
- Delay in shifting of patients for CS due to lack of shifting trolley was prevented

Conclusion

Impact:

- As the patients got bed in postoperative period immediately, they got appropriate drugs for pain relief, complications were avoided and if occurred, got noticed in time.
- Good nursing care could be imparted leading to better patient satisfaction
- Nursing staff was comfortable and organized

Problems encountered:

- Workers were not sensitized to take calls to postop ward or shift patients in time
- Duty- change-over time was most critical as everyone would leave work pending for next person. Leaving one bed vacant at all times could counter this problem

Message:

- Small and simple changes in routine protocols help solving big problems easily

COMPLEX SYSTEM CHANGE: FUSION OF ART OF NETWORKING AND IMPROVEMENT SCIENCE
Call for Posters topic: Leadership and Culture for Change

MALTI VARSHNEY
NHSEI London Region

Background
The health and care system in London serves almost 9m people. The health services are commissioned and provided by multiple stakeholders for a diverse population with over 300 languages, introducing multiple layers of complexity across London. Like any complex system, competing priorities require attention at any given time to improve clinical outcomes. Population level improvement requires joint effort at all levels from strategic intent to front line delivery. London Clinical Networks play a pivotal role to provide an environment for strategic and operational multidisciplinary members to take collaborative action on issues that one organisation can't address alone. There was no clear delivery methodology underpinning improvement science with inconsistent connection to the wider system. Consequently, collaborative working criteria was needed on a small number of clinical priorities, and an effective delivery model to coordinate efforts to implement large scale change at system level.

Methods
A systematic analysis of the problem was undertaken using recognised tools such as 'fish bone', 'field force', 'framing of the problem' and semi-structured interviews with a range of stakeholders. Active listening was used to understand the immediate team's and senior system leaders' perspectives. Multiple interventions were designed with system-wide stakeholders:

- Data analysis undertaken to inform identification of clinical priorities
- Using improvement science, the Clinical Network team developed a change delivery model
- Development of a weighted criterion
- Development of a framework on the Regional Clinical team role (tested with system leaders)
- Engagement via a strategy event with the clinical community to agree system-wide priorities for actions.

Principles of 'Scan, Focus, Act' were used to create a range of possible choices (divergence) and then focussing on detailed improvement opportunities (convergence). This formed the basis of a renewed vision for transformation.

Outcome
The Clinical Network team adopted a population health approach to understand health needs and inform interventions for improved outcomes. The team also used a logic model approach to develop yearly plans to articulate collaborative action outcomes at system level. Self-assessment of network maturity has been undertaken to identify areas for continuous improvement with action plans. Parallel workstreams were initiated to develop leadership at various tiers of the system including front line clinicians, senior clinical and professional leaders (e.g. medical directors, directors of public health, local government), encouraging a network approach to owning the problem and developing solutions. There is a shift in culture across different layers of the system seen through improved ownership to adopt a continuous quality improvement approach. A system level balance score card has been initiated to track improvement across various clinical indicators.

Conclusion
Change management in complex systems requires fusion of science and art. Science informs the areas for improvement, identifies change barriers and potential solutions. Time needs to be taken to understand the nature of the problem and resist the temptation to fix obvious issues. Many issues at system level are entrenched in organisational cultures and personal values. Intrinsic motivators need to be identified and used as transformational levers. The implementation of solutions requires building relationships alongside patience and tenacity. Systemic change is a continuous process similar to QI cycles through which new learning can be generated to inform the next stage. Consequently change management in complex systems is a journey that requires resilient leadership. Leaders require technical skills to understand barriers to optimal outcomes, and networking skills. Through the fusion of science with the art of relationship building optimal solutions can be implemented at system level.

DECREASE TURNAROUND TIME FOR DISPENSING MEDICATION IN OPD PHARMACY - AFHJ

Call for Posters topic: Leadership and Culture for Change

MESHAL ALI ALQAHTANI, ALMU'TAZ BELLAH MAHMOUD ABU FARES, BAHAEE MAHMOUD SALEH, MOHAMMED MOUSA TOFFYAN, IDREES AHMAD BAJAWI

المملكة العربية السعودية

Background

This project was applied in outpatient pharmacy, Armed Forces Hospital in Jazan. In the hospital there are two pharmacies, outpatient pharmacy which is serve all outpatient clinic, and inpatient pharmacy that provide all pharmaceutical services for inpatients ward and emergency department. These two pharmacy are located in separate buildings. The refill medications were dispensed from the inpatient pharmacy. In the second quarter of 2018, we received 443 of patient complaints related long term waiting in outpatient pharmacy until dispensing medication in 2018, and refill medication in the inpatient pharmacy and pharmacist doesn't commit to determining the raw for the patients. After collecting the data related turnaround time for dispensing medication in pharmacy found the average was 55 min in outpatient pharmacy receiving prescription medication until dispensing. Also, we observed the average time for refill medication 89 min and prescribing just in the inpatient pharmacy.

Methods

Once we noticed the problem, a multidisciplinary team was formulated under quality department oversight. In the meetings, the problem and its relevant causes were determined by fish bone diagram and brain storming method. After that, another meeting was conducted with front line staff who faced the problem daily to be involved in decision making. We made our goals within one and half month started from October 2018 and driver diagram was used to build action plan implementation. starting from November 2018, the outpatient pharmacy was reconstructed, reorganized and a new flow chart was applied to achieve our goals.

Outcome

The approach to measuring the effect of the change was FOCUS PDSA. The impact of result is decrease waiting time to be 7 min in January 2020 with average time from January 2019 to January 2020 to be 16 min, which mean reach our target goal. All problem from started project was resolved represented by firstly Workflow in outpatient pharmacy is now organized, Decrease the duplication of medications in prescriptions and Decrease staff distraction. For outcome in patient care achievements presented by Decrease medication errors (medication duplication), Decrease number of patient complaint regarding waiting time and increase patient satisfaction. And Organize the work and each patient know his/her the time frame of dispensing medication.

Conclusion

Decrease the duplication of medications in prescriptions and Decrease staff distraction. For outcome in patient care achievements presented by Decrease medication errors (medication duplication), Decrease number of patient complaint regarding waiting time and increase patient satisfaction. And Organize the work and each patient know his/her the time frame of dispensing medication. Problems encountered during the process of change:

1. Most of physician refuse to repeat the prescription medication if there's error. However, any error show in the prescription the pharmacist calling physician and let him to repeat the prescription.
2. Most of patients did not accept the organized work and commit with row as it is new changes.
3. Most of patient did not accepted new waiting area and the prefer to stay at front of pharmacy window.

HOSPITAL EMPLOYEES SATISFACTION - DOES IT REALLY MATTER?

Call for Posters topic: Leadership and Culture for Change

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Sanjay Gandhi Memorial Hospital, Govt of NCT of Delhi, India of Delhi, India
DR DHANANJAY D MANKAR
Tata Institute of Social Sciences, Mumbai, India

Background

Study was conducted at Sanjay Gandhi Memorial Hospital, Mangolpuri, Govt. of NCT of Delhi and 111 employees were included in this study to identify the factors which they consider is important for satisfaction in a public hospital and explore the gaps that are required for improvement.
Employee satisfaction survey is a very effective tool that measures and maintains a positive culture within the organization. The satisfaction of employees is directly associated with the efficiency of an organization and that is why it is important for them to ensure if their employees are happy with their work or not.
Well-conducted surveys play a major role in the development of any organization or business. Employee surveys offer a deep understanding on how an organization can maintain, attract, and develop skilled employees.
Since employee satisfaction has an impact on career, health and on quality and commitment to work, unhappy or dissatisfied employee have an impact on patient care and treatment.

Methods

It helped me analyze the working of my organization.
This study was an earnest attempt to determine the attributes which cause dissatisfaction among Hospital employees.
System for appraisal and promotion was required to be built - top level management was involved and a timeline of 3 months was decided to built the system.
Housing and basic amenities to be improved - concerned officials informed about the result of the survey and directed to take appropriate measures as soon as possible.
Employee Satisfaction Surveys to be conducted regularly and action to be taken on the feedback - annual survey was converted into 6 monthly survey.
It is important to communicate results and actions of past survey with no repercussions - every 6 months.
Staff are far more likely to give honest answers if we can assure them their individual responses will remain strictly confidential.

Outcome

Analyzing issues and overall environment of an organisation.
Anticipating potential problems like burnt out and absenteeism.
Evaluating management and teamwork related issues.
Low morale, high staff turnover, and overall disenchantment with employment in healthcare improved markedly with workforce engagement.
Measuring effects of change in an organisational set up.
Job satisfaction has been identified as an important factor in healthcare staff retention.
Employee satisfaction can be considered indicator of emotional well being. Satisfaction at work place can lead to behavior of employees that positively affect organizational functioning.
Survey gives an employee a sense of ownership and responsibility and help employers measure and understand their employees' attitude, feedback, motivation, and satisfaction.
Survey lead to improved Job satisfaction further leading to cost reduction by reducing absentees, task errors, conflicts at work and turnover.

Conclusion

Workforce focus is required to develop full potential and alignment with organizations objectives as there is

a) No effective system to decide staffing level
b) No clear criteria to assess skills and competencies of staff
c) No system to manage workforce to exceed performance expectations
d) Ensuring workplace health and security for the workforce

e) There is no empowerment of workforce
f) Assessment of Workforce engagement via grievance, safety and productivity is not done
g) No incentive practices to support high performance
h) Reinforcement of new knowledge and skills on the job is lacking.

All this leads to dissatisfaction. Employees satisfaction survey, complaints in grievance committee, key productivity indicators to be routinely analysed 6 monthly or earlier as a qualitative and quantitative measure.

IS THE FINAL PROFESSIONAL EXAMINATION A FAIR TEST OF COMPETENCY?

Call for Posters topic: Leadership and Culture for Change

GANESH RAMACHANDRAN, AUNG KO KO MIN, MUNANDY ALAGAR
Mahsa University Kuala Lumpur

Background

The examination process is perceived traditionally as a necessary evil deciding if a student should pass or fail. In medical and health care professions, final professional examinations decide if a student has the competencies required to graduate and begin the arduous trail of practice. The aim of this study was to gauge students opinions on the Final MBBS Professional Examination at our institution in terms of scope, tools and conduct. Additionally we also looked at the housemanship completion rates of the cohorts in this study to obtain a more valid conclusion regarding the reliability of the examination in gauging competence.

This study was done using an exit questionnaire survey administered to all students at the end of the final professional examination. The data regarding housemanship completion was obtained through a telephone questionnaire, data regarding full registration as a medical practitioner from the Malaysian Medical Council website and communication with the training division of the Ministry of Health Malaysia regarding the number of houseman from our institution requiring retraining.

Methods

180 students over 2 cohorts participated in this exit questionnaire based study at the end of the final professional examination. Participation was optional. The questionnaire was anonymised and it covered all aspects of the curriculum, teaching learning activity and the final professional examination. Students were also asked to rate their satisfaction. Additionally housemanship completion rates were monitored through a telephone survey and details of full registration with the Malaysian Medical Council were traced. Information of full registration with the council is available to the public online. The Ministry of Health Malaysia also provides information on housemen who require additional training in alternative hospitals confidentially to each institution upon request. The questionnaire was used to gauge student opinions on the programme as well as the exit examination. Completion of housemanship and the numbers requiring retraining were taken as measures of our ability to produce fit for purpose graduates.

Outcome

In terms of satisfaction with the programme 80% of students felt the teaching programme was adequate to prepare them for housemanship.

More than 80% also felt there was good instructor engagement in the programme. In the theory examination more than 70% of students felt the examination tested the various disciplines adequately.

The OSCE was perceived to be a better tool than MCQ, MEQ and SEQ by about 60% as a test of practical skills and competency. The general perception was that the interactive OSCE involving simulation was a good test of competency but was stressful. Students did not support increasing the number of interactive OSCE. More than half of the students felt the OSCE could replace the long clinical case in the final examination.

The long case was thought to be fair. It tested clerking and communication skills required of house officers. It was perceived to be the most stressful part of the examination.

When asked if a pass in the examination equaled fitness to practice, more than 2/3 did not think so. Students seemed to realize that the demands of the job in real time would require further skill acquisition.

There was support for a national common exit examination as criteria for graduation and provisional registration with the Medical Council.

Overall there was an 81% completion of housemanship without extensions. In this cohort of students only 1 required retraining in an alternative hospital.

These figures compare favourably with a national average of 70% completion rates announced in 2015 by the Ministry of Health Malaysia.

Conclusion

The MBBS curriculum at the institution was considered satisfactory by a vast majority of graduates.The examination was felt to be a fair assessment of what had been taught in the clinical years of the programme. OSCE was seen to be a fair tool for assessment of competencies. The long clinical case was perceived to be very stressful. There was support for introduction of a national exit examination as a prerequisite for provisional registration. This proviso is not in place in Malaysia presently, though it is being actively considered by the Medical Council.

Judgement of competency is an onerous task and this high stake decision often rests on performance in the final professional examination. the consequences of error can endanger patient safety.

Take Home

Final year medical students have a clear understanding of the need for competencies at exit.

They understand that a pass in the finals did not necessarily equate with competency.

There is good support for introduction of a national exit examination.

DELIVERY OF PATIENT-CENTRED CARE BY FUTURE PHYSICIANS: A MULTI-CENTRIC STUDY OF LOSS OF EMPATHY IN MEDICAL STUDENTS ACROSS INDIA

Call for Posters topic: Person and Family Centred Care

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Background

Patient-centred care (PCC) has been found to enhance healthcare quality and safety, improve patients' quality of life, and ensure greater patient satisfaction with their care. Unfortunately, rising trends of violence and litigation in healthcare settings indicate significant deviation of healthcare from this ideal state. Inculcating empathy has been found to help strengthen physician-patient relationship and may limit the rising cases of violence and malpractice claims. However, it has been well-documented globally that future physicians, i.e. medical students, suffer a significant loss of empathy from the start till the end of the training, thus hampering their capability to deliver PCC.

Till date, only a few, small, single-centre studies in India have looked at this phenomenon, and have looked at few covariates alone. Therefore, we aimed to assess empathy and its correlates amongst undergraduate medical students across India in a comprehensive multi-centric study.

Methods

We conducted a cross-sectional, survey-based investigation during 2019-20. After institutional ethics committee approval, we surveyed undergraduate medical students in India of age group 17-25 years. Since this was a hypothesis-generating work, hence a power analysis was not performed. We obtained more than two thousand responses (both paper-based as well as online).

Our survey questionnaire included the student version of Jefferson scale of empathy (JSE-S), which is the most validated tool for assessing empathy, along with questions regarding students' socio-demographic, academic and other variables possibly affecting their 'empathy' towards patients. We collected data through a questionnaire which the students were asked to fill using either a web-based version or a paper-based format. The weblink to the online questionnaire was distributed amongst students through WhatsApp and email while the paper-based questionnaires were distributed by our collaborators.

Outcome

First, we found that the empathy of Indian medical students was quite low compared to those of developed countries. This highlights an urgent need to inculcate critical skills such as empathy and effective communication amongst Indian students early in their career so that more trainee physicians emerge as patient-centred doctors in the future.

Second, we found levels of empathy to be remarkably different in medical schools across the country. The institutions having more empathetic students need to be studied further so that their best practices may be implemented widely.

Additionally, we discovered significant variations in empathy with age, gender, family background and other academic factors. These helped us identify those student groups which strongly need focussed training. We also found that the empathy of students declined significantly from the first until the final year of medical school, consistent with prior literature across the world.

Conclusion

Urgent work needs to be done in India and abroad in preventing the loss of empathy in medical students throughout training. Indian students are especially prone to delivering less patient-centred care given their considerably lower scores on empathy assessment.

Additionally, interventions must aim at fixing this temporal loss of empathy through both a generalised and a focussed approach, the former for all students and the latter for those whom we have identified as having the lowest levels of empathy.

Finally, understanding the associations between empathy of medical students and their socio-demographic and academic characteristics by our study will encourage future researchers to further examine these variables. In order to study this further, we have initiated the KGMedEd study, a long-term cohort study at King George's Medical University, India, to assess various domains of physicians-in-training including empathy.

FAMILY PARTICIPATORY CARE: ENSURING QUALITY EQUITY AND DIGNITY BY DEVELOPING IMPLEMENTATION MODELS

Call for Posters topic: Person and Family Centred Care

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IPE Global Ltd. USAID Vriddhi Project, India

Background

India accounts for almost 1/4th of global burden of neonatal deaths; preterm mortality being the leading cause, preterm birth rate is close to 13%; and 28% of newborns with low birth weight. Even with established Special Newborn Care Units (SNCU) in District hospitals 10% of newborns are dying after discharge due to lack of proper care at home. Mothers were not allowed inside SNCUs thus leading to separation anxiety and reduced breastfeeding practices. Programs like HBNC, HBYC strengthen community based neonatal and infant care but do not empower mothers with neonatal care skills.
FPC involves and empowers mothers in nurturing newborn care during their stay in SNCU through skill imparting audio-visual sessions conducted by staff nurses. Involving mother in neonatal care with supervision results in better neurodevelopment outcome, breastfeeding and KMC compliance. Global evidence shows FPC helps reduce duration of hospitalization, low infection rates with continued care at home.

Methods

Family participatory care is well adopted intervention by Government of India since 2015 in the states of Rajasthan, Madhya Pradesh, Bihar and Odisha. GOI has a policy with approved operational guidelines and budget provisions to implement FPC. USAID Vriddhi project team members through concurrent advocacy with respective state governments, support in closing the gaps at SNCUs, capacity building of healthcare staff and supportive supervision at districts facilities implemented FPC in Aspiration Districts of six states- Jharkhand, Chhattisgarh, Uttarakhand, Punjab, Haryana and Himachal Pradesh.

Activity	Timeline
State government's Sensitization & fund mobilisation	Feb – March 2019
Capacity building , logistic support & IEC development	March - May 2019
FPC sessions and monthly reports	June 2019 – June 2020

Staffs involved are: SNCU In charge Doctor, staff Nurses and DEO for report submission. The target clients are mothers & caregivers of admitted newborns in SNCUs.

Outcome

- 312 health providers of 30 SNCUs in 6 states have been trained for implementing FPC. These service providers were provided 2 days of training.
- The trainings have helped the staff to improve their skills in providing neurodevelopment supportive care to neonates, techniques of feedings preterm newborns and infection prevention practices.
- Till July'20, 22064 newborns have been admitted in the 30 intervention SNCUs with over 7000 admissions were of newborns less than 2 kgs birth weight.
- During this period, these 30 SNCUS have conducted 17693 skill based audiovisual sessions for mothers. And more than 20,000 mothers and care givers have attended these sessions.
- As KMC is an integral part of FPC, mothers of small neonates will continue with KMC practices after discharge at home.
- Hand washing and child care using developmentally supportive care skills learnt by mothers will definitely result in better development of the neonate.

Conclusion

FPC is an intervention for empowering mothers in rural and remote districts with structured skill building audio-visual sessions and trained staff nurses facilitating the sessions.
The sessions are on;

1. hand-washing skills,
2. importance of infection prevention,
3. protocol for entry to nursery,

4. Developmentally Supportive Care (DSC),
5. breastfeeding & KMC, and
6. recognizing danger signs helps in continuum of care and chances of better survival and development of newborns.

This cost effective intervention is widely accepted, adopted and has been scaled up by all states to non–Aspiration District hospitals. It has also been piloted in sub–district Newborn care units (NBSU) and was included as best practices by GOI.

The challenge faced initially was, allowing the mothers inside the SNCU. But now the health facility staff have realized the benefits of involving mothers in baby's care. This has resulted in improved trust and faith of community in the health system.

PRACTICALLY PATIENT CENTRED CARE: EMR USE WITHIN OUTPATIENT CONSULTING ON WOMEN'S HEALTH

Call for Posters topic: Person and Family Centred Care

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Background

"I will write—have the green tea. That is something I will not write in the computer. I take the printout……then I will write on it green tea. if not that, I will write, I will write [on computer] drink plenty of liquids and then I used to tell them drink hot water with lemon and honey, I will tell them office time take [hot water] from cafeteria." - Discussion with Doctor 3 [working in corporate hospital, mandatory use of EMR]

Doctor 3 was catering to not just biologic and physiologic processes in the individual, recognised as disease among medical professionals, but also responding to interpersonal, and cultural reactions to disease or discomfort called as illness. The electronic versions of patient's records within an organization are called as electronic medical records (EMR). In this paper we investigate how practical 'caring work', besides medical problem solving done by doctors while writing records (on computer, EMR) gains relevance (irrelevance).

Methods

This is part of larger project, on technology-use in practice. I am focusing on practice, i.e., consultation at time and place of its occurrence. I adopted the case study as the research strategy. In this project, I have followed the approach of asking questions from doctors and patients both, by spending time at four sites (catering to working professional women, non-working women from upper middle income families and women working in informal sector) and it has methodological implications for health information system (technology) design-use. Findings included in this paper are based on interaction with two doctors.

Outcome

- Written accounts of verbal discussion with patients and their condition were largely about clinical picture of patient's experiences
- Doctors augmented patients' experiences (life events, cultural and economic understanding) for clinically usable recordings. This was done to support practicality of treatment and ensure delivery of care
- Consultation is not only about writing the treatment, so if doctors have to write some personal instructions, they preferred writing on print outs
- EMR design discount experiential and practical knowledge about managing care of/by patient so these details are either not recorded digitally or recorded partially

Conclusion

What Does it Mean for Design

- Doctors besides having knowledge about their medical field applied cultural understanding about patient while using EMR or interacting with them within consultation.
- The records functionalities lack support for such interactions, making 'caring work' limited to certain situations and adding more responsibility to doctor or patient
- Engaging with these use cases could help designers in providing more meaningful features, especially around health of women like explanatory notes about reproductive system, body hygiene.
- Findings could be used by policy makers and designers for encouraging meaningful EMR usage, especially on women health

ADDRESSING THE ANTIMICROBIAL RESISTANCE CHALLENGE THROUGH INNOVATIVE APPROACHES IN THE COMMUNITY: 'NUKKAD NATAK' THEME

Call for Posters topic: Population and Public Health

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Background

Increasing Antimicrobial resistance (AMR) is outcome of irrational use of antibiotics in human, animals and environment. Though adequate Antimicrobial Stewardship (AMS) programs exist in hospitals, in community they are scarce. AMR is horizontally transferred in community from hospitals and other antibiotic misuse mechanisms. Awareness campaigns bring positive change in mindset and behavior of people and may prove beneficial in combating the problem of increasing AMR. In this view, we attempted to conduct a 1.8 years (January 2018-August 2019) cross-sectional comparative study on "Knowledge, Attitude and Practices of community on antibiotic use" in Nakhrola village (located within 20km radius of Gurgaon, Haryana and having population census of more than 3760 persons). It was the first survey in community on AMR organized by Artemis hospital.

Methods

200 participants (residents) were randomly selected for survey in the age group 14-85 years.

I. Stage I (Jan-Jun 2018): A questionnaire based survey was conducted for assessment of knowledge, attitude and practices (KAP) of community about increasing antimicrobial resistance. Informed consent was obtained from all participants.
II. Stage II (Jul 2018-Dec 2018): Data was compiled, analyzed and studied for identifying the roadblocks to be addressed using educational interventions.
III. Stage III (Jan-Jul 2019): Education to the residents and school children was provided by adopting theme of 'nukkad natak' on two days 3rd and 17th of July 2019 respectively in order to address different population groups. Same questionnaire was given to the same group of participants after educational intervention
IV. Stage IV (Aug2019): Measurement of Improvement was determined post training. Data was compared and analyzed. Improvement was statistically evaluated with Wilcoxon paired t-test in SPSS 21.0.

Outcome

Mean age of participants-33.3 years (14-85 years). Predominant population was females (61.5%).
The knowledge, attitude and practices about antibiotic use had significantly increased ($p<0.05$) post educational interventions. Percentage increase in knowledge regarding antibiotic resistance (152%) and antibiotic effectiveness against bacterial infections(69%) was significant. Improvement observed in people's agreement that unregulated use of antibiotic leads to treatment failure (25%) increases side effects (20%) and increases AMR (64%).
Attitude of avoiding antibiotics for treating common cold (31%), consuming multiple antibiotics to obtain quick recovery (91%) and skipping antibiotic doses cause problems (17.5%) had also shown improvement. In practice, 3.47% and 2.13% increase was reported in taking antibiotic with doctor's prescription and check expiry before consuming respectively. After taking 2-3 doses of prescribed course, people showed improvement by 1.12% in completing the full course.

Conclusion

India's initiative of releasing National Action Plan (NAP), addressed AMR containment in community due to lack of awareness. In our study, we have focused on two objectives of NAP- first, improving awareness on AMR in villagers through educational interventions and second, conducting collaborative activities by the hospital and village social workers to control its spread in community. We observed significant increase in knowledge, attitude and practices of village residents on antimicrobial resistance and judicious use of antibiotics as a result of educational interventions provided. The problems encountered in implementing this study were logistic difficulties in arranging sessions and including the same group of participants for pre- and post-intervention. Besides these challenges, the study could be conducted in a smooth and timely fashion. It is evident that organizing continuous awareness drives bring positive change in mindset and behavior of public towards antibiotic use.

DEVELOPMENT OF AN AGE APPROPRIATE VISUAL FUNCTION QUESTIONNAIRE IN A COMMUNITY BASED CHILDHOOD VISUAL IMPAIRMENT STUDY

Call for Posters topic: Population and Public Health

DR MEENAKSHI WADHWANI, PROF PRAVEEN VASHIST, DR SURAJ SINGH SENJAM, DR VIVEK GUPTA, PROF ROHIT SAXENA, PROF RADHIKA TANDON, PROF TANUJ DADA
RP Centre AIIMS, India

Background

- The study was conducted at Dr Rajendra Prasad Centre for ophthalmic sciences. It was a part of PhD based study. It aimed at developing an age appropriate visual function questionnaire.
  Visual function questionnaire- is dependent on visual acuity and functional vision.
  Visual acuity is a clinical measure of an individual's ability to perform specific visual tasks.
  Previous population based studies have revealed that visual impairment effects an individual's everyday task performance and self reported difficulty with everyday tasks related to vision.
  Functional vision is a vision used in performing various tasks ranging from outdoor activities to daily activities.
- We analyzed the scoring based on Indian vision function questionnaires-33 (VFQ-33) and LV Prasad Functional vision questionnaires-20 (VFQ-20) in detail.

Methods

This was done in 4 steps:
Step I- Expert opinion from the professionals, these experts were the people who already had experience on working with VFQ and belonged to public health, low vision and ophthalmology at Dr Rajendra Prasad Centre for ophthalmic Sciences.
questions due to non-comprehendible language, repetition and inappropriate function not suitable for that age group were addressed
Step II- The targeted group was children with unaided visual acuity < 6/12 in any eye or parents living with children of age 5 to 9 years, the tool was self administered for children age 10 to 15 years whereas children of age 5 to 9 years, the parents were asked to obtained the information.
Step III- involved further factor analysis of the selected items, only items having factor loading ≥ 0.59 were retained
Step IV- Items having similar language or similar function were kept in a similar domain to calculate Cronbachs alpha. Cronbachs alpha of ≥ 0.6 was significant.

Outcome

In case the Cronbach alpha for individual domains was found to be <0.6, the overall Cronbachs alpha was finally adopted and items were suggested to be not to be taken into domains. In age group of 5 to 9 years, the Cronbachs alpha for domain 1 (distance), 2 (education), 3 (daily routine/general functioning) and 4 (psychosocial) was 0.560, 0.393, 0.791 and 0.658. In higher age group, the Cronbachs alpha for domain 1,2,3 and 4 was 0.748, 0.855, 0.762 and 0.696. The Cronbachs alpha score was acceptable for all the domains (≥ 0.6) in higher age group the overall cronbachs alpha was very good (0.924)

Conclusion

- The score was derived for various domains after calculating the median for the items in various domains asked pre and post intervention in the form of glasses or surgery
  It was observed that all the domains improved significantly except for daily routine in the age group of 6 to 9 years whereas in age group of 10 to 15 years all the domains improved significantly post intervention in the form of glasses or surgery.
  The strengths of the study were that it is the only study which has tried to bring out the feature of visual function quality in children according to their age in an appropriate manner so that the remaining functional vision can be used to its best.
- It was very difficult to ask the questions on this detailed VFQ from children even in the higher age group as children get distracted and also the team of medical social workers reported that one questionnaire consumed minimum of 30 minutes.

ENSURING HEALTHCARE ACCESS FOR ALL THROUGH PRIMARY CARE REFORMS: FINDINGS FROM A BASELINE STUDY IN KERALA

Call for Posters topic: Population and Public Health

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Background

Global evidence shows that primary healthcare is critical for improving health outcomes by reducing morbidity and mortality at a lower cost. Health indicators of Kerala are generally more favourable compared to Indian averages, and even comparable to developed countries. More recently, Kerala has experienced unregulated privatization, inverse care seeking, and cost escalation, with morbidity levels among the highest in the country. To respond to these challenges, the state sought to revamp primary care in Kerala. In 2016, the Aardram Mission was launched to upgrade primary health care facilities and services to make them more responsive to the state's demographic and epidemiological profile. Beginning in 2017, 171 of the state's 848 Primary Health Centres (PHCs) were upgraded to Family Health Centres (FHCs) by increasing staff, training, infrastructure and working hours.

Methods

We undertook a cross-sectional study in four districts randomly selected based upon an index generated using health burden and systems performance data from the latest National Family Health Survey (2015-16). One FHC and PHC per district was randomly chosen. Monitoring indicators were selected through a modified Delphi process. Data were consolidated annually by facility and compiled using simple Excel templates. A primary household survey using multistage cluster random sampling was conducted to collect information from 13,064 people from 3234 households of these PHC and FHC catchment areas. The key findings from our facility and field level survey are reported across Evans et al.'s (2013) three dimensions of Universal Access: Physical Accessibility, Financial Affordability and Acceptability comparing outcomes for FHCs and PHCs.

Outcome

Initial findings were presented to facility staff as well as local self governments leaders in all facility areas in order to assist with course correction, priority setting. Apart from ensuring that they are aware of this baseline assessment, further inputs and suggestions from these stakeholders is being used to guide further data collection and reporting. Going forward, the effort will endeavour to remain embedded in the Kerala FHC reform effort to the greatest extent possible, monitoring progress is vital to ensure that the reforms help to achieve health for all in the state.

Conclusion

Universal access is key to attain universal health coverage. Our findings suggest that primary care reforms in Kerala are still in the early days; yet the increased physical accessibility, financial affordability and acceptability is a very encouraging sign.

HARDWIRING HANDWASHING - A PASSION CONNECT PROGRAMME

Call for Posters topic: Population and Public Health

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Background

The medical community is witnessing in tandem unprecedented advancements in the understanding of pathophysiology of infectious diseases and the global spread of multi-drug resistant infections in health care set-ups. There is now undisputed evidence that strict adherence to hand hygiene reduces the risk of cross-transmission of infections. Our main aim was to have long lasting bonding and positive impact on the community at large by improvising hand hygiene compliance. The objectives of this project were

1. To establish the baseline level of compliance,
2. To identify the constituent parts of an effective and sustainable hand washing programme,
3. To determine the validity of implementation of the hand washing programme within the community,
4. To develop a suitable methodology for engaging the community in the implementation process.
5. To monitor and evaluate the developed methodological approach in order to provide a generic implementation model for community.

Methods

We formulated a committee at the zonal level comprising of:

- Leadership support-Director of medical service, Chief Executive officer
- Infectious disease consultants
- Infection control officer
- Infection control nurse
- Marketing head
- Media support

We approached with our formulated agenda to schools, Teachers, IT companies, Small public hospitals, metro projects, migrant workers working in our city on different projects, Automobile industries etc.
Targets:

- To improvise hand hygiene practices in their working place and home by educating on indications of hand hygiene, cough etiquette
- To touch thousand lives by training them on hand hygiene
- To improvise and teach appropriateness of hand hygiene
- To sustain in their practice of hand hygiene

We connected and bonded with 6000 lives in the community through didactic education and demonstration
We connected with 22000 viewers over social media which was widely shared by 500 people

Outcome

Knowledge, attitude was overall moderate among office bearer as compared to workers community. But practice of appropriateness of hand hygiene was poor among the entire community.
Fluorescent gel and UV lamp technique was widely appreciated and promised to install this challenge counter also in their work areas.
Bugs shown under the microscope and also on culture plates widened their knowledge about their existence on their hands.
Hand hygiene compliance improved in their areas which were indirectly measured by consumption of soap solution. Hand hygiene compliance rate drastically improved for the indication before eating and after using toilet.
There was significant reduction in absenteeism from work as well as in schools. The attractive posters on hand hygiene guided and brought a positive impact on behavior towards hand hygiene. Our approach and connectivity during this project could bring about a sustained improvement in hand hygiene compliance.

Conclusion

Health care associated infections are drawing increasing attention from patients, insurers, governments and regulatory bodies. This is not only because of the magnitude of the problem in terms of the associated morbidity, mortality and cost of treatment, but also due to the growing recognition that most of these are preventable. 80% of communicable diseases are transferred by touch or improper hand sanitation. Hand hygiene contributes significantly to keep everyone safe and also prevents the spread of many of the microbes in the community. Hand hygiene saves millions of lives every year when performed at the right times. The major missing link in prevention and control of communicable diseases is community involvement. We bridged this gap by involving Community in hand hygiene practices on a routine basis to bring positive change.

HEALTH PROMOTION THROUGH MENTORING: AN ADOLESCENT FRIENDLY HEALTH INITATIVE FOR ADDRESSING REPRODUCTIVE AND PSYCHO-SEXUAL HEALTH CHALLENGES

Call for Posters topic: Population and Public Health

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Background:
Psycho-social health problems are important issues among adolescents which are increasing due to rapidly changing life style, increasing stressful conditions continuously faced by them. Proper guidance and counseling may contribute to the psycho social well-being of adolescents and young youths.
Objectives:

1. To investigate reproductive and psycho-sexual health problems of unmarried adolescent students.
2. To explore opinions of teachers and students regarding mentoring for addressing reproductive and psycho-sexual health needs of students.
3. To assess impact of mentoring at school and college levels as an adolescent and youth friendly initiative

Method:
Longitudinal survey was conducted among 1819 adolescent students including 1039 (57.1%) boys and 780 (42.9%) girls and 376 teachers in 12 schools of Chandigarh, India. stratified multi-stage random sampling under ICMR sponsored project "NATURAL MENTORING AND ITS IMPACT ON HEALTH CONDITIONS OF ADOLESCENTS" of three years duration. Prior permission from school Principals, parents and students were taken for enrollments. Mentorship program was introduced in selected schools for one year after baseline survey. Information was collected at baseline and after one year of intervention. Study variables included socio-demographic characteristics, reproductive health behavior, perceptions regarding mentoring and related issues, reproductive and psycho-sexual health concerns like misconceptions regarding sexual activities, lack of knowledge regarding contraception, sexual behavior / indulging in unprotected sexual activities.

Outcome:
Results: Felt need of sex education was found among 1334 (73.3%) students. Girls were having significantly higher (P=0.005) sex related worries and significantly higher degree of felt need of sex education (P<0.001) as compared to boys. About 47% students felt need of mentors. About 87% teachers were of the opinion that mentoring can be helpful in promotion of adolescent health. Mentoring was acceptable by 73% surveyed teachers and 51 %students. Mentoring resulted in increase of awareness regarding contraceptive, teenage pregnancy and reduction in premarital sexual behavior. Felt need of sex education in schools was increased from 60.8% at baseline to 74.2% after intervention.

Conclusions:
Adolescent students faced broad spectrum of reproductive health problems. Desired reproductive health benefits in terms of delaying age at marriage, reducing incidence of teenage pregnancy, and reduction in unsafe sexual and other risky behaviors of adolescents may be attained through mentoring. Study suggests that "Mentoring" may be an effective Adolescent Friendly Health Initiative (AFHI) at school level having potentials of preparing adolescents for Planned Parenthood. Mentoring relationships may contribute to the health and well being of adolescents. Extending Adolescent and Youth Friendly Health Services (AYFHS) through mentoring should be considered for easy accessibility.

IMPROVING EARLY INITIATION OF BREASTFEEDING IN C -SECTION DELIVERIES THROUGH QUALITY IMPROVEMENT APPROACH IN TWO MEDICAL COLLEGE HOSPITALS IN BIHAR, INDIA

Call for Posters topic: Population and Public Health

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Background

Alive &Thrive (A&T) trained and supported hospital teams from the departments of Obstetrics & Gynecology (OBGY) and Pediatrics in 9 medical college hospitals in Uttar Pradesh (UP) and Bihar, in the application of Point of Care Quality Improvement (POCQI) methodology to improve maternal, infant and young child nutrition (MIYCN) service delivery.

This abstract presents the experience of applying the POCQI approach to improve early initiation of breastfeeding (EIBF) within 1 hour of delivery in C-section deliveries in All India Institute of Medical Sciences (AIIMS), Patna and Anugrah Narayan Magadh Medical College & Hospital (ANMMCH), Gaya, Bihar.

In the facilities engaged in this research, EIBF was not a common practice following C-section deliveries. Delay in EIBF was due to lack of skills and confidence among doctors and nurses to initiate EIBF in C-section, leading to separation between the newborn and the mother for 1 to 3 hours post-delivery.

Methods

A&T trained doctors and staff from the department of OBGY on the POCQI methodology in both facilities. Head of the departments subsequently formed QI teams comprised of faculty, resident doctors, interns and staff nurses to analyze the current situation and map the steps from delivery to when the newborn is handed over to the mother for breastfeeding (BF). Key areas of improvement and potential changes were identified to increase EIBF from nil status to 50% in uncomplicated C -section deliveries in 3-months. Specific responsibilities were assigned to the attending doctor and staff in the operation theater (OT) to ensure BF occurs within 1 hour post-delivery. A staff nurse was assigned to record the time of EIBF in the OT register. PW and her family members were counselled beforehand on the importance and benefits of EIBF.

Applying the Plan – Do – Study – Act (PDSA) approach, the changes were first assessed in a single unit and once successful they were scaled to all the other units.

Outcome

EIBF and zero separation of newborn from mother were made compulsory norms in uncomplicated C-section deliveries in both the facilities. EIBF in C-section started at 0% as no system to collect the data on EIBF existed and the aim of 50% improvement was achieved within a month in both the facilities. The QI approach systematically addressed issues related EIBF in C-section deliveries and identified areas of improvement resulting in EIBF in C-section reaching to 79% in AIIMS, Patna and 75% percent in ANMMCH, Gaya in the 3-month period. Significant improvements were also observed in EIBF in normal deliveries as the successful practice of EIBF in C-section motivated all the staff of hospital for EIBF.

Conclusion

Leadership from the head of OBGY department and involvement of all department members including staff nurses, junior and senior residents and doctors were key drivers of change and sustainability.

In both the facilities, an interdepartmental coordination committee has been constituted with representation of departments of OBGY, Pediatrics and Community Medicine under chair of the Dean to sustain the efforts through regular monitoring and review of progress.

Both facilities have a team of trained doctors and nurses with hands-on experience to support EIBF in non-complicated C-section birth deliveries. It is hope that this team will not only support and sustain the current changes but also contribute towards guiding and sustaining other improvements.

The case study demonstrates that it feasible to normalize EIBF in uncomplicated C-section deliveries in the medical college hospital setting, through QI approach, within existing resources and without additional financial investment.

KNOWLEDGE, AWARENESS AND PREPAREDNESS OF COMMUNITY PHARMACISTS TOWARDS CORONAVIRUS DISEASE 2019 AT KATHMANDU, NEPAL

Call for Posters topic: Population and Public Health

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Background

Currently, there is an outbreak of Coronavirus (COVID-19) in many countries with a rising number of deaths. Hence, creating awareness among the health professionals and preparing the healthcare system to handle a possible outbreak is indispensable. Nepalese population often depend on community pharmacies for their minor healthcare needs. Public finds it easy to visit community pharmacies as they are economic compared to the Physician visits. Community pharmacies often serve as the first contact point for healthcare needs. Community pharmacists in Nepal are spread all over the country, even rural and remote villages, and have a huge role in educating the public, maintaining the supply of medicines and health accessories such as face masks and supporting the government initiatives in tackling the outbreak. This study was planned to obtain baseline data regarding the knowledge, awareness and preparedness of the community pharmacies toward coronavirus infection.

Methods

A cross-sectional study was conducted from February 10th to 20th, 2020. The study population included the community pharmacists selected from the registered pharmacies list obtained from the department of drug administration. The sample size was calculated using standard procedures and a total of 81 pharmacies were selected following systematic sampling method. Data was collected using a self-developed structured questionnaire, content validated by experts and pilot tested by administering to ten community pharmacists (Cronbach alpha, 0.75). Ethical approval was obtained from the Institutional Review Board of KIST Medical College and Teaching Hospital, Nepal. Questionnaires were analyzed descriptively and Friedman test was used to find the statistical significance of knowledge, attitude and preparedness scores of the community pharmacists. The mean scores among selected subgroups of respondents were compared using Onaway ANOVA with α=0.05) using SPSS

Outcome

Males were more than female participants. Majority were holding master's degree, and a bachelor degree. 75.3% were aged more than 30 years and the rest below 30 years. Internet was the resource for information on medicine for 61.7% of the respondents and 46.9% of pharmacies were located near the hospital area. 43.2% of the pharmacies handled 50-100 patients per day. In general, the responding pharmacists had a low knowledge on COVID-19 (p=0.485), but better attitude (p=0.011) and preparedness (p=0.000). 60.5% knew that 'Coronavirus' is a virus and only 44 (54.3%) agreed that it can spread from person to person. 46.9% felt infection can be fatal and 55.6% felt that people should not travel to affected areas. 51.9% felt that frequent hand washing may be the best prevention measure. 70.4% felt that a patient with a travel history to the affected areas must get medical attention. The preparedness score varied with work experience (p=0.003) and qualification of the pharmacists (p=0.001).

Conclusion

The findings of this study may contribute to identifying educational interventions that also help policymakers, and regulatory authorities such as the Department of Drug Administration (DDA), Ministry of Health and Population, Nepal Pharmacy Council, and other health and infectious diseases authorities in understanding the usefulness of CPP at the time of the pandemic. The study findings revealed pharmacists to possess less knowledge on COVID-19, but a better attitude and preparedness. More educational interventions are recommended to further enhance the community pharmacists' knowledge on COVID-19, a major public health emergency faced by many countries. Interventions should be

provided to newer pharmacists and the ones manned by pharmacists with lesser qualifications. The studies with evaluating pre and post-study with educational interventions are recommended to further enhance the community pharmacists' knowledge on Covid-19, a major public health emergency faced by many countries.

MULTI-STAKEHOLDER VISION AS A POLICY STRATEGY TO IMPROVE THE QUALITY OF HEALTHCARE SYSTEM

Call for Posters topic: Population and Public Health

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Background

The motivation behind this project on "Multi-Stakeholder Vision as a Policy Strategy to Improve the Quality of Healthcare System" is a part of a "Kanishka Binayak Memorial (KBM) Foundation's (http://www.kanishkabinayaksaha.com/) distinctive activities to make the people aware about a rare metabolic disorder, Primary Hyperoxaluria (PH) as well as to Kanishka's life- line on, who left this world at the age of 9 years and 7 months due to PH. Multi-Stakeholder perspective is a new paradigm shift in science and in its relation to society occurred in the 2nd half of the 20th century, especially with major implications thereof for health, industry, drug development, market and society. From the societal aspects point of view, this work intends specially for the PH, Kidney transplanted (KT) and Liver transplanted (LT) patients, as well as to identify the new ways that are required to link with technological offer and meet the social interventions.

Methods

This work will foster MSIs as Social Innovation for quality healthcare system and practice through good governance specially for the rare metabolic disorders like PH and Kidney transplanted (KT) and Liver transplanted (LT) patients. Combine both clinical and administrative information in order to provide quality life, provide an ongoing advice and support concerning PH and Kidney related patients through the Advisory Council of KBM Foundation. Creating a link with the specific group of stakeholders, i.e. doctors, medical board, ISOT, Govt. Guiding with Organ Transplant Patients and organize a CME Awareness Camp on motivating the transplanted patients to live a quality life and forming CME Awareness Camp on Congenital PH to raise the consciousness and responsiveness program yearly once/twice to exchange information between investigators, clinicians, and patients. The future plan is development of Living lab approach in the healthcare system.

Outcome

MSIs have emerged as a critical force in economic social development and strategic planning. This research suggested MSIs approach could be a very stimulating and sophisticated approach for the new EU member states as well as for the developing countries like India. It indicates that people, firms' individuals as well as government's linking and networking proficiency develop through the amalgamation of different medical practitioners, patients and service provider's groups. The Multi-Stakeholder Platform (MSP) in healthcare, influencing medical issues factors. Moreover, stakeholder's initiatives and their governance encourage entrepreneurial learning and strengthen social innovation and social entrepreneurship of specialized technical and administrative skills. Raise awareness among research institutes, associations and academics, i.e. medical application business, civil society organizations (CSOs), non-governmental organizations (NGOs), individuals and institutions.

Conclusion

In order to solve the problem of healthcare, this work intends to explore about the significance of multi-stakeholder vision in healthcare benefit from the societal aspects point of view specially for the Primary Hyperoxaluria (PH), Kidney transplanted (KT) and Liver transplanted (LT) patients, as well as to identify the new ways that are required to link with technological offer and meet the social interventions. Finally, this work tries to highlight the importance of MSIs, how a good governance can raise the performance of health service and provides a useful entry point for discussions of policy, programs, and implementation. It suggests that MSIs vision as a policy strategy to focus and improve on performance in health care delivery, and in turn, provide policymakers and program managers a basis that enable them to raise quality healthcare system and enhance the healthcare performance.

Acknowledgement:

The first author dedicated this Abstract to her only beloved son "Kanishka Binayak Saha" and the first & second author dedicated this abstract to their beloved father "Chittaranjan Saha".

OUTCOMES OF INTERVAL AND POST-PARTUM INTRA UTERINE CONTRACEPTIVE DEVICES (IUCD AND PPIUCD) INSERTIONS AT AND ABOVE ONE YEAR FOLLOWING INSERTION IN INDIA

Call for Posters topic: Population and Public Health

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Jhpiego, India

Background

Number of women accepting IUCD/PPIUCD in India has increased significantly in the recent past. However, the acceptance of IUCDs in steadily increasing, there is limited evidence around outcomes at one year within the context of a large program.

IUCD has emerge as a relatively new contraceptive choice. Follow up data for continuation and complication is available till six week of insertion and mainly from tertiary care facilities. It was important to generate evidences till one year post insertion from the large public health program.

Methods

This was a secondary analysis of government data collected during routine provision of family planning services between February 2015 and June 2019 in Odisha and Chhattisgarh states. Every client was followed up telephonically till the one year post insertion. Women who received IUCD services followed up at different time intervals by telephonically to know their status till one year post insertion.

The study subjects comprised of 129,571 PPIUCD and 33,607 interval IUCD clients from 388 public health facilities who received IUCD and follow-up services.

Socio-demographic and other fertility-related characteristics were compared among women who continued and those who discontinued IUCD and PPIUCD above one year after insertion. Chi-square test was used for determining associations. Data were analysed using SPSS-21.

Outcome

Continuation rates of Interval IUCD was 68.6% and for PPIUCD it was 57.9%.Additionally, removal rates of Interval IUCD and PPIUCD was observed to be 29.3% and 38.2% respectively above one year of insertion. Heavy bleeding (28%) and abdominal pain/ cramps (36%) were the main reason for discontinuation (within 6 weeks of insertion) in PPIUCD and IUCD groups respectively, while the main reason for discontinuation from six weeks to one year of insertion was abdominal pain in both the IUCD (20%) and PPIUCD (26%) groups.

PPIUCD clients who received family planning counselling during all exposures (ANC, early labor & Post-Partum) to health facility are more likely to continue IUCD for longer period. ($p<0.05$)

Conclusion

Both PPIUCD and interval IUCD have high discontinuation rates, which can be predominantly attributed to symptoms such as heavy bleeding and abdominal pain/ cramps. Hence, it is essential for providers to be technically competent in providing IUCD services as per standard protocol to minimize adverse outcomes. Service providers must also be capable of providing appropriate management and counselling during follow-up in order to minimize discontinuation rates. Such insights from a large scale public health program reflects the scenarios form the "real world settings" and can be used for refining the existing programming and service delivery in India

SUBJECTIVE AND OBJECTIVE ASSESSMENTS OF HEALTH AMONG AGING INDIVIDUALS: A COMPARISON OF URBAN AND RURAL COMMUNITY

Call for Posters topic: Population and Public Health

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Background

A Centre for Advance Research in Ageing and Geriatric Mental Health was established by the Government of Uttar Pradesh, India in the Department of Geriatric Mental Health, King George's Medical University, Lucknow. The purpose was to carry out research activities, training programs and provide services for managing health problems of elderly with special reference to mental health. The first study under the department was 'Lucknow Elderly Study' (LES) which was developed, planned and carried out between April, 2015 to June, 2018. The aim was to collect comprehensive information from randomly selected study participants (45 years and above) from rural and urban communities and generate a cohort to follow up further. As one of the objectives of the study was to assess their health status; during data collection, we obtained their self-assessments of health as well as recorded an objective evaluation. Here, we discuss the differences of objective versus the self-assessed health outcomes.

Methods

This study focusses on larger public health concerns and is an observational study. After random selection of the study areas (urban/ rural), a team of trained researchers including a medical practitioner, clinical psychologist, spiritual counsellor and yoga instructor visited the community. Each household of the study area was mapped and every person aged 45 years and above were identified and screened. They were briefed about the study and requested to take part in the study. All those who had given verbal and written (signed) consent were asked for their time for a detailed interview. Additionally, a comprehensive assessment of the participants was done. In this poster, we have extracted and discussed the response of the participants on their perceived health on a 5-point Likert scale and the results of detailed assessment by the research team. The recorded data of 589 rural (45-59 yrs.=339; 60 & >=250) and 778 (45-59 yrs.=455; 60 & >=323) urban participants will be discussed.

Outcome

On analysis, it was found that in rural areas, the proportion (60%) of participants of 45-59 years of age perceive their health as good or very good. However, the results of objective assessment reflect that only 23% were healthy. Similarly, in the age group of 60 yrs. or > more than 51% reported their health as good or very good, whereas on objective assessment portrayed 18.4% as healthy. Likewise, in urban areas 58.3% of 45-59 years reported their health as very good or good and only 4% found to be healthy on the objective assessment. 46.7% of individuals aged 60 years and above reported their health good or very good and off these only 3.7% were found to be healthy. This is a serious public health concern and needs further investigations.

Conclusion

Health is a social construct that is not limited to medical assessments. The study clearly suggests a disparity between felt health status and actual medical assessment of a community. This can be attributed to normalization of certain behavior that is considered a part of ageing, even though, medically, it is not. Hence, the study points towards a gap between understanding of what is healthy and what actually is medically fit. This in no way suggests that the perceived health status of an individual holds no significance and medical opinion is all that counts. Psychologically, it is important for a person to perceive themselves as healthy to maintain physical and mental stability. The concern only remains that rationalization of symptoms of disease can end in development of morbid conditions that are preventable or manageable. If the dissemination of right knowledge is promoted, perceived health status statistics can be easily converted into medically sound statistics as well.

WORK ENVIRONMENT, LIVING CONDITIONS AND INTENTION TO STAY AMONG DOCTORS AND NURSES IN RURAL AREAS OF ODISHA STATE, INDIA

Call for Posters topic: Population and Public Health

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Background

In India, fewer nurses and doctors work in rural areas than city locations, despite having greater health needs in rural and remote areas. Further, the work environment and living conditions for the doctors and nurses in rural areas pose multiple challenges. Therefore, it is crucial to improve living and work conditions for physicians and nurses for their improved retention in rural and remote areas. Odisha, one of the most underdeveloped states in India, faces the severe scarcity of doctors and nurses. The availability of doctors and nurses in rural areas are very low at periphery health facilities mainly at the Primary Health Centers (PHCs), which the first contact point for the community to access health care. The aim of the study is to analyze doctors and nurses perception regarding living conditions, work environment and their intent to stay in current posts of work; and the associated factors that influence retention in current posts of work in rural areas of Odisha state, India

Methods

A cross sectional survey focusing on quantitative approaches was conducted among 233 doctors and 232 nurses working in government rural health facilities of Odisha. Multistage sampling technique was used to select study participants. The dependent variable “intention to stay” was measured categorically as “Yes” or “No”. The sociodemographic characteristics, living conditions and work environment were the independent variables. The living conditions and work environment satisfaction inventories were evaluated in a five point (number from 1-5) scale that ranged from “very dissatisfactory” to “very satisfactory. Further, the satisfaction items were grouped into three categories: (1) dissatisfied (e.g., very dissatisfactory, dissatisfactory) (2) moderate (not too bad) and (3) satisfied group (e.g., satisfactory, very satisfied). After that, a score of more than 3 were classified as the “satisfactory” group. A score of “2-3” represented moderate; the rest (e.g., <2) were “dissatisfactory”.

Outcome

The mean ± SD age for doctors and nurses were 36.7±10.6 years and 34.8±9.3 years. About 57.6% of doctors and 73.7% of nurses wanted to stay and continue working in rural areas for the next 36 months. The doctors were least satisfied in living condition inventories (overall mean 1.36) and their work environment (overall mean 1.69). However, the nurses were not satisfied with living condition items (overall mean 1.58) while they were moderately satisfied with work environment (overall mean 2.12). Logistic regression showed that lower age (OR=0.94, p= 0.043), less than 30 minute one way time travel to work place (OR=2.59, p=0,023) and better work environment (OR=1.11, p=0.009) were significant factors that are associated with intent to stay in rural areas for doctors. For the nursing profession, it was lower age (OR=0.95, p= 0.047), better living conditions (OR = 1.13, p=0.009) and satisfactory work environment (OR = 1.07, p= 0.015) that significantly influence their intent for retention

Conclusion

The health administrations, managers and policy makers should target for tailor made rural retention strategies. They need to deploy young doctors, nurses and new fresh graduates in underserved communities as well as make provisions for good accommodation facilities closer to health centers for better retention in rural areas. Other facilities (Such as water, telephone, electricity, schooling for their children etc) to work in rural areas should be provided to doctor and nurse community. Doctors and nurses should be given enough incentives to work and stay in rural environment. Though, both financial and non-financial incentives may need a considerable amount of financial resources in country like India, but return in investment for doctors in remote and rural areas may bring a number of benefits to the rural communities. Further, improvement in living condition and creating a culture of supportive work environment can have long term impact on health workforce retention in rural areas.

A QUALITY IMPROVEMENT INITIATIVE FOR REDUCING HOSPITAL LENGTH OF STAY IN RH NEGATIVE PREGNANT WOMEN ADMITTED FOR ANTI D PROPHYLAXIS IN A TERTIARY CARE HOSPITAL

Call for Posters topic: Quality, Cost and Value

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SONIA KAMBOJ
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Background

This quality improvement project was done at the Department of Obstetrics and Gynaecology, Lady Hardinge Medical College and SSK Hospital, New Delhi, India.
Patient group: comprised of RhD negative pregnant women with RhD positive husband blood group and patient's Indirect Coomb's test negative, who were advised Injection Anti D prophylaxis between 28 to 34 weeks of gestational age.
Problem: As a part of our hospital policy, pregnant women are advised admission for receiving prophylactic Anti D injection. These patients had a prolonged hospital length of stay (LOS) with a mean of 9 hours 40 minutes and 30% of these patients absconded due to delay in receiving discharge summary.
Aim Statement: Reducing hospital LOS of RhD negative pregnant women admitted for receiving Anti D prophylaxis from a baseline average of 9 hours 40 minutes by 50% (4 hours 50 minutes), over a period of 4 weeks.
Increased hospital LOS leads to inconvenience and dissatisfaction for the patient.

Methods

This project was initiated in October 2019 and a team constituted. Problem was analysed using process flowchart and fish bone analysis. Issues were identified concerning patient counselling ,admission timing, procurement of injection Anti-D and timely patient discharge. We planned to measure the hospital length of stay as outcome indicator.
Intervention:
Strategy over first two weeks:

- All admissions for Injection Anti D were done from a fixed room in OPD (Prioritising of pregnant women)
- Instructions were given to pregnant women for admission between fixed time slot (8-11 am) from Monday to Friday.

Over next two weeks:

- After indent of drug, staff nurse was instructed to load injection and hand it over to the concerned resident so that it can be immediately given to the pregnant women without any delay.
- Same resident doctor who gave injection to patient was instructed to hand over discharge paper within next 2 hours.
- The type of discharge slip was changed to a small preprinted one.

Outcome

Primary outcome: Reduction in hospital LOS of RhD negative pregnant women admitted for receiving Anti D prophylaxis
Secondary outcome: Reduction in abscond rate of pregnant women admitted for receiving Anti D prophylaxis
Measurement of improvement:

- Before starting this initiative the mean hospital LOS for these pregnant women was 9 hours 40 minutes and 3 out of 10 women absconded from hospital after receiving Anti D injection without discharge summary.
- Statistical analysis involved time-trend methods
- Over period of 4 weeks the mean hospital LOS reduced to 4 hours 50 minutes and abscond rate to 1.4%

Effects of changes:

- Reduced hospital LOS of pregnant women admitted for Injection Anti D prophylaxis

- Patient satisfaction and improved quality of care

Other anticipated benefits: Improving and reducing LOS improves financial, operational, and clinical outcomes by decreasing costs of care for a patient.It can also improve outcome by minimising risk of hospital-acquired conditions.

Conclusion

Following problem was encountered during the process of change:

- The concerned team of resident doctors as well as staff nurses posted in maternity ward kept on changing on rotational basis.
- These problems can be reduced by regular sensitisation of doctors and nurses to follow this protocol at the time of change of team.

Lessons learnt:

- Quality improvement projects involve team work.
- Every problem should be analysed and solutions to be directed towards rectifying contributory factors by making changes in processes.

Messages for others: LOS is one of the most important indicator of hospital performance and health care delivery as it allows optimal use of resources ,with strong associations between LOS and hospital costs since it evaluates bed management.

Hospital leaders can embrace the challenge of reducing LOS to lower costs and lessen risk for its patients by adopting a systematic, data-driven, and multi-pronged approach.

A QUALITY IMPROVEMENT INITIATIVE IN IMPROVING THE RATE OF HAND WASH AT THE ENTRY POINT OF LEVEL III NICU

Call for Posters topic: Quality, Cost and Value

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Background

One-third of the annual 4 million neonatal deaths occurring worldwide are associated with infections. In countries with high neonatal mortality, 50% of these deaths are attributed to infections. India contributes to one-fifth of the total live births and 27% of global newborn mortality.

Proper hand washing by personnel handling neonates is a simple and effective intervention to prevent HCAI (health care associated infection). Strict adherence to hand hygiene practices in neonatal intensive care unit (NICU) has the potential to reduce neonatal sepsis and related mortality. Better adherence to hand hygiene guidelines and policies has been shown to reduce the HCAI rate by as much as 40%.

We had undertaken this initiative in order to audit the current practices in hand wash and to set simple easily achievable goal which would help us achieve an outcome with great impact on neonatal mortality in the long run.

Methods

Study was conducted at Level III NICU of Niloufer Childrens Hospital,Hyderabad, India (tertiary level, 1000 bedded mother and child Government College Hospital with 20 bedded level III NICU). Team was formulated. Baseline data was recorded. Observation of steps of hand wash was also made and recorded. The observation was confirmed by the CC camera installed in level III NICU. Root cause analysis was done using Pareto principle and FISH BONE analysis .Change ideas were formulated after discussion with the team leaders. Data was collected and reviewed every week during the meeting of all the team members and further plan of action formulated. Four PDSA cycles were conducted. Data analysis was done using RUN charts. After intervention phase, maintenance phase during the Covid-19 pandemic needed special arrangement of maintaining social distancing during counseling by marking the floor with paint at distance of 4-6 feet for standing and use of mask by each of the attendees was practiced.

Outcome

Base line data had revealed that the compliance in morning afternoon and night shift was 26%, 8% and 5% .The change ideas were implemented in the form of four PDSA (plan do study act) cycles. 1st PDSA cycle was to sensitize doctors and nurses which had shown the improvement to 60 %. 2nd PDSA was training of support staff and patient attenders .This would be done by assembling everyone at one place and discussing the importance of hand wash and demonstrating its steps. This had shown the improvement to 89 %. 3rd PDSA cycle was to circulate videos and messages among the health care personnel and this had shown the improvement to 93%. 4th PDSA cycle was to display posters at different points of level III NICU and this had shown the improvement to 100%. Maintenance of compliance was checked once in 15 days and it was shown to be sustained at an average of 86.7%. After onset of Covid-19 pandemic the hand wash rate had improved drastically close to 95 to 100%.

Conclusion

Compliance of hand hygiene was improved from the base line to a total of best recorded 100%. Maintaining adherence among newer staff (doctors and technicians) was found to be the most difficult challenge. The effect of the QI initiative may wane if a continuous monitoring system was not in place. Counseling patient attenders and staff during COVID-19 pandemic got difficult with changing rotations of the health care workers and doctors as well as maintaining social distancing while counselling was a challenge. However hand wash rate after onset of pandemic had improved probably due to the government initiative in creating public awareness regarding hand wash in general.

Hence we conclude that simple no cost initiatives can make a drastic improvement in staff and patient compliance towards hand wash thus helping to reduce sepsis and its related mortality and morbidity. These simple interventions can be implemented at any neonatal unit without any extra cost or man power.

A QUALITY IMPROVEMENT INITIATIVE TO IMPROVE HAND HYGIENE COMPLIANCE AMONG PEDIATRICS CTVS NURSES

Call for Posters topic: Quality, Cost and Value

KAJAL, SATHIYRAJ K
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Background

Dept: Pediatrics CTVS NURSES

Background: Health care associated infections persist as a major problem in health settings. Hand Hygiene is the most simple and effective method for the prevention of these infections. On an average health care providers clean their hands less than half of the times they should.

The common reasons for lack of Compliance to hand washing includes lack of appropriate equipment, low nurse to patient ratio, allergies to hand washing products, insufficient knowledge among staff about risks and procedures related to infections, the time required and casual attitudes among health care professionals towards bio-safety. On any given day, about one in 25 hospital patients has at least one health care associated infection. (CDC 2019)

AIM: To improve the hand hygiene compliance among nurses in pediatrics CTVS ward from 40% to 65% within one month.

Methods

This Initiative is based on Improvement Science. The methodology was used Point Of Care Quality Improvement (POCQI) which consists 4 steps.

STEP 1: QI team was formed, SMART Aim was formulated, roles were distributed to all team members.

STEP 2: Following WHO hand hygiene standard measurement tool for data collection to get baseline and than Fish Bone Analysis was used to know the causes of low hand hygiene compliance among nurses in pediatrics CTVS.

STEP 3: Change ideas were tested through different PDSA cycles.

PDSA 1: Enviornment Change
PDSA 2: Sensitization regarding Hand Hygiene (Training/Education)
#PDSA 3: Education Session: Infection control team
PDSA 4: Evaluation and feedback

STEP 4: Sustaining strategies we're formulated:

Strict supervision, continuous education and regular feedback can sustain the improvement.

Outcome

After implementation of all the PDSA an improved median of 65% was obtained within targeted time period (16th March 2019 to 15th April 2019. The quality improvement Program is in progress by using four PDSA.

Conclusion

With simple change ideas, we can improved infection control practices. In this initiative with continuous educational sessions, hands on training and reinforcement contributes in the improvement of hand hygiene compliance among nurses.

A QUALITY IMPROVEMENT INITIATIVE TO INCREASE SENSITIVITY TO PROCEDURAL PAIN IN PRETERM NEONATES

Call for Posters topic: Quality, Cost and Value

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Background

The study was conducted in level 3 NICU of Fernandez hospitals, a perinatal center in South India, over a 6 month period. In the present study, we focused on quality interventions to increase sensitivity of health care personnel to procedural pain in preterm neonates (< 37 weeks gestational age at birth). We chose procedural pain because there was poor adherence to pain relief measures during procedures.
Several studies have also thrown light on long-term consequences of recurrent exposure to painful stimuli in neonates. These include poor neuro-motor development, decreased white matter and subcortical grey matter volumes and heightened sensitivity to pain in later life. Several bodies have published practice guidelines for use in NICUs to decrease pain in neonates. But, in practice there is a gap between available information and its implementation in NICUs, as reflected in several studies and practice surveys. So, a quality improvement initiative can help bridge this gap.

Methods

Time period: November 2019 to April 2020
We have done the following interventions, each over 2-4 weeks period
Baseline period: We observed procedures and collected data on pain relief measures employed and surveyed knowledge using a questionnaire. PIPP scale was used for assessment.
PDSA-1: Powerpoint based educational sessions, bedside discussions
PDSA-2: Bedside visual aids, decreasing redundant procedures, clustering non-emergent samples
PDSA-3: Simulation sessions demonstrating pain relief measures to be used for various procedures. Use of various non-pharmacological measures. Inclusion of sampling decisions in clinical rounds. Focus on heelpricks and venepunctures. Liberal use of pharmacological analgesia where indicated.
PDSA-4: Video-based feedback sessions to improve practices
Sustenance phase (3 months): Continued monitoring of practices, creating of pain protocol

Outcome

The questionnaires revealed a knowledge and practice gap in staff. The sensitivity of healthcare personnel to neonatal pain has significantly improved during the study period from an average of 40% during baseline period to 93% in the sustenance phase. The mean pain score decreased significantly from 12.8 ± 4.5 in baseline period to 6.2 ± 1.8 in the sustenance phase. Mean number of procedures per day decreased from 6.5 ± 1.8 in baseline period to 2.7 ± 0.9 in the sustenance phase. The use of analgesic measures also continued to increase after PDSA-2 to 72% in the sustenance phase. The adherence to use of pharmacological analgesia, where indicated, was >90%. However, the use of non-pharmacological methods remained below 70%. When the process measures were analysed, we noted a sustained increase in automated lancet use after correcting the dysfunctional lancets and more procedures were being done in an appropriate behavioural state and environment (minimal light and sound stimuli).

Conclusion

The findings of our quality improvement initiative indicate that multi-interventional strategies targeting health care personnel can improve their sensitivity to neonatal procedural pain, use of analgesic measures and resultant decrease in perception of pain by neonates. We also noted that several of the redundant procedures can be easily curtailed by focused monitoring.
During simulation sessions, disagreements were sorted by mutual discussion. The nurses perceived increased workload as 2 personnel were needed to give non-pharmacological analgesia during a procedure. Alternative methods were devised for this. Although planned, mothers could not be involved because of staff apprehension. Measures were taken to avoid blame during video-based feedback sessions.
We conclude that focused quality measures addressing the root cause can improve procedural pain management in neonates. Pain monitoring and control should form an essential part of all NICUs.

A QUALITY IMPROVEMENT MISSION IN IMPROVING AND SUSTAINING THE RATE OF EARLY INITIATION OF BREASTFEEDING IN A BUSY TERTIARY LEVEL GOVERNMENT INSTITUTE

Call for Posters topic: Quality, Cost and Value

DR SADIQUA ANJUM, DR HIMABINDU SINGH, DR MADIREDDY ALIMELU, DR SWAPNA .L, DR RAKESH KOTA, DR BHAVANI KALAVALPALLI

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Background

Early initiation of breast feeding (EIBF) refers to initiation of breastfeeding within first one hour of birth. This forms a part of the step 4 of the revised Baby Friendly Hospital Initiative (BHFI) EIBF is known to reduce the neonatal mortality rate by 22%. According to NFHS (national family health survey) - 4, EIBF in India is 41.6% only.

EIBF leads to better latchment, successful achievement of exclusive breastfeeding till six months of age and continuation of breastfeeding till 2 years. Exclusive breastfeeding is known to decrease under five mortality rate by 13-15%. Hence this can play a very important role in achieving the Sustainable development goal 3 (SDG -3) by reducing neonatal mortality rate to less than 12% and under 5 mortality rate to less than 25%.

Hence this QI project was taken up to improve EIBF and to strengthen the health care delivery to the newborns right from the grass root level.

Methods

This QI was done in Niloufer Hospital for woman and children (1000 bedded tertiary government college Hospital with 12000 to 14000 babies delivered per yr).

A QI Team was formed and change ideas were formulated. Problem analysis was done using fish bone analysis and Pareto principle. Six PDSA (plan do study act) cycles were performed weekly. First one involved sensitization of health care personnel. Second involved documented antenatal counseling.Third involved documented peripartal counselling and introduction of birth companion. Fourth involved use of unique “breastfeeding initiated” stamp with signature of the birth companion. Fifth involved use of IEC (information , education and communication) material in antenatal and postnatal wards and in labor room and OTs. Sixth involved introduction of a separate column in newborn sheet dedicated to breastfeeding during hospital stay and in the follow up card after discharge. After the onset of Covid-19 pandemic specific counselling was done.

Outcome

Baseline data in our study had revealed the EIBF rate was 16.5 % (21.7 % among vaginal births and 8.6% C section births). After 6 cycles of PDSA , Early initiation of breastfeeding has improved from baseline 16.5 % to 82.3 % (95. 8 % among vaginal births and 68.7 % among cesarean births). The 1st PDSA of sensitization improved EIBF rate to 31.5%. 2nd PDSA of documented antenatal counselling improved it to 40% .3rd PDSA of documented peripartal counselling improved it to 51%. 4th PDSA of stamp with signature improved it to 69.23%. 5th PDSA of IEC materiel improved it to 73.68% and the 6th PDSA improved it to 82.3%. After initial phase, EIBF was sustained between 74% to 81% . After the onset of Covid -19 pandemic in the 4th week of pandemic there was a fall the rate of EIBF to 70 % (vaginal births to 70 % and C sec births to 42%) and after efforts to look into the created lacunae, the rate improved to 76 % (vaginal births to 76% and C sec births to 54%) in 8th week of the pandemic .

Conclusion

Simple interventions of methodical approach right from antenatal period to birth of the baby can help impact the EIBF rate to a great extent. These simple steps can be implemented at any health facility to reap the huge benefit to the neonatal health. Further progress can be made by the involvement of the government in helping to create a separate column for breastfeeding related issues in antenatal card of mother and follow up card of the baby.The challenges which cropped up hindering the process of EIBF in our hospital during the QI were that the birth companion identified kept changing after initial counselling. Entry of male birth companion in labor room was objected by other pregnant women. Permission of entry of birth companion in OT complex recovery room was a challenge. After the onset of Covid -19 pandemic due to altered rotations of the health care staff sustaining EIBF and coordinating the documentation of EIBF was a challenging task.

ANTIMICROBIAL STEWARDSHIP PROGRAM IN TERTIARY CARE HOSPITAL OF DEVELOPING COUNTRY, AGA KHAN UNIVERSITY HOSPITAL (AKUH), KARACHI, PAKISTAN

Call for Posters topic: Quality, Cost and Value

KASHIF HUSSAIN, SYED SHAMIM RAZA, GUL AMBREEN, MAHREEN MUZAMMIL, SAMREEN SAJJAD, AREEBA NAYAB
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Background

Antimicrobial resistance (AMR) has become critical public health issue. A growing body of evidence demonstrates that hospital based programs dedicated to improving antibiotic use, commonly referred to as "Antibiotic Stewardship Programs (ASPs)," can both optimize the treatment of infections and reduce adverse events associated with antibiotic use. Antibiotic stewardship initiative in Pakistan (ASIP) is an emerging concept. Learning objective is to present in-service education regarding purposes and methods of a stewardship program to other health care providers who are participants/stakeholders in a health care organization

Methods

PDSA tool is used in methodology. Hospital leadership was taken into loop and issued a note on importance and implementation of ASP and nominated physician and pharmacist leader. Antimicrobial stewardship committee approved the protocol which includes core and supplemental interventions Core interventions include pre-authorization and Prospective audits of regimens selected by committee. These audits are done by a team of clinical pharmacists headed by ID pharmacist. Supplemental interventions are pharmacy driven which include dose adjustment, IV to PO, drug interactions.

Outcome

Results compared with historical control .Pre-authorization compliance is 100% in year 2018 while compliance of prospective audits recommendations acceptance is 78% in 2018.Total 625 interventions were done in prospective audits. Define daily dose (DDD) of antimicrobials also decrease after implementation of ASP. Like DDD of ceftriaxone decrease from210/1000 pt-days to 185/1000pt-days.Supplemantal interventions also result in cost saving of USD 20000.Infection rate of multi-drug resistant organisms is also on decreasing trend.

Conclusion

More than its economic impact, this antibiotic stewardship approach leads to decrease in un-necessary antibiotic administration in hospitalized patients.

BIRTH COMPANION FOR IMPROVING THE CHILD BIRTH EXPERIENCE

Call for Posters topic: Quality, Cost and Value

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DR. APARNA SHARMA
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Background

Inspite of making childbirth a completely cashless experience and providing incentives for institutional deliveries under National Health Mission (NHM), India, the expected improvements in key indicators of maternal health and overall childbirth experience of women have not occurred.

A transformational change is required in the care provided during childbirth to achieve the desired results. Birth companion (BC) refers to the presence of continuous support of partner, family member or a health care professional during child birth. Under Laqshya guidelines, a Labour Room Quality Improvement Initiative launched in 2017, allowing BC for all patients during labour is one of the 7 Do's recommended for labor room. WHO vision of quality of care in labor includes BC as a key element.

The project was introduced by the Department of Obstetrics and Gynaecology, JNMC, AMU, Aligarh in May 2018.

Methods

Assessment of problem: A fish bone analysis was done. It was found that increased traffic in labor room, lack of infrastructure, lack of knowledge about advantages, fear of mishap occurring in the presence of BC were some of the challenges for implementation.

Interventions: A sensitisation program was held regarding respectful maternal care. Policy decision was taken regarding implementation of BC in 100% of deliveries.

Measurement: Run charts, patient satisfaction questionnaire, healthcare provider questionnaire, direct observation of the process in labor room, focussed group discussion is being used to generate data.

Sustaining the change: Repeated PDSA cycles are done

PDSA 1: Presence of birth companions was started from May 2018. Initially there was resistance from nursing staff.

PDSA 2: 36 weekers were counselled for BC from August 2018

PDSA3: There was a risk of COVID .From June 2020, counselling and consent was designed and BC was again allowed.

Outcome

Most of the women preferred having BC. In May 2018, the percentage of BC was 5% which rose to 97 – 98% till Jan-March 2020. During the period of lockdown (end of March 2020 till mid-April 2020) it was between 93-95%. A policy decision was taken to stop allowing any BC in view of risk to the companion but when all stakeholders gave the feedback, a third PDSA cycle was done and counselling and consent form was designed and BC was again allowed.

For the woman in labor, BC provided emotional support, facilitated in mobilisation, provided physical comfort and pain relief through massage, helped in changing clothes, encouraging oral feeds and making decisions.

For the Health Care Worker, the BC helped with shifting and transfer, purchasing supplies and drugs, calling the doctor/nurse urgently in case of need. The baby was benefitted as early breastfeeding could be initiated. For the healthcare system, resident accountability and transparency led to confidence building in the system.

Conclusion

Quality initiatives are small changes which go a long way in improving outcomes or the overall healthcare experience. There were many challenges that we faced like staff resistance and taking undue advantage of the BC which were overcome by repeated counselling and training.

A BC has a positive role to play in improving the birth experience and making the healthcare system more accountable and transparent thereby increasing the confidence of the beneficiaries in the system.

Mishaps breed secrecy and training is required to deal with it and maintain transparency.

No project can work successfully without commitment of all stake holders. Sensitization of the patients, their attendants as well as the health care providers is essential prior to introducing a project.

CAREER IN LABORATORY MEDICINE: A PARADIGM SHIFT AND A COMPREHENSIVE SOLUTION TO A MODERN DAY LABORATORY NEEDS

Call for Posters topic: Quality, Cost and Value

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Background

Laboratory medicine (LM) is an integral component of healthcare delivery systems worldwide. Up to 80% of routine patient care is dependent on the test results from laboratory. LM includes several disciplines; clinical chemistry, haematology, microbiology, molecular biology and anatomical pathology. LM is practiced in diverse ways throughout the world. In the US, training in the discipline is comprehensive and includes clinical chemistry, hematology, microbiology, immunology, management, molecular pathology, informatics, and transfusion medicine. In contrast in Europe, European Federation of Clinical Chemistry and Laboratory Medicine connects National Societies of Clinical Chemistry and Laboratory Medicine and creates a platform for all European "Specialists in LM". LM is a newer discipline in India. It was created as a new department in 1988 with an aim to consolidate patients' investigations conducted at various places in All India Institute of Medical Sciences, New Delhi.

Methods

Aims and Objectives:

1. To develop a central laboratory facility for "one-stop shop" solution thereby minimizing delays and reducing turn-around time (TAT).
2. To integrate common investigations to provide a comprehensive patient report that "makes sense".
3. To work towards quality assurance (QA) across the laborator
4. To provide post graduate training in LM

Outcome

Progressive Innovative Discipline

1. Face of the laboratory-LM physician
2. Distinctive combination of automation and microscopy
3. Wholesome solution to patient's laboratory needs
4. Integration of laboratory services for an extensive patient report
5. Holistic laboratory physician under the umbrella of laboratory medicine.

Benefits to patient and medical profession

1. Reduction in Turnaround-time (TAT)
2. Reports that "make sense"
3. Reducing cost –Cost to company (CTC) of LM Physician vis-a-vis of three experts
4. Reducing budget & expenditure of the department/institute
5. Reducing space-laboratory space for service, education and research
6. Focus on quality assurance

Conclusion

To conclude, the concept of LM remarkably fits in Indian Scenario:

1. One single authorised signatory for a laboratory
2. In resource constraint setting one laboratory provides a comprehensive solution
3. Promising with respect to finances,manpower, space and TAT.
4. Creation of new opportunities for example Ph.d courses in LM and others technical courses.

COMMUNITY WOMEN GROUPS PARTNERING WITH FACILITY STAFF TO IMPROVE QUALITY OF MATERNAL AND CHILD CARE IN NORTHERN UGANDA AND SOUTH SUDAN

Quality, Cost and Value

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Torit State Hospital, South Sudan
LOUBNA BELAID, CHRISTINA ZAROWSKY
Montreal University, Canada

Background

This operations research was conducted in St. Mary's Hospital Lacor in Uganda and Torit State Hospital in South Sudan, primarily by health workers, under the Innovating for Maternal and Child Health in Africa initiative, focusing on improving primary maternal and child health by engaging community and facility actors. It worked with community women groups, important consumers of maternal and child health services, and the health care workers who provide it, in the two post-conflict settings where for long survival was prioritised over quality.

There were many informal complaints about many aspects of maternal and child health services in the two hospitals by both surrounding communities and health workers, reporting delays and rudeness by health workers, and many negative experiences. Health workers also decried severe late care seeking and negation of health instructions by clients. This led to rumours and tense patient-provider relationship

Methods

Using formal patient satisfaction surveys and patient feedback from suggestion boxes, health facility quality teams discussed the potential causes and interventions for these concerns. Stakeholder feedback meetings were held, but specific community women groups were also identified to raise more concerns and possible remedial actions. We strengthened facility quality teams to tackle client and health worker concerns, and actively engaged 27 community women groups in working together improve health care. Both community and facility groups identified priority quality problems, discussed root cause and locally implementable solutions which they implemented. From 2017 to 2019, we had quality team meetings in facilities using the plan, do, study, act (PDSA) cycles. In communities, women group meetings (starting 2018) using participatory learning action cycles were done. Community facility dialogues were later organised to harmonise the solutions (starting October 2019).

Outcome

Change was measured by client satisfaction surveys, analysed in percentage satisfaction with different components of care, as well as qualitative comments from community and health worker experiences. Communities subjectively measured perceived improvement in attendance for antenatal, natal and postnatal care, and facilities have already noted improved overall satisfaction from 89% to 97%, and appreciation from communities. Antenatal, natal and postnatal care attendance have improved by 12%, 14% and 30% in the last year alone respectively. Documentation of some processes has improved in the facilities.

There was improved interaction between health workers and community, improved client satisfaction, and improved service access and adherence to medical instructions. Early during community dialogues, we feared shaming health workers or confrontation with clients

Conclusion

Actively engaging clients and facility staff to solve health problems has a strong potential to improve both the quality of supply of health services, but also the interaction that improves care seeking behaviour and adherence. Many things that we measured subjectively in communities could be measured more quantitatively.

Participatory learning action cycles for health workers and communities individually and collectively has high potential for improving client-provider relationship, quality, satisfaction, as well as care seeking. Collaborations between communities and facilities for health can break many barriers to health care and provide opportunities for clarification and feedback

This project involved community women in groups as primary consumers of maternal and child health, and other benefits like needs driven outreaches and health information have been provided

ECONOMIC BURDEN OF NEEDLE STICK INJURIES OVER A PERIOD OF FOUR YEARS IN A TERTIARY CARE HOSPITAL IN INDIA

Call for Posters topic: Quality, Cost and Value

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Background

The present study was a prospective analysis of Needle stick injury (NSI) incidences in a 400 bedded corporate tertiary care hospital in North India. NSIs from contaminated sharps put healthcare workers (HCWs) at risk of blood borne infections and potential medical consequences. Despite causing trauma and psychological distress, NSI generates significant direct, indirect and intangible cost. Each NSI imposes huge economic burden on the hospital in terms of PEP. The substantial cost includes,

1. testing for infection in the injured healthcare worker (cost of viral marker tests, liver function test and molecular tests for HCV and retroviral drugs) and, if known, the patient on whom the needle/sharp had been used,
2. short- and long-term treatment of chronic blood-borne viral infections,
3. staff absence and replacement.

We attempted to design and implement a robust process improvement (RPI) plan to reduce the NSI and related cost.

Methods

Prospective analysis of NSI incidences over a period of four years (Jan 2015 to Dec 2018) was performed. NSI incident reporting was coordinated by Infection control team following the recommended prophylaxis protocol of hospital. An incident form was filled (information about type of device, source status, site and depth of injury, procedure associated and vaccination status) and reported to Emergency (ER). Post Exposure Prophylaxis (PEP) was provided appropriately based on the source status.

Intervention:

Prospective implementation of RPI toolkit was introduced in 2015:

- Root cause analysis for each NSI incident
- Safety engineered devices for prevention of NSI
- Disposal of sharps
- Hepatitis B Vaccination drive to achieve 100% vaccination in hospital staff
- Reminders of Vaccination and follow ups through mails and text messages
- Educational programs

Impact of intervention on reducing NSI incidences and associate cost was analysed.

Outcome

A total of 211 NSI were reported (Mean-52.72/year, NSI incidence-13.18/year/100 beds). Yearly trends showed a decrease by 21.3% in NSI from 2015 to 2018. 50% (106) of injuries were reported among nurses. Root cause analysis showed that 116 (55%) injuries involved use of hypodermic needles and 114(54%) have occurred due to non adherence to hospital policies. 90 cases completed PEP follow up till 6 months. No seroconversion was reported.

The initial cost of PEP for each NSI was variable (59.23USD - 264.23USD) depending upon the source and immunization status. Overall PEP cost incurred was 33075.53USD (average cost 156.79USD/ NSI). 24 cases that had NSI from Hepatitis B positive patients had 6-30% chances of seroconversion if their titres had been low. Collective cost of Immunoglobulins for them would be approx. 1737.16USD. In contrast, amount spent on vaccination of these individuals was 257.16USD. Therefore, the cost saved on PEP for immunized individuals was approx. 1480USD.

Conclusion

Multifaceted intervention brought 21.3% reduction in NSI. Appropriate immunization strategies saved approx. 1480USD expenditure on PEP. 6 months follow up is essential to completely rule out risk of infection yet in our study only 90 could complete their follow-ups due to staff attrition. Intangible cost associated with time lost on NSI prophylaxis procedure, loss of concentration at work and mental distress could not be measured. These were few limitations of our study.

Needle stick injuries are an issue of employee safety which need immediate attention and incur huge costs. They can be prevented by implementing robust process improvement toolkit. Cost of post exposure prophylaxis is an additional burden on the organization which can be minimized by providing vaccination (against Hepatitis B virus) and education to the staff.

EXPERIENCE OF INTRODUCING BIRTH COMPANION IN INSTITUTIONAL DELIVERIES

Call for Posters topic: Quality, Cost and Value

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Background

Pt BD Sharma PGIMS Rohtak, is a tertiary care hospital in Haryana, India.
Birth companion provides support to the delivering woman and improves birth experience and outcome. It is not practiced in low resource setting. It was not a policy in our hospital that the birth companion is to be present at the time of delivery before the introduction of this work. The assessment and analysis of problem was done. It was found that the importance of birth companion was not known.There was no prior fixing of birth companion. No assignment of duties to the birth companion was there. No female attendant was present/ if present was not willing to stay. Health care providers were afraid of Interference with treatment and overcrowding in delivery room. All problems were taken into account and we aimed to increase the percentage of patients delivering vaginally in presence of birth companion from 0% to 90 % in 6 months.

Methods

A Quality Improvement (QI) team did a PDSA (plan do study act) cycle. Time to time meetings were held to assess the problem and to overcome them. Maternity students, residents, staff nurse and guards in Labor room were sensitized. Staff nurse was told to arrange caps, masks, gowns labelled for birth companion. Birth companion duties chart was displayed in Labor Ward. The project was started on 26/11/2019. Involvement of patients, carers and family members in the project was done. Patients who came during labor were counselled regarding birth companion of her choice by the doctor on duty at the time of admission in labor room. Birth companion who was chosen was told about her duties by charts displayed in the labor ward. Record was kept in register in Labor room and it was checked once a week by QI team.

Outcome

In this project, the feasibility of allowing birth companion during delivery was assessed as there was no such policy in our institute prior to this project. We were able to achieve 86% vaginal deliveries in presence of birth companion. We could not continue our study after lock down in March 2020 in India. Anticipated benefits of this project will be to bridge the gap between health care provider and delivering women in resource limited settings as birth companion will fulfill emotional, informative and physical requirements of delivering women. This will also reduce abuse and disrespect of the delivering women.

Conclusion

The policy of birth companion is not practiced in low resource settings. Health care providers shall know the importance of birth companion. They should be sensitized regarding this. At the initial phase of this project, labor room team was not accepting this concept but with continuous encouragement and sustained efforts we were able to achieve our aim. The problems faced during this project were defined, analysed and solved from time to time.The provision of birth companion during delivery is feasible and acceptable. During delivery, birth companion can be allowed so as to provide psycho-social, informative, physical support to the women and respectful maternity care. This project is being sustained and we are planning to counsel the women regarding birth companion during routine antenatal care and to take feedback from healthcare provider and patient.

IMPLEMENTATION OF ACUTE CORONARY SYNDROME CLINICAL PATHWAY

Call for Posters topic: Quality, Cost and Value

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Apollo Hospitals Enterprise Limited, India

Background

Clinical care being human centric and multi-factorial, there are many elements which greatly affect the clinical consensus for treating a patient, especially an emergency patient. Subjectivity, difference of opinion, disagreement, rejection, confusion, limited knowledge leads to a state of clinical dysfunction and inappropriate or inadequate care of the patients. This essentially affect the patient safety and clinical outcomes in an adverse manner. This is a case study of successful implementation of ACS clinical pathways in Apollo Hospitals. This pathway is primarily implemented for a variety of patients presenting with chest pain or similar cardiac morbidity situations at Emergency Department. Emergency clinical processes carried out by Emergency Physicians, Nurses and other professionals around the ACS patients arriving at ER is the focus of this study.

Methods

Implementation of standard, evidence based and appropriate clinical pathway was one of the key interventions. Clinical pathway was chosen keeping the focus on specific clinical circumstances and considering the relevance of the care uniformity amongst the patient population. Such pathway was implemented in order to standardise the clinical care processes, to reduce the risks of deviations in patient care and to make the entire process timely, efficient, consistent and cost effective. Clinical pathway was searched from many authentic sources and references i.e. professional associations / societies / academies, regulatory bodies, government health agencies, professional journals, expert groups and reputed organizations etc and finally adopted from American Heart Association.

Outcome

We succeeded in having faster care processes, fewer deviations and shortcuts, lesser confusions and errors, no complications, shorter length of stay, no mortality, satisfied patients and happier staff. Cost of overall ACS patient management (diagnostics and treatment) also went down to certain extent. The very intent of initiating the care pathways was fulfilled to a great extent. Monitoring QIs were door to ECG and Aspirin time, door to balloon inflation time, mortality rate, complication rate, ALOS etc. Quarterly meetings were convened to discuss the next steps.

Conclusion

Careful selection of pathway is very important. Relevant and value adding pathway should be selected, rather than an easy one. Buy in from all the team members (clinical as well as nonclinical) must be obtained for success of the clinical pathways. Data collection and review mechanism should be planned at the initial phase itself. Clinical pathway implementation is one of the very effective strategies to align all the clinicians of the specialty to a focused care approach and to minimise the variability and deviations. It really streamline the way of treating a patient in a specific condition or circumstances. Not only quality and outcomes, it also saves costs of re-work and errors and adds value to entire spectrum of clinical care.

IMPLEMENTING QUALITY ASSURANCE FRAMEWORK FOR IMPROVED FAMILY PLANNING SERVICES IN JHARKHAND (APRIL 2017- MARCH 2019)

Call for Posters topic: Quality, Cost and Value

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Background

Sub-optimal quality of services diminishes efforts to expand Family Planning (FP) access to women and couples in need. Inadequate preparedness and management at the service delivery point, engagement with community stakeholders, supplies, infrastructure and competent human resources for FP services lead to substandard services. The Government of India recognized this problem and released guidelines on Standards and Quality Assurance in Sterilization Services in 2014. The guidelines address almost all the components- readiness, safety and choices in FP services. Implementation of these has often been compromised by lack of political will and management and monitoring capacity at various levels. Dashboards used in the public health system largely focus on quantity of services by design and quality takes a backseat. The model for improving quality family planning was piloted in 25 high delivery load facilities in districts, Dhanbad (9), Giridih (12), and Ramgarh (4) of Jharkhand State.

Methods

The quality framework was conceptualized, developed and implemented from April 2017 to March 2019 at public health facilities in collaboration with the state government. The components of the frame work were designed to inform policy level changes for creating dedicated counselling space at facilities, task shifting of community health worker as family planning (FP) communicator to deliver FP messages at facilities and community, establishing linkages for scheduling the number of clients for fixed day services at facilities, capacity building of human resource and infrastructure improvement with strengthening of process as per guidelines. The focussed clients were females in the catchment area of the interventional facilities interested in adopting FP services. Door step communication were done by community health workers during their routine field visit to inform the clients and family members on available FP methods.

Outcome

Working Group at districts and Quality Circle at facilities were established. National Health Mission approved USD 32,000 for creating 72 counselling rooms at every facility in 24 districts. Community health workers designated as FP communicators counselled 61,635 clients at health facilities and 15,925 clients through doorstep FP counselling. Through the process of scheduling of clients, 13,873 clients pre-registered out of which 8,449 underwent sterilization. A total of 2702 client exit interview conducted, showed that 92% clients were satisfied with the services provided at the facilities. From November 2017-January 2018 and November 2018-January 2019, the clients informed choice in decision making increased from 82% to 96%, availability of toilet at facilities from 92% to 100%, and availability of bed from 59% to 94%. Dashboard was developed based on qualitative and quantitative indicators. The overall composite quality indicator score increased from 12% in 2017 to 60% in 2018.

Conclusion

Quality of family planning services can be monitored through dashboard which can be used for advocacy with the policy makers to improve the services. Evidence generated by implementation of quality framework and working closely with key stake holder increase the buying among the decision makers for scaling up the quality model. Large investments are not required to improve the quality in family planning services. It just requires a small catalytic investment to build facility infrastructure, skills of the services provider, ancillary staff of operation theater, facility manager, community health workers and use of some process/tools to achieve big returns as demonstrated through the implementation of quality framework in Jharkhand.

IMPROVING COMMUNICATION SKILLS OF RESIDENT DOCTORS AS A PART OF PROVIDING RESPECTFUL MATERNITY CARE: EXPERIENCE FROM TEACHING HOSPITAL IN JHARKHAND, INDIA

Call for Posters topic: Quality, Cost and Value

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Background

Access to care does not guarantee a positive outcome. Care for pregnant women must be of high quality and delivered with respect and dignity. Trained doctors and staffs who adhere to quality standards are critical to minimising the risks of pregnancy complications. In view of this, Govt. of India launched "LaQshya" programme as an evidence based approach to improve the quality of care in public health facilities. One of the key components is providing Respectful Maternity Care during intrapartum and postpartum periods. One of the key interventions is focussed Quality Improvement (QI) cycles of 2 months duration. Ineffective communication skills and lack of empathy of the resident doctors, who are the first point of contact with patients and attendants, reflects as poor patient satisfaction and compliance. This QI project was done for improving the communication skills of resident doctors of the dept. of Obgyn in RIMS, Ranchi, a teaching institution under Govt. of Jharkhand, India.

Methods

Aim statement was "to inculcate the practice of effective communication skills among resident doctors of obgyn dept. of the institution from baseline to at least 50% within period of 6 weeks and to 70% at end 2 months (21.9.19- 12.1.20). Fishbone approach was used to analyse the problem. A brief structured questionnaire on communication skills was prepared. Scoring was done by silent observation of residents by QI team of 6 members. At end of one week baseline data was obtained. The interventions were:

1. orientation of residents by QI team members to emphasize on how the right attitude, empathy and proper communication skills improve patient satisfaction and compliance.
2. Repeated sensitisation of residents by using videos, role plays and team members behaving as role models during interaction with patients and their families.

Timeline: Baseline data at end of first week, orientation, repeated sensitization, PDSA cycles, analysis of data at end 3rd week, 6th week & 8th week.

Outcome

During timeline, apart from silent observation and continual scoring by team members, feedback from patients on the basis of questionnaire were also taken intermittently. For the outcome measure, indicator was: No. of residents doing effective communication (>50% score in questionnaire)/Total number of resident doctors observed (n=23). Impact of change- Baseline data (2.12.19) 8.69%, 1st analysis (16.12.19) 26%,2ndanalysis (30.12.19) 51.17%, 3rd analysis (12.01.20) 73.91%. Orientation and repeated sensitisation of residents improved the desired communication skills and also brought the change in behaviour in terms of empathy and attitude towards patient and attendants. The benefit of this improved communication skill was seen as improved patient satisfaction and compliance to treatment, apart from providing respectful maternity care. Sustainability and future plan includes: repeated sensitisation of residents, nurses, service staffs and periodic assessment at monthly interval.

Conclusion

Effective communication skills of resident doctors, who form the first point of contact with patient and attendants, is the first step towards providing respectful maternity care. Ineffective communication skills, lack of empathy, improper attitude of resident doctors towards clients reflects as poor patient satisfaction and compliance to treatment. Orientation, repeated counselling and sensitisation using video, role plays and senior doctors behaving as role model during communication with patients and attendants, can be used as simple, cost effective intervention tools to improve the communication skills of the resident doctors. An important benefit of effective communication skills would be improved patient satisfaction and compliance, apart from respectful maternity care. Sustainability might become a problem in future especially when new batches of residents join. We propose to organise orientation of new residents on attitude, ethics and communication skills every year.

IMPROVING THE COMMUNICATION SKILLS OF RESIDENT DOCTORS WITH PATIENTS IN LABOUR ROOM
Call for Posters topic: Quality, Cost and Value

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Background
The All India Institute of Medical Sciences, New Delhi is a tertiary care centre with around 2600 delivery per year of which approximately 70% are high risk pregnancies. Managing such high risk pregnancies requires an effective doctor-patient communication. It not only helps the doctor to earn the patient's trust and confidence, but also improves patients' overall satisfaction and compliance with treatment. In developing countries such as India, healthcare delivery systems are constrained in terms of resources and societal expectations of healthcare providers. Doctors are often overwhelmed by number of patients resulting in emotional outbursts and violence towards doctors. Residents are often the first point of contact for the patients and their care providers, and they often face the brunt of such expressions of discontentment. Studies suggest that one of the main reasons for doctor-patient conflicts is the lack of proper communication between both parties.

Methods
A multidisciplinary QI team consisting of a consultant, a senior resident, a junior resident and a nurse was made. We first developed a questionnaire in first week for assessing communication skills among resident doctors and did a baseline evaluation by week two which was interpreted in form of total score of all residents observed x100/Maximum score for all questionnaire.They scored 32.4%. We used process flowcharts and fish bone analysis to identify the causes of poor score. The main reason was lack of awareness, empathy and attitude. Hence the first change idea was sensitization of resident doctors for practising good communication skills with patients in labour room. For this we prepared SOP's for doing proper abdominal and pelvic examination of women and made communication skills poster for display in labour room notice board. The second change idea was periodic reinforcement of good practice points through role plays by consultants while clinical rounds.

Outcome
After the implementation of change ideas, there was a significant improvement in the communication skills of the resident doctors. After the first cycle of PDSA done after 6 weeks, the score improved from 32.4% to 67.8%. This was followed by resensitization through role-plays and positive reinforcement of good scorers. At the end of the second cycle of PDSA after the 8th week, the score further improved to 76.3%. Another important observation was made that the nurses posted in the labor room also spontaneously adopted good communication skill practices while delivering care. Respectful maternity care was ensured. Patients also were satisfied with the care and behavior of doctors. The results have sustained for the past 3 months without any additional efforts.

Conclusion
Improving the communication skills of resident doctors is a challenge especially in India where the focus in all residency programs is only on the knowledge aspect of learning. The residents don't have any awareness and training in communication skills. At our center too, initially, the idea of improving the communication skills of residents was regarded as an unnecessary exercise by the residents until the baseline evaluation was shared with them. However, after realizing the need for improvement, there was a significant change in the attitude as well as scores of the residents. It increased their own confidence besides increasing the overall satisfaction of the patients. Reinforcement through role-plays by consultant on clinical rounds significantly motivated the residents to practice good communication skills in labour room. Hence with a well planned and conducted QI project, significant changes can be accomplished within the existing resources with team efforts of all.

EFFECT OF AFP SMART APPROACH IN IMPROVING QUALITY OF CARE IN FP SERVICES IN FOUR STATES OF INDIA

Call for Posters topic: Quality, Cost and Value

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Background

The Advance Family planning program (AFP) was launched in 2015, in state of Jharkhand, India with an aim of mobilizing necessary policies, funds and services to support rights of men and women to access contraceptive information, services and supplies, without coercion. It was later expanded in the states of Maharashtra, Uttar Pradesh (UP) and Assam by 2019. In accordance with the Government of India's (GoI) vision for quality family planning (QFP), Jhpiego successfully integrated AFP advocacy efforts to support establishment of district working groups (DWG)by diffusing AFP SMART (Specific, Measurable, Attainable, relevant and Time-bound) approach throughout government and regional organizations working on family planning (FP). This study is essentially secondary analysis of program monitoring data collected during three years of the AFP program. The analysis aims at describing how AFP program efforts were related to improvements in quality of FP related care in the intervention states

Methods

A District Working group (DWG) which comprised of influential advocates from government and other organizations was formed in all intervention districts. Members of DWG were trained with the SMART approach. Landscape assessments were carried out in all four intervention states in 2016-2017 to understand prevailing scenario of FP services. Data were used to frame 'SMART' objectives around better access and improved quality of FP services. Intervention facilities were identified with consultation of DWG members. Healthcare providers were oriented and trained for their capacity building. Supportive supervision visits were undertaken by Jhpiego employees to provide technical assistance. Aggregate facility level data were collected as monthly progress reports (MPRs) from selected health facilities. Information on key indicators(no. of clients undergoing sterilisation, no. of clients accepting a method of contraception) were collated and trends were observed to monitor outcome of intervention

Outcome

I. Improved uptake of services during FDS (fixed day sterilization) sessions
   In UP, post introduction of the FDS mechanism, proportion of planned FDS services which were held, improved from 24% to 59% and proportion of pre-registered women who were operated, improved from 40% to 89%. In Maharashtra, FDS planned v/s held ratio improved from 62% to 91%
II. Initiation of Post Abortion Family Planning (PAFP) Services
   Post the introduction of PAFP services, percentage of abortion clients not accepting any method of contraception reduced from 52% to 35% in Maharashtra. Furthermore, acceptance of contraception by the clients post PAFP counselling increased by 6%. Similarly, in UP percentage of clients accepting modern contraception method of choice has gone up from 4% to 56%
III. Improved informed choice

In Maharashtra, post integration of FP counselling with Antenatal Care (ANC) and immunization services, a total of 2898 clients were counselled, of which 44% accepted some form of contraception.

Conclusion

Advocacy is not resource intensive; small catalytic investments can lead towards big achievements. Partnering with the community and the government leaders accelerates achievement of objectives and can lead to substantial change. Building accountability strengthens ties between the community and health providers. Being a purely advocacy focused program, there was no direct involvement with the beneficiaries. However, advocacy was mainly focused around improving the quality of services provided to the acceptors of FP services. Despite existing health systems related challenges like shortage in the number of health care providers, their limited availability for trainings due to competing priorities, ill equipped facilities, poor availability of logistics and insufficient supply of contraceptive methods, the

program was successful in achieving targeted outcomes. This provides ample evidence to reiterate that the SMART advocacy approach enables local planning, ownership, and achievement.

INFLUENCE OF LANGUAGE BARRIERS ON PATIENT SATISFACTION IN PRIMARY CARE

Call for Posters topic: Quality, Cost and Value

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Background

The London Borough of Hackney has a population of nearly 300,000, speaking 10 different languages including Turkish, Polish and Bengali, with the latter spoken by around 1.3% of the population. Between the 2001 and 2011 census, there has been a 4% increase in Bangladeshi people living in Hackney.

A lack of English proficiency can present as a barrier between a healthcare professional and a patient and can affect the quality of service, adherence to treatment and delays in getting access to appropriate services. It can also present as an obstacle to overcome when gaining informed consent and in confidentiality.

The purpose of this study was to explore the impact that language barriers have on Bengali speaking women and their patient satisfaction at a GP surgery in Hackney. Language barriers are still a recently new and limited area of research.

Methods

Despite there being various language services available in Hackney, there was no primary service for people who could speak Bengali. A popular service amongst clinicians is Language Line however this often took a long time bearing in mind that GP appointments are usually limited to ten minutes. Another method would be to book a translator prior to the appointment, which many clinicians have found difficult to use logistically as well as in regard to cost effectiveness.

The GP partners were brought in early to discuss the appropriateness of the study, and later on another staff member was recruited to act as the translator. The intervention involved a group interview with Bengali speaking women who were registered at the GP surgery. Prior to this each patient had been called and consented to participate in the study. The questions were classified into participant characteristics, personal health management and their experience of healthcare.

Outcome

Whilst all participants were satisfied with their current experience at the GP surgery, each participant felt like more could be done to improve their use of the services at the practice. Where the participants who were accompanied by a family member were happy with their experience, future safeguarding issues could arise which should be addressed.

Following the interviews, a list of recommendations were presented to the GP partners, which included providing an information board in the waiting area with accurately translated written materials about various medical conditions and promoting healthy lifestyle habits, to increase patient understanding and access to services. Other recommendations are to hire and maintain an up-to-date list of bilingual employees and consider offering language training to volunteers or existing staff members to become practice interpreters. It was important to consider and include as many different languages to represent the diverse population in Hackney.

Conclusion

The main limitation of this study was the unrepresentative sample due to a sample size of 6 participants. Other limitations included the staff member that acted as the translator who may have introduced bias as well as summarised the group response rather than individuals. In addition where group consultations allowed for discussion it may have also meant women mirrored the views of those more vocal and this should be avoided by conducting individual interviews in future studies.

However, whilst this was a small scale study with a limited time frame, it has highlighted the importance of gathering patient feedback to improve satisfaction. Where language barriers can impact a variety of components of a patient's experience, the long term effect could lead to patients not seeking medical help when needed resulting in adverse outcomes. Future studies should be conducted with larger sample sizes and should also explore the impact of language barriers with a wider range of foreign languages.

PATIENT'S SATISFACTION ANALYSIS WITH PHLEBOTOMY SERVICES IN TERTIARY CARE CANCER HOSPITAL
Call for Posters topic: Quality, Cost and Value

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Background
The study is being done in sample collection centres in the OPDs of the Rajiv Gandhi Cancer Institution and Research centre (RGCIRC). Being a tertiary care cancer hospital, it witnesses massive patient footfalls during OPD timings. The patient load in our OPDs was difficult to manage, especially in the morning timings, which are most desired slots. Hence due to the availability of only two sample collection centres, we were witnessing massive queues. This was leading to patient dissatisfaction. We were trying to fix the problem on an ad-hoc basis, however, the desired output was not encouraging. In order to fix the problem in totality, we embarked on the mission to understand the patient's problems in a structured manner by outlying this study. The study is on-going, however, preliminary data that have been analyzed indicates, long waiting time, small size of collection room, difficulty to navigate and discomfort of wheelchair or trolley bound patients to reach the collection centres.

Methods
Patients are interviewed about phlebotomy services with help of self- structured questionnaire, both in Hindi and English language.This questionnaire is self-designed along with inputs from technical staff and previous studies. Informed consent was taken from all the patients. The patient's confidentiality was maintained. The questionnaire included ten parameters. All the selected patients filled up this questionnaire. A 5 point Likert scale was used. Patients were asked to grade on all parameters on a scale of 0 to 100: 100 being strongly agree; 75 as agree; 50 as neutral; 25 as disagree; and 0 as strongly disagree. Strongly agree, agree and neutral responses are considered as satisfied whereas disagree and strongly disagree are considered as dissatisfied. The data gathered has fulfilled the important message of Voice of Customer (VoC), as one of the main tools in order to understand our patients and therefore make more informed decisions that align with the needs of patients.

Outcome
As per data analysis, patients have complained about four major issues- long waiting time, collection room is small, sample collection room difficult to navigate and inaccessibility of collection centres on first or second floor by the wheelchair or trolley bound patients. Accordingly, one new sample collection room was commissioned on ground floor, which increased the collection centres to three in number. The process took almost four months to finalize the project. Also, as a part of the expansion project of the hospital, the existing sample collection rooms were shifted to newly and better-built collection centres. The impact of interventions is observed instantaneously as the waiting time of patients decreased from an average of 30 minutes to 5 minutes. This has helped in reducing the waiting time and helped the patients while accessing phlebotomy services. The faster turnaround time has enabled the faster management of patients with quicker hospitalization and better outcomes.

Conclusion
We at RGCIRC phlebotomy services strive for excellence and quality services to our cancer patients. Several surveys and random inspections are conducted by the team to collect information about changes and necessary actions are taken in order to improve the services. Being a tertiary care cancer hospital, special precautions are taken to deal with patients having special and extra needs. Staff was trained to be extra gentle in handling aggrieved patients; preference for phlebotomy was given to senior citizens and persons with disabilities and organize training and teaching programs in a regular manner ensuring maximum participation of technical staff. Further study with a larger sample size, is needed to judge the deficiency in the other areas to have a broader outlook of patients about phlebotomy services. However, we will continue to make an effort to reduce the dissatisfactions in our phlebotomy services by taking sustainable actions.

PROJECT SEDAP! IMPROVING QUALITY OF CARE FOR RESIDENTS WITH DYSPHAGIA THROUGH 3D-MOULDABLE PUREED MEALS AT A LONG-TERM RESIDENTIAL CARE FACILITY

Call for Posters topic: Quality, Cost and Value

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Background

Based on overseas studies, prevalence of oropharyngeal dysphagia is about 40% to 60% in residential age care facilities. Texture modified diets are routinely used in the management of swallowing disorders. However, for individuals requiring a pureed diet, it may result in decreased oral intake due to changes in appearance and texture. Interventions have been trialed overseas to improve presentation of smooth pureed foods into shapes so that the food resembles its natural form. This has shown to increase in volume of food taken.

At present, there are no guidelines in Singapore for the implementation of this intervention in a long term residential care facility. At this nursing home facility, the pureed foods were served by blending all foods and placing them in a single bowl for feeding. This pilot program aims to determine if the use of 3D-mouldable pureed meals can improve patient consumption and nutrition in a residential long term care facility in Singapore.

Methods

In order to improve oral intake in patients with dysphagia, 3D-shaped pureed meals were implemented. Improving the pureed meals in relation to

1. Taste, Appearance
2. Texture and Consistency as per IDDSI guidelines

Pre-post design was used with 5 patients with dysphagia who were placed on pureed diet by a Speech Therapist. This is a 3-week pilot study, with the nursing home's approval for collection and analysis of data. A total of 5 participants for both the control test (“Bowl”) and the treatment group (“Bento”) were inpatients who are neurologically impaired.

In week 1 of the pilot study, data were collected at both the lunchtime and dinnertime meal for all meals. Smooth pureed meals (“Bowl”) only, served in the standard format from the kitchen. In week 2, pureed meals for the patients were provided in a moulded format (“Bento”). Week 3, the patients were then served the smooth pureed meals. (“Bowl”)

The change model was communicated to management and all ground staff involved.

Outcome

Main outcome measure was the amount of pureed diet consumed by the patient n weight (in grams) of both “Bowl” or “Bento”. A mixed model analysis was used to determine if there was a statistically significant difference in the consumption of mouldable pureed foods compared to pureed diet at the care facility.

From the results, patients consume more food from the 3D-moulded “Bento” meals than the existing “Bowl” meal. The p-value calculated is <0.05 which showed that there is statistically significant difference in amount of food consumed between “Bowl” vs “Bento” meals.

The benefits from this project was that the residents can enjoy the 3D-mouldable pureed foods with taste, texture and improved oral intake. Nursing staff were also made aware of the importance of taste and texture of pureed foods in assisting oral intake. Mouldable pureed foods can be a potential way to improve oral intake in patients with dysphagia in other long-term care facilities.

Conclusion

Changes need to be actively reviewed and frequent communication is important in addressing issues relating to food preparation and data collection. The menu was designed in collaboration with residential care staff to ensure the 3D-mouldable pureed meals were culturally appropriate for the care facility.

It would be important to increase the sample size, length of sampling and analysis of meal components with the inclusion of additional outcome measures such as change in energy intake, types of foods consumed and impacts on body mass and composition. Other factors such as the efficiency in time and

cost of preparation of this 3D-mouldable pureed foods compared to traditional pureed food methods can also be explored.
Mouldable pureed foods can be a potential way to improve oral intake in patients with dysphagia in other long-term care facilities and with other/larger patient population as indicated by positive results in this study.

QI PROJECT ON RATIONAL USE OF ANTIBIOTICS IN THE DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY AT A TERTIARY LEVEL HOSPITAL LHMC DELHI

Call for Posters topic: Quality, Cost and Value

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Lady Hardinge Medical College and Associated SSK Hospital Delhi India

Background

- The project was done at Department of Obstetrics and Gynaecology in a busy high-load Public sector Hospital Lady Hardinge Medical College and Smt. Sucheta Kriplani Hospital, New Delhi with a delivery load of 13000/annum
- Principal Investigator: Dr Manju Puri Co Investigator Dr Shilpi Nain
- Focus group was patients undergoing elective surgeries and problem identified was rampant and irrational use of antibiotics in postoperative period resulting in antibiotic resistance
- A base line analysis was done to capture the antibiotic use practices, a team was constituted and the problem was analysed
- The team Involved nursing officers, residents and consultants
- Aim statement: To implement the single dose antibiotic prophylaxis (SAP) in patients undergoing elective major surgery from baseline 0% to 60% by 8 weeks

Methods

- After doing fishbone analysis to assess the problem, an antibiotic policy was formulated after referring to national and international guidelines for patients undergoing elective surgeries.
- Outcomes were monitored and data was shared on monthly basis
- Changes implemented with timelines:
    - Formulation of antibiotic policy and its adaption and workshops for residents on asepsis: 1st Feb 17 to 28th Feb 17
    - Implementation of one component of antibiotic policy namely use of single dose antibiotics for low risk elective surgeries in one unit: 1st March to 31st March 17
    - Implementation in all units: 1st April 17
    - Identification of nodal officers in each unit with monthly meeting and discussion in person: 1st Sep 17
    - Re-sensitization and regular sharing of data by nodal officers: 1st March ’18
    - Making a WhatsApp group for reminders 1st July 19
    - Hold meeting with nodal officers on a fixed date every month: 1st Sep 19
    - Sharing data in front of whole department

Outcome

Measurement of improvement:

- Process measure: Number of low risk patients undergoing elective surgery receiving SSAB out of all low risk patients undergoing surgery
- Outcome measure: Number of patients developing Surgical site infections out of all patients receiving SSAB

Effects of changes:

- The departmental antibiotic policy was formulated, hence uniformity in antimicrobial prescription.
- The antibiotic use decreased without any increase in Surgical site infections
- Patient stay in hospital decreased as the need to give intravenous antimicrobials decreased
- Intervention saved the unnecessary expenditure and saved the patients of unnecessary discomfort and side effects. Will decrease antibiotic resistance in long run
- Involvement of all concerned, monitoring the process and outcome measure alongside and comparing it simultaneously with surgical site infection in those receiving antibiotics for 7-10 days, regular monitoring and sharing of data helped in sustaining changes

Conclusion

Impact:

- Motivation for consultants and residents to follow guideline-based practice and avoid unjustified antimicrobial prescription.
- The use of antibiotics reduced
- Patients were more comfortable and so were the operating teams
- Understanding need to do risk assessment prior to surgeries and optimise patient's health status.

Problems encountered:

- Fear of sepsis in elective surgeries prevented wholehearted involvement of few consultants initially which was allayed by regular sharing of data and comparison with the group receiving full course of antibiotics.
- It took time for some to come onboard especially those with average surgical skills

Message:

- Building of consensus and addressing concerns of those likely to be involved in the change is important
- The changes need to be introduced slowly and patiently
- One needs to showcase the results to others for them to follow
- Regular monitoring and sharing of data is important

QUALITY IMPROVEMENT PROJECT (QIP): END OF LIFE (EOL) CARE IN ACUTE MEDICINE DEPARTMENT, THE QUEEN ELIZABETH HOSPITAL KING'S LYNN (QEHKL)

Call for Posters topic: Quality, Cost and Value

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The Queen Elizabeth Hospital Kings Lynn NHS Foundation Trust, United Kingdom

Background

End of Life (EOL) care in QEHKL was rated as inadequate by Care Quality Commission in their report published on 24/7/2019. Therefore, a Quality Improvement Project (QIP) was conducted in collaboration with NHS Improvement (NHSI) in acute medicine, aiming to recognise EOL patient at earliest opportunity during acute admission, to deliver high quality, compassionate and personalised EOL care with a holistic approach in a timely manner and to raise awareness about EOL care among staff in acute medicine.

Methods

This QIP was conducted prospectively for 10 weeks (24/9/2019 – 2/12/2019) with daily data collection using a standardised proforma in acute medicine department. Proactive EOL teachings with open discussions and weekly performance update were delivered to doctors and nurses in acute medicine. Staff from acute medicine also attended regular meetings with NHSI to gain advice from experts for EOL care improvement.

Supportive & Palliative Care Indicators Tool (SPICT) was introduced to junior doctors, helping them to identify rapidly deteriorating patients and provide feedback to senior clinicians to make further clinical judgement. This helps in early recognition of EOL patients.

Outcome

19 EOL patients were identified during their acute admission. All patients with full mental capacity were involved in EOL care decision-making. Do not attempt resuscitation (DNAR) was found in place in all EOL patients. Anticipatory medications were started in all EOL patients at earliest opportunity to keep patients comfortable. Individual Plan of Care (IPOC) was started on 68% of the EOL patients to deliver individualised care.

Conclusion

Awareness about early recognition of EOL patients was successfully raised among staff in acute medicine department through this QIP. EOL care was found to have markedly improved in acute medicine. Appreciation messages were received from patients via "Family and Friends Test".

Importance of EOL care should always be highlighted in departmental meeting to sustain current good practice in the long run especially during the change-over period of junior doctors.

REDUCING DOOR TO REPERFUSION TIME IN ST ELEVATION MYOCARDIAL INFARCTION PATIENTS: QUALITY IMPROVEMENT STUDY IN A TERTIARY CARE CENTRE IN INDIA

Call for Posters topic: Quality, Cost and Value

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Background

Our health care facility is one of the largest tertiary care government hospital in the capital city of India. Our Emergency Department (ED) caters to more than 450 patients every day. Due to a large volume of cases, patients of ST Elevation Myocardial Infarction(STEMI) presenting within the window period often missed the treatment within time. The focus of this Quality Improvement(QI) project was to improve systems to achieve standard of care for STEMI patients, which is a highly time sensitive condition. The aim of the project was to increase the percentage of STEMI patients undergoing primary Percutaneous Coronary Intervention (PCI) with Door to Balloon time of < 90 minutes by 30%.

Methods

After Institute ethical approval a QI team including doctors, nurses, health assistants and security guards was formed. After mapping patient's journey, the delays were discussed using fish bone analysis. A few successful change ideas are highlighted:

1. Focussed group discussions were done to create awareness regarding the care of STEMI patients and to motivate the staff. The mean door to ECG time during 9th to 23rd April 2018 reduced from baseline 20 minutes to 13 minutes.
2. Fast track lane was made from triage to treatment area. The average time to transfer reduced by half.
3. An Induction program was organised about emergency care on 7th and 13th of July 2018. The data collected between 8th and 22nd July 2018 decreased door to cardiology communication time to 19 minutes from baseline 35 minutes. The induction program became a part of the department activity thereafter.
4. Early interpretation of ECG by ED Senior Resident led to faster diagnosis by the end of January 2019.

Outcome

The project helped to develop and smoothen processes between Emergency Medicine and Cardiology for timely care of STEMI patients. The project brought about a visible cultural change and in the knowledge, attitude and practices of the frontline health staff. At the end of intervention phase, the percentage of patients undergoing PCI within 90 minutes was 70% as compared to baseline of 22.22% at the start of the project. After 4.5 months of post intervention 70% percentage patients were still undergoing PCI within 90 minutes.

Conclusion

QI is a cultural change as much as it is science. Engaging with frontline staff, taking their inputs and working with all cadres of staff as a team was the single most important change concept. To bring about sustainable improvement, both individual and system barriers need to be addressed. There is a significant improvement in the percentage of STEMI patients receiving PCI within 90 minutes of arrival. This has led to improvement in emergency cardiac services at our centre and the community at large.

REDUCING THE INACCURACY IN INTAKE OUTPUT CALCULATION OF POST-CARDIAC SURGERY PATIENTS IN ICU

Call for Posters topic: Quality, Cost and Value

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AIIMS, New Delhi, India

Background

CTVS ICU A, AIIMS, NEW DELHI, INDIA. Fluid management is an important nursing responsibility in care of Post-cardiac surgical patients. Every patients' management decisions are influenced by inadequate fluid balance information. The inaccuracy in intake output calculation in ICU Charts done by nursing officers was around 28.6%.

Methods

Used improvement science method to reduce the inaccuracy in intake output calculation in ICU charts of post cardiac surgery patients. The QI team was formed including the ANS, Senior Nursing Officer and Nursing Officers of the department. Assessed and prioritized the problem using prioritization matrix. Data was collected using observation by Senior Nursing Officers in the ICU. The change idea was to assess the attitude of the nursing staff regarding the common factors causing an error using a Likert scale and educate them one to one about how to minimize or to overcome those factors. Senior Nursing officers were given the responsibility to educate the Nursing officers. This was done for a period of two weeks.

Outcome

With the change idea implemented and covering the majority of Nursing staff, the errors reduced from a median of 28.6 to 7.14. By this the care of Post-cardiac surgical patients were improved. It improved the morale of the staff and staff satisfaction. Unnecessary fluid resuscitations were prevented. Patient care quality improved by a simple change idea.

Conclusion

All the staff could For the accuracy of fluid balance monitoring in ICU, awareness about potential consequences of calculation errors should be reinforced during bedside rounds and in-service education to improve nurse's knowledge. The changes can be sustained with implementation of protocols and ongoing supervision by the administrators.

REDUCING THE WAITING TIME TO INITIATION OF INFERTILITY TREATMENT AT A TERTIARY CARE CENTRE IN INDIA

Call for Posters topic: Quality, Cost and Value

K APARNA SHARMA, ANSHU YADAV, CHITHIRA SRIDHAR2, NEENA MALHOTRA
AIIMS, New Delhi, India

Background

The All India Institute of Medical Sciences (AIIMS), New Delhi is a tertiary care government hospital in New Delhi, India. About 400 patients are seen every day in the gynaecology outpatient department (OPD), with about 40% of these patients coming for infertility management.

The limited infrastructure, resources and low staffing levels affects the quality of care that the staff is able to deliver, especially given the high patient volume. We realised that patients were having to wait for months to get investigations done and for follow-up appointments. Time is of extra essence in managing infertility. So the long waiting period for initiation of the infertility treatment was adding to the stress faced by patients.

Increased waiting times are not always the result of infrastructural or system problems. Redistribution of resources or restructuring of processes can sometimes improve outcomes.

Methods

A multidisciplinary QI team consisting of a consultant, a senior resident, a junior resident and one nurse was formed.Baseline data from 10 consecutive females presenting to gynecological OPD was collected prospectively. .The average waiting time was found to be 6 months and 25 days (Mean = 6.85 months;3.5-10 months). The team used process flow diagrams and fishbone analysis to identify various causes for these long waiting times. The main reason for the delay in starting infertility treatment was that the date for HSG was given only after seeing EA report (i.e. after ruling out endometrial tuberculosis as there is a risk of dissemination of tuberculosis during HSG). Also, HSG was done only once a week during a short two hour slot in the fluoroscopy room.

The first change idea was to give the date of HSG test by the nurse posted in the procedure room on the same day when EA test is done.The second change idea was to arrange additional slots for HSG in the fluoroscopy room.

Outcome

After the implementation of change ideas of there was a significant reduction in the waiting period for starting treatment in infertility patients. After the first change idea the average waiting period seen in 10 consecutive infertility patients was reduced to 3.25 months i.e. by 51.8% from the baseline within a 2 weeks interval and there is shift in the run chart diagram(fig 2).

After the second change idea the waiting time reduced to 2 months i.e. by 70% seen in the next 10 consecutive infertility patients within next 2 weeks time.

The results were sustained for 6 months, without any additional resources .

Conclusion

It took significant convincing for the nurses to combine the dates for HSG and EA as it was perceived that it would increase their work load significantly. However, after initial few slots, it actually decreased crowding as two visits were being combined together.Increasing the time for HSG from two hours in a day to six hours in a day meant increasing the cases from 10-15 to almost 40 per day. For this some more instruments were indented with the cooperation of the sister which was easily available in the hospital store. A rotation of staff posted in HSG was agreed upon between the gynecology and the radiology department for the smooth conduct of the procedure. Also, the duty roster of the residents doing the HSG was shuffled so as to accommodate a full day of doing the procedure.

With a well organized and conducted QI project and team efforts, the required changes can be brought about even in a resource strapped healthcare delivery system.

SUSTAINABILITY GOALS IN INFECTION PREVENTION AND CONTROL: PRACTICAL SOLUTIONS
Call for Posters topic: Quality, Cost and Value

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Artemis Hospitals, Gurgaon, India

Background
An alternative solution to improve sanitation and proper bedpan management has been practiced in a tertiary care hospital in urban settings of northern India. The risk of HAIs by poor management of reusable receptacles has been shown in survey conducted by KNIP which shows 4-21% reported HAIs from source related to unclean bedpans and urinals. The practice of manual emptying of reusable receptacles like bedpans, urine bottles, kidney trays, sputum mugs etc. is an underestimated, unpopular and labour-intensive task for caregivers, who are mainly the nurses and nursing assistants. This practice has risk of spreading microorganisms directly to the environment or indirectly via healthcare personnel. The fact that bedpans have to be emptied before the decontamination process with the risk of splatter, splash and aerosol is not taken into account. We have recognized the weakness in bedpan management and set an alternative solution within our means.

Methods
To reduce the risk associated with Re-usable system for discarding human waste a pilot project was conducted in ICU1 and ICU2 of our hospital for the duration of four months. We have replaced the reusable bedpan washer/disinfectant facilities to Vernacare single use vortex disposable system (Macerators) and conventional metal/plastic bedpan, kidney trays, urinals and sputum mug to Vernacare biodegradable medical pulp products.
Disposable medical pulp products are made by extracting water from a suspension of cellulose paper fiber designed to be used once, and then disposed of in a macerator. After depositing the medical pulp product in the macerator, the door closes and the macerator empties and crushes the pulp products, the remains of which flow to the sewage system. Using of medical pulp products does not require manually emptying the human waste hence reduced the risk of cross contamination.

Outcome
We have categorized the impact of using pulp products into four categories for better analysis – 1. Environmental benefits, it has used less energy and water than re-usable systems to dispose of biodegradable medical pulp products, using macerator. -2. Nursing time benefits, it helped to improve working conditions, increase patient dignity and save nurse time, released more time to care for patients. -3. Financial benefits, the cost was significantly less to purchase than re-usable systems. Further financial benefits are provided through the savings in nursing time and reduction of costly HAIs. -4. Infection prevention benefits, It has removed the concerns over the effectiveness of thermal washer disinfectors and helped to break the chain of infection. Further added the hands free opening and closed drum maceration which prevented the risk of aerosolisation of harmful pathogens.

Conclusion
The disposable pulp receptacles were seen to be more convenient, more hygienic, have better ease of use & save time and less of a risk in spreading infectious diseases.
Problems encountered
Disposable bedpans and supports results in high operating cost, recurring acquisition of single-use supplies, large volume of biodegradable waste generated, single-use bedpans and bedpan storage racks, vortex units needed large storage area and space. The annual operating costs for the use of macerators were higher than those for bedpan washers.
Message
Given that disposable pulp support helps to reduce the risk of cross infection and promote hospitals' sustainability agendas. It is necessary to carry out a pilot project on the use of disposable pulp medical products to gain further insight into the degree of complexity involved in operating it, the prevalence of bedpan use and the risk level for nosocomial infections associated in respective organization.

THE OUTPATIENT PARENTERAL ANTIMICROBIAL THERAPY - PATIENT CENTRIC MODEL OF HEALTHCARE DELIVERY

Call for Posters topic: Quality, Cost and Value

DR. YAMUNADEVI R, DR. RAMASUBRAMANIAN V
Apollo Hospitals, Chennai (Main)

Background

Outpatient parenteral antimicrobial therapy (OPAT) is a method for delivering intravenous antimicrobials in the outpatient setting, as an alternative to inpatient care. It is useful for patients who require parenteral therapy for moderate to severe infections. To measure the scale of our problem 100 patients were retrospectively studied based on whether antibiotics were administered during hospital stay alone (hospital only), during both hospital stay, and also as OPAT post discharge (hospital/OPAT) or as OPAT alone. It included the cost incurred on the patient due to cost for bed; cost incurred due to medication and consumables. The main aim and objective of our project was cost savings, and patient and family satisfaction and improve health outcomes for the medically underserved community through the provision of high quality, affordable, and accessible health care and support services.

Methods

OPAT team where Infectious disease consultant was the lead, Roles and responsibilities of each stake holder was defined, Roles and responsibilities of each stake holder was defined, Service structure layout were defined. In the OPAT process right from the beginning of process patients were involved. The benefit of services was calculated from the billing process for with and without OPAT services. Patient family satisfaction was collected based on feedback process. Outcomes in terms of complication showed no difference between OPAT based treatment and hospital admission based treatment which was obtained through patient follow up through telephonic conversation. Since our OPAT programme is operated with infectious diseases physician in both the initial design of antibiotic protocols and ongoing patient care it functions well within the context of an antibiotic stewardship programme.

Outcome

1. Patient and family treatment satisfaction
2. Less expensive per episode than hospital based treatment by 30-70% hence more cost effective for the public
3. Outcomes in terms of complication showed no difference between OPAT based treatment and hospital admission based treatment
4. OPAT frees inpatient capacity, which can then be used either to admit further patients or as part of a planned reduction in bed capacity.
5. OPAT is associated with a very low rate of healthcare associated infection.
6. Since our OPAT programme is operated with infectious diseases physician in both the initial design of antibiotic protocols and ongoing patient care it functions well within the context of an antibiotic stewardship programme.

The only challenge we faced was protecting the IV access and training the ground level staff about handling the lines to prevent blood stream infections.
Extensive training and supervisory level was carried out for the staff to prevent blood stream infections.

Conclusion

Our intervention is definitely a new approach as this kind of project is alien to our country and it will definitely help in decreasing Out-Of-Pocket Health Care Expenditure in India due to public demand.
It also provides quality service at an affordable cost. This would also help in improving our health tourism where patients from different parts of our country would be benefited. This would also make our hospital a popular destination for people across our country seeking healthcare.

TO IMPLEMENT THE HABIT OF IMMEDIATE DRYING OF NEWBORN IN LOW RISK FULL TERM VAGINAL DELIVERIES

Call for Posters topic: Quality, Cost and Value

PARUL BHUGRA
Assistant Professor, Department of OBG, Pandit B D Sharma University of Health Sciences, Rohtak, Haryana
DR KRISHNA DAHIYA
Professor, Deparment of OBG, Pandit BD Sharma University of Health Sciences

Background

This work was carried out in the Department of obstetrics and gynaecology , Pt. B D Sharma University of health sciences, Rohtak (Haryana).The clients were low risk full term vaginal delivery patients. The focus group was students undergoing post-graduate training and staff nurses. In this study we aimed at immediate drying of the new borns. The baseline data was collected and it was found that immediate drying was not being practiced in our department. The study was started as apart of LaQshya initiative.

Methods

Fish bone analysis was done to analyse and identify the causes of the problem. A quality improvement team including consultant obstreticians, post graduate trainee students and staff nurses was made. A policy regarding immediate drying of low risk new born was made and all the trainees and staff nurses were sensitized about this new protocol. Regular meetings were carried out for continued motivation besides use of social media and posters pasted in labour room. The data was collected on weekly basis over 4 week. PDSA (Plan -do-study-act) cycles were carried out to analyse and rectify the problems encountered.

Outcome

Policy making and regular motivation led to increase in immediate drying of new borns to more than ninety percent in four weeks as compared zero percent at the start of study.The policy of immediate drying led to development of practice of delayed cord clamping. This would also reduce the risk of neonatal hypothermia and anemia, thus indirectly reducing neonatal morbidity and mortality.

Conclusion

Simple steps of policy making,sensitization,motivation led to establishment of practice of immediate drying of new born in our department.Reluctance and ignorance on the part of labour ward staff was the main challenge encountered. By continuous motivation of the staff and judicious use of social media we can achieve desired change in established practices, for the benefit of mother and child.

TO IMPROVE RATE OF ADMINISTRATION OF PROPHYLACTIC ANTIBIOTIC WITHIN 15-60 MINUTES BEFORE SKIN INCISION IN ALL CAESEREAN DELIVERIES

Call for Posters topic: Quality, Cost and Value

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Pt Madan Mohan Malviya Hospital, New Delhi, India

Background

All pregnant women delivered by caesarean section whether elective or emergency under spinal anaesthesia. (168 patients were enrolled in study)

PROBLEM IDENTIFIED:

S.S.I rate in LSCS was persisting between 4-5% since last 1 year.

PROCEDURE

We conducted the study in labour room and operation theatre of secondary care hospital, from 1st Dec19 to 31st Jan 20 and also measured any fall in postpartum SSI rate.

Antibiotic prophylaxis given 15-60 min before skin incision to reduce rate of SSI in addition to preventive strategies like gloving, face mask, use of skin antiseptics for hand washing, pt skin preparation, vaginal preparation.

Previously only post operative antibiotics were given after shifting in maternity ward.

According to the study protocol all subjects participating in the study were followed until 30 days after operation procedure.

Methods

Pregnant women admitted & monitored as per W.H.O partograph & safe birth checklist in labour.

Once decided for caesarean (elective/emergency) patient is advised injectable antibiotic after sensitivity test dose.

If patient has acute emergency (foetal distress/MSL. Etc) then patient receives only sensitivity dose in labour room & full dose is given in pre-op room in maternity OT before spinal anaesthesia.

If patient is semi-emergency/elective indication for caesarean then sensitivity & full dose of antibiotic is given in labour room itself. This dose with time & date is mentioned in transfer register for OT receiving staff reference.

New policy to be made. Doctors in OBG & Anaesthesia deptt. along with nursing staff on duty (LR & OT) were sensitized for administration and importance of prophylactic antibiotic.

New columns to be added in caesarean audit register.

Shortage of staff and heavy workload.

Frequent change of resident doctors in deptt.

Outcome

Outcome was measured by:

proportion of patients received antibiotic within 15-60 minutes of skin incision.

its effect on surgical site infection upto 30 days post operatively.

All measures except prophylactic antibiotic were already in practice since April 2018 by quality initiatives on antiseptic procedures, surgical checklist & hand scrubbing projects.

Conclusion

Started entry of Administration notes of antibiotic sensitivity or/and full dose given in labour room by nursing staff in labour room in OT transfer register while transferring the patient. [takes approx 20-30mins]

OT receiving staff was then checking the entry in transfer register. She/He then gave full dose of antibiotic in pre-op room after checking skin sensitivity test site if full dose was not given in labour room.

Monthly caesarean audit team checked the entries of prophylactic injectable antibiotic also, along with other factors.

Run charts were made during study to motivate the staff.

We already achieved less than 5% S.S.I rate in caesarean section from 2018.

The rate of administration reached more than 90% in four weeks study and sustained till end of study.

SSI rate fell down significantly to less than 1% inspite of 2 times increase in number of caesarean section in deptt. and doubling on beds in maternity ward.

TO IMPROVE THE COMPLIANCE TO SUCTION TECHNIQUE OF ARTIFICIAL AIRWAY DEVICES AMONG NURSING OFFICERS, NS-4 WARD, AIIMS, NEW DELHI, 2019

Call for Posters topic: Quality, Cost and Value

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AIIMS, New Delhi, India

Background

Artificial airway devices are required when patients are in respiratory distress or airway integrity cannot be achieved. The endotracheal and tracheal tubes are commonly used as artificial airway devices. In such patients, their body produces more mucus and secretions but their ability to clear secretions has decreases. So mobilization of secretions from trachea must be facilitated by aspiration (suctioning). The goal of suction should be to maximize the amount of secretions removed with minimal adverse effects (injury, bleeding and infections) that are associated with the procedure, so we need to take extra caution to prevent such complications.

Methods

Problem identified with prioritization matrix. POCQI Model was used for improving the suction technique, Observational checklist was developed with review of literature and validated by Delphi experts from heterogeneous background, Base line observations was done with the help of developed observational checklist. The focus group discussions were done with nursing officers to identify their problems. The route cause analysis was done with fish bone technique. Two change ideas were identified:-
1st change idea (PDSA 1st):-All needed articles were provided and faulty suction regulator repaired. The Median compliance to suction technique was improved from 45% to 61%. It was adopted and planned for second change.
2nd change idea (PDSA 2nd): - Developing a Standard Operational Protocol (SOP) and training of nursing officers. The Median compliance to suction technique was improved from 61% to 86%. The 2nd change idea adopted and plan for maintaining sustenance.

Outcome

Sustenance :- Weekly evaluation of data was done to monitor the sustenance. SOP and checklists were provided in each cubicle of NS-4 ward. Median compliance of operational suction technique was sustained 82%.
Results: - The baseline mean compliance to suction technique was 45% that was improved up to 86% and sustained up to 82 %(Aim 80%)

Conclusion

It was possible to improve compliance to suction technique and therefore reducing suction related complication by adhering to evidence based guideline and close supervision. The patients were benefited in terms of significant reduction of tracheal bleeding and received quality care. The Nursing officers were benefited as written SOP and checklist made available in ward

TO INCREASE THE PRACTICE OF HAND WASHING WITH CORRECT 7-STEP TECHNIQUE FOR 2 MINUTES FOR DOCTORS CONDUCTING VAGINAL DELIVERIES FROM BASELINE TO 80% IN 4 WEEKS

Call for Posters topic: Quality, Cost and Value

DR SARIKA GAUTAM, DR NISHA MALIK, DR MEENAKSHI CHAUHAN, DR VANI MALHOTRA, DR SMITI NANDA
Department of Obsteterics and Gynaecology, Pt BD Sharma PGIMS Rohtak, Haryana, India

Background

Pt BD Sharma PGIMS Rohtak, is a tertiary care hospital of state Haryana, India. The work "To increase the practice of hand washing with correct 7-step technique for 2 minutes for doctors conducting vaginal deliveries from baseline to 80% in 4 weeks, the focus group were junior residents of Department of Obs. & Gynae.

The hand hygiene is an important issue and one of the basic habit to prevent the infection from service provider to service seeker. Everybody aware of safe the hand wash but there was no written policy statement for residents. The quality improvement team decided to take the system dysfunction of hand hygiene and made a policy statement "To increase the practice of hand washing with correct 7-step technique for 2 minutes for doctors conducting vaginal deliveries from baseline to 80% in 4 weeks" problems were evaluated keeping the following questions why it is not being done? Where is the gap? What were the reasons if done but not done with correct methods?

Methods

A QI team of 4 members were formed. An awareness interactive class was held with demonstration of hand hygiene practice and by the end of the lecture students were motivated to do hand hygiene practice. Seven step hand wash poster and a wall clock with second hand was put near the hand scrub station. First change: Continuous water supply was ensured. Second change: Soap was made available 24 hour. Daily electronics reminder given via Whats App. To measure the effect of change PDSA (plan do study act)cycles were used and at one time one problem was chosen and after rectifying the problem its effect was seen on the proposed problem. The results were analysed weekly. Week 1 10 to 55.5%, week 2 55.5 to 69.2%, and week 3 69.2 to 75% target achieved. And sustenance from 80 to 100% achieved in following weeks by continuous motivation and reminders

Outcome

At the first step of project when problems were analysed and the question were asked in the form of "WHY" why you are not doing handwashing? A small group was taken from the target population (junior residents of department of obstetrics and gynaecology) and two way discussion system applied and open ended questions were asked and the Quality improvement team got multiple small problem but the major issue the team found that there is no regular supply of water in the scrub station The public works department contacted and the problem raised up to the higher authorities and continuous water supply was ensured and it showed improvement from baseline 10% to 55.5%, then another problem of non-availability of soap was taken and after rectifying it improvement upto 75 % seen. It gives the benefit of habit change in the residents and enthusiasm in QI team that by rectifying small problems we can achieve targets without spending extra cost.

Conclusion

At the start of the project there was reluctance to change seen among the residents, this problem was rectified by demonstration of hand washing in small groups of the target population. An enthusiastic team is very necessary part for success of any change we need, and QI team picked the basic Necessity which should be a habit of every Doctor that is hand washing and we checked the compliance of hand washing, initially we thought that it must be there on assessment of baseline it was only 10% ,so in my experience first step is to accept the 'Problem" than analyse the problem and make plan that how we will tackle the problem, which our QI team has done and accepted the main problem area that were non availability of water and non-availability of soap all the time of a day and as soon as these problems were rectified the students get motivated day by day and the make it their habit and now it is in their behaviour that they have to do the hand washing for 2 minutes with correct 7 steps.

USE OF PRINTED INVESTIGATION SHEET IN CASE RECORD FILES OF ADMITTED ANTENATAL PATIENTS
Call for Posters topic: Quality, Cost and Value

VIDUSHI KULSHRESTHA, ANUBHUTI RANA, ANJU SINGH, GARIMA KACHHAWA, JYOTI MEENA, VATSLA DADHWAL
All India Institute of Medical Science New Delhi, India

Background
This QI project was undertaken in department of Obstetrics and Gynaecology, All India Institute of Medical Sciences, New Delhi, India. It was observed that after admission in obstetric wards, investigations are sent on the next morning.
Most of the time, all required investigations are not sent on single day, also reports are not collected or entered by the resident. So, the problems encountered are: Incomplete workup, repeat blood collection for investigations, delay in starting treatment, possible increase in length of stay. This affects patient care, hence we observed a need to undertake a QI project to address this lacuna in our care.
The two most common indications of admissions in our Obstetrics ward are hypertensive disorders and diabetes in pregnancy. Anemia coexists in 60% in-patients in our setting. So, we planned to initiate use of 'Printed Investigation sheet' through this QI project to increase complete workup without delay, covering these three conditions.

Methods
'Complete work-up' was <2required investigations pending on 3rd day of admission. Baseline data was collected: percentage of patients with complete workup was 28.5%, 16.7%, 37.5% and 30% in week 1,2,3 and 4 respectively; median being 29.2%. Fish bone analysis & process mapping were used. Change idea was use of IS with list as per anemia, hypertension or diabetes, space to enter reports. Team members were sensitized with the change idea.
Aim Statement was to increase complete work-up in antenatal patients with Anemia/ Hypertension/ Diabetes from existing median 29% to 80% by 3rd day of admission by initiating use of 'Printed Investigation sheet' in 12 weeks.
In PDSA 1, IS was attached. However, only 1/3rd had complete work-up as IS were not available if none of the team members were on duty. In PDSA 2, all residents were sensitized. In PDSA 3, IS was modified as the problem discovered was congested IS posing difficulty in writing reports.

Outcome
After PDSA cycle-1, cycle-2, and cycle-3; complete work up was found in 33.3% in week-5; 40% in in week-6 and 42.8% in week-7 respectively.
Simple QI change led to change of practice without any additional resources. Using 'Investigation Sheet' avoided delay in complete work-up of in-patients and need for taking repeat blood samples. It also avoided delay in starting treatment and possibly reduced hospital stay. Gradually this was adopted by all residents.

Conclusion
This QI project helped in streamlining the process of patient's evaluation and reporting in order to avoid unnecessary delay in initiating the management plan while awaiting reports. It was difficult to sensitize all the residents at one go and the sheets had to modified due to space limitation in the investigation sheets. This was overcome by incorporating suggestions from the residents who were the main stakeholders. Moreover, other QI initiatives were suggested enthusiastically by residents after undertaking this simple project.
Undertaking a QI project with constant participation and encouragement of the stakeholders can lead to successful implementation to improve patient care without any additional resources.

VALUE IMPROVEMENT AT THE POINT OF CARE TO INCREASE EFFICIENCY AND REDUCE WASTE

Call for Posters topic: Quality, Cost and Value

POONAM GUPPTA, IAN MCDONALD, GRACY CHACKO, MINCY THOMAS, EMAD AL OMARI, MAWAHIB EL HASSAN

Hamad Medical Corporation, Qatar

Background

Heart Hospital is a tertiary cardiac facility which is a part of Hamad Medical Corporation (HMC). Like many hospitals and healthcare systems, we had identified gaps not only in terms of outcomes and cost but in terms of patient and staff satisfaction as well in several areas.We tried to improve several processes in the units by testing and implementing rapid cycle value improvement methodology. We selected High dependency unit B (HDU B) as pilot unit for this work based on few characteristics like this unit has exposure to Quality improvement tools and techniques and were part of previous initiatives. Apart from this middle managers support and baseline data are available which again makes this unit suitable.

Methods

The work is underpinned by Model for Improvement and includes

1. “Box Scores” which is a tabular display of capacity, performance and financial measures, with relevant data added each week. These measures are selected based upon several factors, the most important of which is “linkage” to hospital strategic priorities. These priorities, in turn, are defined by the needs of customers (including patients, payers, and government and system stakeholders).
2. “Visual Management Board” (which includes the box score, PDSAs, process mapping, and other relevant documentation related to the project),
3. “Team Huddles” (which are conducted every week, led by the Head Nurse or Project Lead of the unit, and are attended by frontline staff as well as hospital leaders).

The project also employs very rapid improvement cycles featuring data collection and analysis on a weekly basis.

Outcome

There are several results achieved but only few are mentioned here.

1. Patient discharges before 1 pm reached 95%, which was 9% before starting this initiative
2. Number of blood samples reduced by 40% in High dependency unit B which includes reduction in numbers of rejected samples as well as new orders
3. Laboratory costs have correspondingly been reduced by 50%.Cost reduction is by product of reduction in number of samples.
4. Skin issues significantly reduced as monitored by weekly prevalence survey. It includes pressure ulcers, phlebitis, skin peels and tears. There is 68% reduction in numbers of skin issues in the unit. Recently Seventeen straight weeks free of phlebitis was achieved.
5. Direct nursing care hours have increased to 75%.
6. Joy at Work measure for staff has been sustained at 100%
7. Noise levels were reduced from 70 dB to 28 dB in Coronary Care Intensive Care Unit during quiet hours.

Conclusion

We’ve used a multidisciplinary approach and efforts at all levels have being integrated to gain the maximum output from our resources. Our main focus is on improvement of the current processes and increase in patient satisfaction. Few key factors to make this work a success are

- Weekly data is more valuable in terms of providing insight and plan next step
- Frequent “round table meetings” occur to discuss and solve issues face to face.
- Weekly test of changes which reduces intervals between successful tests

Above all, value improvement helped in capability building in front line teams and empowered them to identify quality improvement opportunities in their units, manage costs by reducing wastes, increase efficiency, and better utilize staff capacity. This all helped produce “culture change’’ in the unit.

REDUCTION IN REFERRAL OF LIFE THR EATENING SEVERELY ANAEMIC TERM PREGNANT WOMEN IN LABOUR TO TERTIAY CARE HOSPITAL

Call for Posters topic: Safety

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Background

Anaemia is a global public health problem affecting adversely in developing countries. Pregnant women are the most vulnerable population amongst. 20% of maternal deaths are caused by anaemia & 50% of total maternal deaths as additional risk factor. Hb level less than 4 g/dl is associated with high risk of cardiac failure and death particularly during delivery or soon after. The risk of developing anaemia was higher in 3rd & 2nd trimester. Severity of anaemia is associated with high rate of morbidity & mortality.

Methods

SETTINGS: ANC OPD AND MATERNITY WARD.
PARTICIPANTS:- All pregnant women attending Antenatal care clinic at our hospital.
PROCEDURE:- A Team of obstetricians and nursing staff posted in opd / Lr/ Maternity ward was made who analysed the factors resulting in higher referral rate through fish bone analysis, process flow mapping and Five Why"s. Various ideas were tested for change by PDSA cycles.
We started from PDSA 1 BY TESTING HB IN EVERY ANC WEEKLY FROM 36 WEEKS ONWARDS
PDSA 2:-
Plan: Policy revised to do CBC at every two weekly visit after 28 weeks of pregnancy onwards in all pregnant women.
Do: Every pregnant women irrespective of Hb level in previous visit was advised CBC test.
Study: Due to irregular visits, irregular/non-intake of iron either due to habit/ intolerance. Still 20% referral due to severe anaemia in labour.
Act: CBC at every monthly visit 20 weeks onwards to minimize referrals & blood transfusion.

Outcome

Due to irregular antenatal clinic visits of pregnant women, they reach term with life threatning severe anaemia and then require blood transfusion on urgent basis. Sometimes they reach as emergency in labour and due to lack of I.C.U services they are referred to higher center. As per W.H.O each pregnant woman should have 04 regular ANC visits (to ensure healthy mother and child. But we found in our patients, due to non-intake/ ir-regular intake of oral iron as advised due to non- compliance or in-tolerance, most of prgnant women remain anaemic, at term.
Number of referrals reduced from 30% to 5% per month.
Consumption of blood transfusion per month reduced from 8% to 2% per month.
Injectable iron comsumption initially increased 2 times & then fell down to routine consumption per month.

Conclusion

PDSA 3:-
Plan: Policy revised to do CBC at every ANC visit from 20 weeks onwards in all pregnant women.
Do: CBC test advised as policy. Study: Most of the booked/registered ANC with minimum 2 visits in 2nd & 3rd trimester were caught timely & managed with oral/injectable iron. However, unbooked ANC/less than 4 visits could not be picked up timely & were referred if came in labour/transfused blood if not in labour.
Act: Field workers like ANM and Asha workers should be encouraged to give frequent home visits.
They are more near to pregnant women as they live in same society.They can understand and follow both societal problem of pregnant women and what safety they need as per obstetricians advise.
ASHA and ANM are vital help to govt schemes for maternal safety. We have to improve the system to get all pregnant women covered by ASHA/ ANM atleast once in 15 days at their home itself with other family members.

A SIX SIGMA APPROACH FOR REDUCING INCIDENCE OF NEEDLE STICK INJURIES TO NURSES
Call for Posters topic: Safety

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Apollo Hospitals Jubilee Hills Hyderabad, India

Background
Needlestick injuries are of significant concern and pose multiple risks for healthcare workers. These injuries are frightening because the needles can be a source of contamination with Hepatitis B, Hepatitis C, or HIV/AIDS viruses. Apollo Hospitals Hyderabad, nurses identified and implemented the project of reducing the incidence of Needle Stick Injuries by scientifically applying the process of Six Sigma. The main focus of the project was to bring down the number of NSI by studying the causes contributing to such events and come out with strategies of controlling & create awareness among the nurses. The project was discussed and approved by the 'THINK TANK' headed by our President Sir and HODs of all involved disciplines. The specific goals were to fulfill

1. process improvements in waste segregation practices;
2. knowledge improvements by conducting various training sessions and campaigns and
3. reducing occurrence of NSIs by improving the use of methods of prevention

Methods
Based on the background study for the number of needle stick injuries reported between the months of September 2018 to February 2019, a baseline value was arrived at and considering other variables a target value was assigned
Reasons for NSI incidents:

1. Manipulating the needle inpatient
2. Improperly discarded sharps
3. Handling/ passing devices during or after use
4. waste segregation disposal, Overfilled PPC holding sharps
5. Handling / transferring of specimens
6. Others: Though the staff is trained regarding not recapping the needles, the new staff tends to forget and recap the needle.

Our major focus was on the campaign that was conducted on 25th April 2019 and 26th April 2019. The program started by on 25th April 9 am from the main lobby of Apollo Hospitals, Jubilee hills.Opening ceremony was done by Dr Hariprasad (President), Mr Subramanyam (CEO), Dr Vijay Mohan Reddy (DMS), Ms. Saravjeet Kaur (ND)

Outcome
Reactive:

a) Raising Incidents for all the events of NSI and analyzing the observations or root causes.
b) Regular follow up with the staff reported positive for NSI incidents and monitoring their health indicators.
c) Having a track of NSI surveillance and NSI follow up
d) Post exposure prophylaxis is also followed up

Control Phase:

- Control - build a system of checks and adjustments for ongoing improvement in production processes. This is for final implementation of the solutions
- The data was continuously monitored in this phase and a control plan was developed.

a) Regular audits by ICNs and Incharge Nurses in IP Areas.
b) Continuous training and retraining of staff requiring special attention
c) Orientation of new staff towards prevention of NSI
d) Post exposure prophylaxis is done.
e) Testimony of the staff who had been affected.

Conclusion

Based on the project, awareness was our main goal to improve safety. Hence at the end of the study we could achieve the below given

a) Raising Incidents for all the events of NSI and analyzing the observations or root causes.
b) Regular follow up with the staff reported positive for NSI incidents and monitoring their health indicators.
c) Having a track of NSI surveillance and NSI follow up
d) Post exposure prophylaxis is also followed up

Implementing the approch to deal with NSI prevention by a Six sigma approach has increased knowledge among the staff and have kept them motivated to apply this knowledge in their clinical practice, which would lead to comparitively decrease incidence of needle stick injury among the health care team and specially Nurses

#PAUSETHEPRESSUREINJURY
Call for Posters topic: Safety

DR AFFAN SAMI RAYEEN, JUNED SIDDIQIE, MS PRITINDIRA SACHDEVA, MR ABHILASH PILLAI
Apollo Hospital Indore, India

Background
Problem:
Although healthcare organizations have decreased hospital-acquired pressure injury (HAPI) rates, HAPIs are not eliminated, and in Apollo Indore there is an increased in number of cases of Pressure Injury in the year 2018-2019. In last financial year from April 18 to March 19, our unit had 18 Pressure Ulcer that is 1.5 per month.
Upon reviewing on various literature and medical journals, it was evident that pressure injury were one of the leading cause to increase patient hospital stay, cost of treatment and mortality.
During last financial year apollo hospital indore recorded to have high number of pressure injury. So a quality circle was formed to reduce this numbers which include Quality Team, AMS, NS, ICN, ICO, intensivist and nursing staff.
Retrospective study of existing pressure injuries occurred at Apollo hospital Indore is done along with literature and best practices review.

Methods
Intervention:
Various tools where used for problem starting to problem solving is being applied which are mentioned below:

a) A3 Problem Solving tool kit
b) Audit and Data Collection.
c) Sensitization & knowledge enhancement of staff on prevention of pressure ulcer
d) On job Training by ICN/Nurse Educator to staff.
e) Training and Implementation of PUSH Tool.
f) Training and Implementation of Pressure Injury Pathway.
g) Training of staff on techniques of pressure ulcer prevention.

Outcome
We have implemented Apollo Group Toolkit for this with a name “Zero is Hero” and “Clinical pathway of Pressure Injury” for the prevention of Pressure Injury developed by clinicians.
The focus continues to sustain the outcome and move towards our moto of being a Pressure Injury (Hospital acquired) free hospital.
Daily Assessment of patient is important for prevention of pressure injury which can be easily be done by correct implementation of assessment tool (PUSH and BARDEN tool).
SOP's Provide healthcare staff with the standards of care and processes to be followed by all staff caring for patients improper implementation of SOP's increases the risk of pressure ulceration.
Higher Temperature and irregular monitoring of devices used by patient can lead to device associated pressure ulcer.

Conclusion
Lessons learnt:
As a comparison, during April to August 2018-19, total 7 pressure injury occurred while during April to August 2019-20, total 1 pressure injury occurred after proper implementing of all possible tools.
After taking this as a focused project and applying all the material and methods along with close monitoring on regular basis and support from all staff, we had decreased pressure injury by 87% from last year till last month.
After taking this as a focused project and applying all the material and methods along with close monitoring on regular basis and support from all staff, we had decreased pressure injury 87% from last year till last month.

A STUDY TO ASSESS KNOWLEDGE AND PRACTICE OF NURSES REGARDING PREVENTION AND MANAGEMENT OF PATIENT FALLS IN A VIEW TO DEVELOP PATIENT FAMILY EDUCATION MODULE

Call for Posters topic: Safety

RAMYA MULPURI, MS.SOMA DAS
Apollo Health City, India

Background

Apollo Hospitals, Hyderabad has emerged as the most renowned and trusted integrated Health City in Asia. Researcher chosen quantitative approach with descriptive survey design, the target population and the setting for the study are registered nurses working at Apollo Hospitals. Random sampling technique was taken with sample size of 100.Data collection was done by structured questionnaire to assess the knowledge level and the practice check list to assess the practice level of staff nurses in monitoring the modified Morse Fall risk Assessment. It was noted most of the time the family was not aware about their risk of fall, so we have taken up a project 1.To assess the level of knowledge on prevention and management of falls. 2. To develop the structured teaching programme on prevention and management of falls. 3. To assess the practical knowledge on Interventions and documentation of Modified Morse Fall Risk Assessment.4.To assess the effectiveness of structured teaching programme

Methods

In 2018 there was 38 falls recorded but after implementation of the fall prevention program the total falls in the year 2019 is 13. Fall was the major concern in 2018 even there are post-operative falls which are led to bleeding from the surgical site. The implementation stage is from Jan -19 to March -19 during which the staff are educated on fall prevention and the same was disseminated to the patient family by the night supervisors and nurses during the rounds, Fall prevention campaigns are conducted at the patient areas, Night rounds to all the vulnerable patient every 2nd hourly by the night nursing supervisors, Posters all over the hospitals for the patient and family education was helped us to reduce the falls. After bringing up the patient and family education form awareness on fall risk was improved by which most of the falls come done. We received feedback from the patients saying that they are getting education soon after the admission.

Outcome

Number of fall in 2018 are 38 falls after the implementation of the project the number of falls are decreased to 13 per year in 2019. The target for 2020 is to reduce 50% falls. It is understood the nurses at primary level will involve in the patient care and education to prevent falls. So we started by understanding the knowledge level and practices of nurses and also came up with the patient education form wherein we took the signature of the patient/family after informing the risk of fall and its prevention. Created the fall prevention posters and displayed on the TVs and placed at the inpatient areas and outpatient areas. Frequent patient rounds are helped in reducing the patient call bells and waiting for the assistance their by patient was not left unassisted for his/her needs. Fall campaign created awareness among all the health care personnel’s. In turn reduced the incident of fall in the hospitals and brought a drastic change in the nursing sensitive indicator.

Conclusion

No, problems were encountered, would like to implement this project at outpatient department to capture the patients risk for fall by doing a visual screening to take necessary preventive measures. It is always recommended that the patient and family should know their risk for fall by which they will be conscious .Fall prevention includes managing the patient's underlying fall risk factors during the hospital stay whenever there is change in mode of treatments and optimizing the hospital's physical design and environment. Thus Educational module, Rounds by night supervisors, fall campaign in the hospital, posters across the hospital on fall prevention, Knowing your fall risk will help the organization to overcoming the challenges associated with sustaining a fall prevention program.

AN EMPIRICAL STUDY OF IMPACT OF HEALTHCARE RISKS AND ERRROS ON PATIENT SAFETY

Call for Posters topic: Safety

DR. SANJAY DALSANIA
Apollo Hospitals Enterprise Limited, India

Background

Patient safety is a critical component of an effective and proficient health care system where quality prevails. The two go as inseparable elements and there can never be any quality without safety. Patient care in a hospital is related with countless mistakes, errors and risks. Adverse events often result in longer length of stay, higher expenses and adverse clinical outcomes, even death. The seriousness of the consequences may vary from insignificant to catastrophic. The majority of them are totally or mostly preventable with the help of watchful vigilance and their negative consequences can be minimized to a great extent. The new discipline of patient safety recognizes that the risk is inherent in medicine and error is inherent in human condition.

Methods

Purpose

To identify and understand the impact of healthcare risks and errors on safety of patients in a multispecialty hospital setting.

Methodology

Patients' medical records (n=600) were reviewed with IHI's Global-Trigger-Tool to detect risks and patient harm. The collected data were subjected to reliability check, correlation and regression tests.

Outcome

Findings

Certain clinical risks, surgical risks, medication related risks, blood transfusion related risks, risks related to incompetency of the staff, equipment related risks proved to have significant relationship and impact on patient safety as indicated by R and R2 statistic values.

Practical Implications

This research proposes an informative review on the healthcare risks and hazards and assessment of patients' safety that will help researchers, clinicians and healthcare professionals to design novel general methods for the assessment of patients' clinical outcomes that avoid the conceptual limitations of existing methods and mitigate the ill effects of different healthcare risks by understanding the impact of different healthcare risks on patient safety and clinical outcomes.

Conclusion

A patient's safety in clinical field is critical, important and complex. The patients are still suffering from preventable harms from diagnostic errors, procedural mistakes, communication and teamwork failures, and the failure to deliver recommended therapies. This triggers the need for more research to better understand the existing patient clinical outcome assessment methods and their conceptual limitations. Accordingly, this research effort proposes an informative review on the healthcare risks and hazards; and assessment of patient safety that will help researchers, clinicians and health care professionals to design novel general methods for the assessment of patient clinical outcome that avoid the conceptual limitations of existing methods and mitigate the ill effects of different health care risks by understanding the impact of different health care risks on patient safety and clinical outcomes.

ASSESSMENT OF PATIENT SAFETY CULTURE IN A HOSPITAL OF ODISHA, INDIA
Call for Posters topic: Safety

PURNIMA BHOI
KIIT School of Public Health (KSPH), India
NILAKANTHA BHOI
Independent Consultant, India

Background
This study aims to provide an assessment of patient safety culture in a hospital setting in Odisha, India. The study was carried out in a multi-speciality Hospital in Bhubaneswar, Odisha, India. It is a multispecialty hospital having 750 bedded and 25 intensive care beds. The research findings would help in achieving an intra-hospital comparison and also if possible inter-hospital (Both Private & public sector hospitals of similar category) comparison and help quantify the resources and strategies required in order to improve patient safety culture including but not limited to development of guidelines, training & capacity building initiatives of healthcare providers and would also help in taking policy decisions in strengthening patient safety programme through involvement of various stakeholders and to improve quality of health care at different level of healthcare facilities in Odisha or could be used as a reference for other private & public sector hospitals across India.

Methods
A highly validated and widely used survey instrument, originally developed by the Agency for Healthcare Research and Quality(AHRQ) in US, was used which captures a range of safety culture dimensions to compare hospital units/departments and professional roles. The questionnaires was administered to 350 health professionals including physicians, nurses, technicians, managers and paramedic staff. Descriptive statistics was computed with 95% confidence intervals to compare safety culture dimensions across the units in the hospital and amongst different groups of professions (Doctors, paramedics, patients). Timeline 2018-2019.

Outcome
The research findings would help in achieving an intra-hospital comparison and also if possible inter-hospital (Both Private & public sector hospitals of similar category) comparison and help quantify the resources and strategies required in order to improve patient safety culture including but not limited to development of guidelines, training & capacity building initiatives of healthcare providers and would also help in taking policy decisions in strengthening patient safety programme through involvement of various stakeholders and to improve quality of health care at different level of healthcare facilities in Odisha or could be used as a reference for other private & public sector hospitals across India.

Conclusion
Data analysis is under process. However, the study will go a long way in achieving an intra-hospital comparison(within different clinical departments & respondents like doctors, nurses, paramedics etc.) and help quantify the resources and strategies required in order to improve patient safety culture including but not limited to development of guidelines, training & capacity building initiatives of healthcare providers which would help in taking policy decisions in strengthening patient safety programme and improve quality of care at different level of healthcare facilities through involvement of various stakeholders. It could be used as a reference for other private & public sector hospitals across India.
Problems encountered during the process: Non availability respondents for data collection, patient load, reluctance to disclose the operational challenges.
Main message: Not to loose patience, build a culture of safety within the team and strive to improve quality of care.

EFFECTIVENESS OF A QUALITY IMPROVEMENT INTERVENTION TO INCREASE ADHERENCE TO KEY PRACTICES DURING FEMALE STERILIZATION PROCEDURES IN TWO STATES OF INDIA

Call for Posters topic: Safety

DR GEETA CHHIBBER, DR ASHISH SRIVASTAVA, DR GULNOZA USMANOVA, DR BULBUL SOOD
Jhpiego, India

Background

The intervention was implemented in public health facilities in 12 districts of Odisha and Chhattisgarh states of India. Doctors and nurses providing female sterilization services to clients seeking these services as a method of family planning were involved.

Despite nearly 2.6 million women (HMIS, FY 2018-19) receiving sterilization services at public health facilities annually, poor quality of services remains a persistent concern. Failure to meet quality standards resulted in unacceptable outcomes such as complications and deaths reported by government HMIS systems, media and non-government organizations. Orders issued by Supreme Court of India, resulted in revised quality standards to include evidenced-based practices and quality assurance mechanisms for female sterilization. However poor techno-managerial capacity, scarcity of trained human resource and high client load have put increased pressures on the public health system, resulting in underutilization of these guidelines.

Methods

Intervention was planned over 3 years. Service providers were oriented to best practices and quality standards as outlined in updated government guidelines. 30 client-centered critical practices, corresponding to client flow at the facility from pre-operative assessment, surgery to discharge were identified and incorporated into a Clinical Safety Checklist (CSC). Following hands-on refresher training, CSC was introduced to facility managers and core surgical teams. Design involved nurses to support shared team work, focus being on client safety and satisfaction.Project staff made regular mentoring supervision visits. Facility-based quality assurance mechanisms, quality circles (QCs) were established to strengthen local problem-solving capacity. QCs periodically reviewed facility-level data, identified gaps and strategies to address them. Clients could also provide direct feedback of services received through an innovative mobile phone-based interactive voice response mechanism.

Outcome

For measuring effect of the intervention, we conducted a before and after quasi-experimental study with matched comparison arm involving direct observations of provision of female sterilization services. We computed proportion of observations in which provider adhered to key practice/s and compared proportions at endline and baseline in each arm. Practices related to client-provider interaction, assessment of women's medical eligibility and obtaining an informed consent improved because of the intervention. Post-op monitoring, documenting vital signs and providing clients with written discharge improved after intervention. Package of program-supported interventions improved adherence to nine key practices including ascertaining medical eligibility, improved client-provider interaction, consenting process and post-surgical care. These are directly related to both improved quality of, and experience of care impacting overall complication rates and client satisfaction.

Conclusion

9 key practices improved as a result of the intervention. With introduction of a client-centred checklist, expected impact over time is reduction in failure and adverse events of surgery with a focus on promoting a culture of safety, early detection of potential near-misses and adoption of a rights-based approach ensuring voluntarism and informed decision-making.

Lack of HR, frequent staff transfers and set behaviour patterns were key challenges encountered. Combined bottom-up and top-down approach is needed along with addressing contextual factors.

A rigorous plan is required for broad-based buy-in, willingness to adopt a safety culture beyond sharpening technical skills. Routine and correct use of the checklist can be supported through developing defined rosters, providing competency-based training, cultivating local champions to drive the process and regular feedback of analysed data in QC meetings. Utilization of behaviour-change models may improve adherence to certain practices.

IMPACT OF IMPLEMENTATION OF SOP FOR COMPLICATIONS AND REFERRAL MANAGEMENT ON IUCD SERVICE PROVISION: A CASE STUDY FROM ODISHA

Call for Posters topic: Safety

NOCHIKETA MOHANTY, KAMLESH LALCHANDANI, SASWATI DAS, PRITI CHAUDHARY, NEHA SRIVASTAVA
Jhpiego, India

Background

Since 2014, Jhpiego, a Johns Hopkins University affiliate, has been working in the Indian states of Chhattisgarh and Odisha, under the 'Expanding Access to Intrauterine Contraceptive Device (IUCD) Services in India' (EAISI) project. Despite the overall effectiveness and safety profile of Copper IUCD, side effects and complications can occur during or following insertion, which may lead to discontinuation, switching to other methods or increased out-of-pocket expenditures (OOPEs) for the clients due to cost of referral to higher and private facilities in absence of diagnostic/care facilities. This generates negative community feedback, discontentment and aggression from clients at the facility level, ultimately affecting IUCD acceptance rates and demotivating providers. This analysis assesses the impact of the implementation of Standard Operation Procedures (SOP) developed in June 2019 for complications management, including prevention and referral protocols for IUCD services in Odisha.

Methods

A SOP for prevention, referral and management of complications was drafted by Jhpiego in March 2019, vetted by the Technical Advisory Group (TAG) of the State Directorate of Family Welfare in April 2019 and approved and disseminated to districts in June 2019. 14 districts ensured implementation with mapping of facilities with available X-ray and/or USG machine and competent providers who were willing to handle complication cases as per the SOP before December 2019. The SOP has 3 parts – (1) Prevention (including strategies to avert common events of infection, expulsion, perforation and removal.) (2) Referral (outlining mapping, process of referral and formation of Emergency Complication Management Team at the referral centres) (3) Complication Management (outlining management of complications in accordance with national guidelines). The impact was assessed from follow up registers and monthly IUCD acceptance rates and a format to document incidents of complications.

Outcome

The OOPE and change in acceptance a month before and 2 months after the reported incidents in 14 districts where referral mechanism was implemented was analyzed from the review of the documents.36 incidents of complications were reported by 25 facilities in 14 districts. While there were 9 incidents of USG done from a private facility among 36, the management for 7 of these cases were conducted at the facility and 2 were referred to a higher facility with no additional expense for management. There were 9 difficult removals requiring referrals to higher facilities. Average PPIUCD acceptance rates in these facilities before incidents were 27 (±19)% and 2 months later were 33 (±17) %. Average Post Abortion IUCD acceptance rates in these facilities before incidents were 21 (±22) % and 2 months later were 31 (±30)%.The implementation of a referral mechanism as per the SOP led to decrease in OOPE for those PPIUCD acceptors who met with complications, thus also improving community feedback.

Conclusion

The SOP led to lower OOPEs for IUCD acceptors who underwent complications, lower incidents of complication related grievances at facility affecting service provider motivation and unaffected acceptance rates of IUCD services. The implementation of a SOP for managing adverse events not only ensures timely referral and management of complications, it also ensures prevention of the same through better administration of care through adherence of standardized guidelines. These further ensure lower inconvenience and OOPE to the clients thus ensuring sustained acceptance of services. Availability and access to free or low cost diagnostic facilities and competent and cooperative providers to manage complications can further ensure that there is a sustained client satisfaction in the community and thus improvement in acceptance of IUCD services. A SOP for managing adverse events can thus ensure sustained levels of performance of IUCD services.

IMPROVEMENT IN TURNAROUND TIME OF CRITICAL VALUE NOTIFICATION THROUGH APPLICATION OF QUALITY TOOLS IN A TERTIARY CARE HOSPITAL

Call for Posters topic: Safety

DR. PUJA KUMARI JHA, DR. RACHNA AGARWAL
IHBAS, Delhi, India

Background

Institution: A tertiary care hospital IHBAS (NABH Accredited)
Department: Biochemistry laboratory catering to IHBAS
Outline: A number of regulatory and accrediting bodies require the reporting of critical results on a timely basis (immediately or within the time frame established by the laboratory) to "the responsible, licensed caregiver" as timely notification of critical laboratory results can pivotally affect patient outcome. The aim of the study was to decrease the Turnaround time (TAT) of critical result notification along with assurance of notification to concerned caregiver or clinicians. The objectives were to measure the TAT of critical result notification in the biochemistry laboratories, identify factors associated with delayed reporting and root cause analysis for these factors by application of quality tools.

Methods

In the present study 2437 critical values during the period of 4 years (2016-2019) were analysed in the biochemistry laboratory catering to a tertiary care hospital with respect to timeliness, clinical area and to whom it was notified through process mapping. The potential failures and their corrective actions were addressed in failure mode and effect analysis (FMEA). The factors associated with delayed notification (>10 min from the time of analysis of the sample) were analyzed through cause and effect model that is Fishbone diagram. Most notable causes were presented through Pareto charts. Delays were mostly related to incomplete test requisition form and lack of Staff awareness regarding critical values.
Intervention for RCA:

a) Sensitization of staff by training to complete the TRF
b) Disseminate the change and opportunities for feedback by regular meeting.
c) Better communication system.
d) Restructuring the protocol of notification.

Outcome

TAT was again measured after implementation of change. The delay in critical value notification was reduced to 7.8% which was 14 % earlier. The analytes most commonly notified were electrolytes (Na+, K+, Ca2+) ,Glucose and Creatine Inability of laboratory staff to notify 0.02% values to the responsible person was noticed in mostly outpatients (93.56%).
Benefits -

a) Faster reporting of critical value to the responsible care giver.
b) Reduction in repeat testing of same sample.
c) Improved awareness, promptness from laboratory personnel.
d) Better management of emergency patients.

Conclusion

Better patient safety and care was ensured by early notification of critical value. Avoidance of repeat testing reduces the patient trouble as well as extra work and financial burden.
The problems encountered during the process of change -

a) Lack of awareness of non clinical caregiver regarding significance of critical value notification
b) Delayed feedback from clinicians regarding action taken after the critical value notified to them.

Lesson learnt: A good communication between laboratory personnel and caregiver / clinicians is required for better patient care.

IMPROVING COMPLIANCE TO "ASEPTIC CENTRAL LINE CARE AND MAINTENANCE BUNDLE" FOR REDUCTION OF CLABSIS AMONG NEUROSURGERY PATIENTS

Call for Posters topic: Safety

SWEETY LOHCHAB, GENINA JAMES, KALPANA SHANDIL, RAZIYA BASHEER
AIIMS, New Delhi

Background

AIIMS is one of the primary institute of India;providing essential, emergent and basic health services to patients all over the India.

This quality initiative project was done in neurosurgery department, Neuroscience Center, AIIMS. This initiative was done to reduce the rate of central line associated blood stream infections among patients admitted in neurosurgery patients. CLABSIs lead to prolonged hospital stay among neurosurgical patients which accounts for increased morbidity and mortality along with increased health care costs. Aim of the initiative was to improve the compliance to Aseptic central line care and maintenance bundle from 48.9% to 80% over a period of 2 months in Neurosurgery ICU-C.

A total of 70 patients with central venous catheter ranging from 2 months to 60 year of age and 65 nursing personnel were enrolled in the project. Data were collected during the period from May, 2019 to July, 2019 to document existing CLABSI rates and CVC-related practices.

Methods

Pre-assessment phase was conducted from 16 May, 2019 to 2nd June, 2019 to find out current practices(pre-intervention data). On the basis of pre-assessment findings, root-cause analysis was done. Three sets of change idea were selected on the basis of low efforts with high impact. First change idea was sensitization of health care personnel on aseptic handling of central venous line. Second change idea includes demonstration of operational central venous line care procedure to all nursing personnel of neurosurgery ICU-C. Post-intervention CLABSI rates were collected during the period of 7th July 2018 to 4th August, 2019 and compared with pre-intervention data. Third change idea was formulation of booklet on aseptic central venous line care. After achievement of target, sustenance phase was started from 30th August to mid-November, 2019 with observation of three samples for 8 weeks.

Outcome

The rate of CLABSI in neurosurgery ICU-C reduced from 48.9% to 24.6% over a period of 12 weeks. The baseline median compliance to central venous line care was improved from 48.9% to 55.2% from first change idea to second change idea and then up 63.4% after third change idea and now sustained up to 73.4%.

Conclusion

It is possible to do compliance with "Aseptic Central line Care and maintenance Bundle" and therefore reducing the number of "Central Line Associated Blood Stream Infections" by adhering to guidelines and close supervision. Sustainability depends on continued data-surveillance and timely feedback to staff.

IMPROVING PRE-SEDATION ASSESSMENT COMPLIANCE IN AN INSTITUTION IN THE UNITED ARAB EMIRATES

Call for Posters topic: Safety

DR INDIRA KANNAN, DR NELLIE SHURI BOMA
Tawam Hospital, Al Ain, UAE

Background

Tawam Hospital, part of Abu Dhabi Health Services Company (SEHA) is a 469-bed Joint Commission International (JCI) accredited national referral centre for oncology services and received JCI Clinical Care Program Certification (CCPC) for oncology in October 2017. Anaesthesia chairperson is responsible for managing the sedation services practised by non-anaesthesiologist physicians. The CCPC visit found no documentation of pre-sedation assessments for cancer patient's procedural sedation and requested a strategic improvement plan (SIP) to be submitted ahead of JCI site visit in September 2018. Quality and patient safety (QPS) department organised meetings in October and November 2017 between relevant stakeholders to analyse the problems and formulate SIP. Major problems identified were physicians lack of awareness of SEHA sedation policy and lack of training in utilising pre-sedation assessment tool in the Health Information System (HIM).

Methods

SIP with strategies and timeline was disseminated to the relevant stakeholders and submitted to the JCI on 23rd November 2017.

23rd November 2017:

- All relevant clinicians attend the in-house safe sedation course to obtain privileges.
- Weekly alerts on the significance of documenting pre-sedation assessment.
- Safe sedation policy to be distributed through email.
- Incorporate training on pre-sedation assessment in safe sedation courses.

31st January 2018:

- Training clinicians on HIM Pre-sedation assessment tool by weekly training sessions

31st March 2018:

- Educational fair to raise awareness, promote informal discussions and answer questions.
- Update and implement the safe sedation policy.
- Monthly retrospective chart review outside the OR and ICU setting was conducted starting from January 2018. The data was gathered on the completion of pre-sedation assessment documentation and the reported adverse events. The target compliance was 90%.

Outcome

- The pre-sedation assessment documentation increased from 0% in October 2017 to 88% in January to 99% patients in July 2018.
- 22 measurable elements under sedation were fully met during JCI visit in September 2018.
- There was an increase in the referral of high-risk cases requesting anaesthetic input.
- The improved awareness and training of the physicians resulted in a significant drop in failed sedation and adverse events.
- The anaesthetic department started keeping a database of safe sedation trained and privileged physicians and is updated every quarterly.
- QPS department is conducting random snapshot audits on procedural sedation to maintain compliance after JCI accreditation in September 2018.

Conclusion

The compliance was much more challenging to achieve for paediatric procedural sedation (EEG, ECG or CT) involving oral sedation due to their low volume. Less than five patients have oral procedural sedations in a month. Another reason for low compliance was oral sedation was prescribed by the physicians during the clinical visit, and the procedure was done later.

It required several meetings with the stakeholders, repeated emails from CMO office and QPS office stressing pre-sedation assessment documentation to improve compliance.

Establishing a sedation committee with relevant stakeholders helped in achieving compliance.

Sedation is an independent risk factor for morbidity and mortality in addition to the procedure itself; it is imperative that practising physicians are trained to follow safe sedation practice guidelines and sedation practices are monitored and evaluated by the Department of Anaesthesia.

NOISY NICU: IMPACT OF STAFF SENSITIZATION ON NOISE LEVELS

Call for Posters topic: Safety

DR NIDHI GUPTA, DR MANOJ MODI, DR SATISH SALUJA, DR ARUN SONI, DR NEELAM KLER, DR PANKAJ GARG, DR ANUP THAKUR
Sir Ganga Ram Hospital, Delhi, India

Background

Background:
Setting: Neonatal Intensive Care Unit, Sir Ganga Ram Hospital, New Delhi
Noise levels in most Neonatal Intensive Care Units exceed 45 dB (the recommended levels by American Academy of Paediatrics). Exposure to high levels of noise during Neonatal Intensive Care Unit (NICU) stay adversely affects hemodynamic stability and neuronal maturation in neonates. This may also affect behavior of caregivers with alarm fatigue, poor concentration and depression. Sensitization and education of staff has been identified as a key element in creating a noise free environment.
Objective of our study : To assess noise levels in a tertiary care NICU and compare noise levels before and after implementation of a formal educational programme and noise reduction strategies.
Study Design: Pre and post intervention study design. Noise level data collected in two phases: (1) pre-intervention (2) post-intervention after a 2-week educational programme.

Methods

This prospective study was carried out after approval by the institute ethics committee.Pre-intervention phase (Period I):Noise levels in NICU were recorded by a calibrated sound meter (Sound Ear 300,Denmark) in each of 4 patient care areas as well as at the nursing station, sequentially for a total of 15 days.The sound levels were recorded in dB (decibel) in following format: (LAFmax) , (LAS max) (LAeq1min).During the intervention phase, staff were educated on noise reduction through a structured training program.Quiet hour was introduced for 1 hour each during day and night when intensity of lights was reduced and minimal handling of babies ensured.Collar Badges bearing the logo “I’m for no noise” were worn by staff to serve as a reminder.We did not record sound levels in NICU in this phase to avoid bias. Post-intervention phase: Sound levels recorded (Period II) from each of the five areas. Noise levels during period I and period II were compared using appropriate tests .

Outcome

Results
A total of 20838 measurements during Period I and 21591 measurements during Period II were recorded. During period I, LAFmax, LASmax and LAeq1min were 76.71 (7.5), 72.5 (6.8) and 66.3 (6.1) dB, respectively; there was significant decline in all these parameters during period II, values were 74.8 (7.2), 70.2 (6.6) and 64.2 (5.5), respectively (p values <0.0001).
Overall reduction (all areas) was roughly 2 dB during period II compared to period I, which equates to approximately 13% reduction in noise levels.The pressure of sound is measured in decibel , which is a logarithmic scale. A weighting db(A) is the sound measurement that closely represents human at varying frequencies and is used for majority of instrument measured sound levels. During the quiet hour, change of approximately 5 dB was observed i.e 30% reduction in noise levels.

We observed that a relatively short 2-week period of education significantly lowered noise levels in our busy 40-bed level III unit.

Conclusion

Even though there was a significant reduction in noise levels in our study after staff sensitization they were still well above AAP recommended levels. This could be explained by the structural design of our NICU. Our NICU is a busy 40-bedded tertiary NICU with 4 closely located areas -2 ICU’s (Intensive Care Unit) area and two step down Intermediate care units. Each room has capacity for approximately 10 babies each with nurse to patient ratio of 1:2 in intensive and 1:3 in intermediate care units.
Baseline noise levels in NICU are high and educating staff is an important step in reducing noise levels in NICU, however the training needs to be reinforced at regular intervals to ensure sustainability of reduced noise levels. In addition, environmental modification is also necessary in creating a noise free environment as even with behavioral modification sound levels exceed the recommended limit of 45 dB.

PROPHYLACTIC ANTIBIOTICS BEFORE NEPHROSTOMY AND URETERIC STENTING IN INTERVENTIONAL RADIOLOGY: AN AUDIT AND QUALITY IMPROVEMENT PROJECT

Call for Posters topic: Safety

DR MICHAEL THOMAS, DR JANE KILKENNY, DR TERESA PRESA, DR KUNAL KHANNA
Wexham Park Hospital, Slough, UK

Background

Patients undergoing nephrostomies and ureteric stents are at high risk for infection if prophylactic intravenous antibiotics are not given on the day of the procedure. The Society for Interventional Radiology (SIR) guidelines recommends timely and appropriate administration of antibiotics, ideally to be given 1 hour before the start of procedure.

The aims of this audit and quality improvement project were:

1. To assess the current compliance with prophylactic prescription of antibiotics before nephrostomy and ureteric stenting at Wexham Park Hospital
2. To evaluate whether a mixed awareness and educational campaign as part of a quality improvement project and modified requesting forms would increase antibiotic prophylaxis adherence

Methods

Inclusion criteria – all inpatients undergoing nephrostomy or ureteric stenting in interventional radiology between April and August 2018 at Wexham Park Hospital. Patients were identified from operation codes and data cross-referenced with electronic databases.

A three month, four-pronged quality improvement project consisting of nursing education, poster awareness campaign, modified procedure safety pathway form and modification of online request forms to emphasis antibiotic compliance to requesting clinicians.

Post-quality improvement loop data were collected for all inpatient procedures conducted between March and June 2019 to assess the efficacy of these interventions.

Outcome

30 patients fulfilled the inclusion criteria in both loops. Pre-intervention, 40% of patients were given antibiotic prophylaxis. Of those who received antibiotics, one fifth were given in interventional radiology within the hour while the remainder were given in the ward environment at other times. 40% of these patients had antibiotics on the day of procedure.

Post-intervention, the percentage of patients given antibiotic prophylaxis rose to 64%. The number of procedures where antibiotics were given on the same day increased to 58%. New pre-procedure safety-forms now including antibiotics were filled in at a rate approaching 90%.

Conclusion

This project found that pre-intervention compliance with antibiotic prophylaxis pre-nephrostomy and ureteric stenting at Wexham Park Hospital was poor. An awareness campaign comprising disseminated posters, modified safety pre-procedure forms, new online requesting forms and nursing education resulted in an increased compliance with antibiotic prophylaxis recommendations with potential to improve patient safety.

REDUCING ENDOTRACHEAL INTUBAION TIME FROM INDUCTION AGENTS TO SUCCESSFUL ET TUBE INSERTION

Call for Posters topic: Safety

DR. SEEMA SACHDEVA, DR. AKSHAY KUMAR, DR. GAURAV
AIIMS, New Delhi, India

Background

The quality improvement project was carried out in New emergency department in All India Institute of Medical Sciences, New Delhi, India in 2019.

The baseline data from 15 data points in the month of Jan 2019 showed that average number of intubation per day were 4-5 and its average time (median) for successful intubation (T2-T1) (from administration of induction agents to successful pass of ET tube) was around 300 seconds. The common reasons for delay in intubation were lack of training of residents, Communication gap b/w nurses and doctors, Equipment failure, space constraints and low Nurse to patient ratio in red triage areas. The Quality Improvement team was formed including nurses, junior and senior doctors and consultant from emergency department.

The aim statement was to reduce the delay in intubation time from administering induction agents to the pass of ET tube from present 5 min to 2 min in next 4 months, in emergency ward starting from February 2019.

Methods

Two tools were used for measurement - Process mapping and Fish bone analysis. The major bottlenecks found by these were less number of staff, Equipment failure, lack of knowledge reg induction drug preparation and lack of skill for intubation. PDSA 1 was done on 11th February 2019 for Hands on Training of junior residents regarding Effective intubation. PDSA 2 was conducted on 15th March 2019 and 24th March 2019 for airway intubation training program using high fidelity airway mannequin for Junior residents. On site sensitization of red area nursing officers was done by Nursing faculty, regarding importance of early intubation in two formal sessions. RSI drug checklist was implemented and The induction drugs and dosages was marked on posters displayed in every unit of emergency ward. The other changes implemented were keeping Bougie in resuscitation trolley for difficult intubation. Data was collected immediately after these PDSA 1 AND 2.

Outcome

The outcome of PDSA 1 was tested with 14 data points for intubation time from 12-2-19 to 16-3-19. Median time for intubation reduced from 300 sec to 165 seconds.

The outcome of PDSA 2 was tested on 10 Data points from 25-3-19 to 21-4-19. The Median time of intubation further reduced from 165 to 157 seconds which was very close to set target.

The major benefits of this QI were regular training program for airway management, Induction rugs checklist introduction and dedicated staff for red area all the shift,

The main challenges were data collection was not regular due to shift duty of team members and Batch of doctors and red area nurses in Emergency department were not fixed. thy were in rotation after every 1 month.

Conclusion

Median time of intubation after induction drugs administration to successfully pass of ET tube reduced from baseline 300 seconds to 157 seconds.

REDUCING HEALTHCARE-ASSOCIATED INFECTIONS BY IMPROVING COMPLIANCE TO ASEPTIC NON -TOUCH TECHNIQUE IN INTRAVENOUS LINE MAINTENANCE: A QI APPROACH

Call for Posters topic: Safety

DR. ABHISHEK SOMASEKHARA ARADHYA, MS. SAVITHRI S, MR. SRINATH RAMAPPA, MS. SHALI JAICOB, DR. VENUGOPAL REDDY, DR. PRAVEEN VENKATAGIRI
Ovum Woman & Child Specialty Hospital, India

Background

Lack of standardization and failure to maintain aseptic techniques during procedures contributes to healthcare-associated infections (HCAI). Although numerous procedures are performed in NICU, handling of peripheral intravenous (IV) lines is one of the common procedures performed daily. The aseptic non-touch technique (ANTT) is based on a set of well-defined principles, which aims to standardize common procedures by maintaining an aseptic field and stresses on the protection of key parts and key sites from touch to reduce HCAI. Adherence to evidence-based catheter practices has shown to reduce HCAI across various age groups admitted in intensive care units. Despite evidence-based care bundle approach variability is higher and compliance to asepsis is less.

Aim of this study was to standardize and improve compliance to IV line maintenance by ANTT through quality improvement (QI) approach and study its impact on HCAI in Neonatal intensive care unit (NICU).

Methods

This study was conducted in a tertiary care neonatal unit of rural Bangalore, India. All nurses were subjects of assessment for compliance to IV line maintenance and admitted neonates with IV line were subjects for the HCAI data collection. At baseline, the current practices for IV line maintenance were audited to understand gaps in practice. Pictorial Standard Operating procedure (SOP) was developed based on ANTT. Implementation and sustenance of SOP were ensured by PDSA cycles. HCAI was defined as per German neonatal nosocomial infection surveillance system. Compliance to individual aseptic techniques was the process measure. HCAI rates per 1000 patient days was the outcome measure. Audits were done by the 3 nurses who were the project leads. One nurse and one baby were audited only once during a day. Audit data on compliance to ANTT and trends of HCAI rates were displayed using run charts. Qualitative experience from the nursing staff was also recorded.

Outcome

A total of 143 neonates was part of this QI study. Implementation of ANTT involved the dissemination of information amongst nurses by focused group discussions, WhatsApp messages, pictorial SOP and video demonstrations. Principles of ANTT were incorporated into onboarding unit education. After the implementation, significant improvement was seen in compliance to various components- use of the aseptic field (0 to 100%), closed ports (0 to 100%), key part contamination reduction (80% to 0%) and IV hub scrubbing (0 to 72%). Apart from continuous group teaching, display of results of process measures and outcome measures in the form of run charts helped to sustain ANTT. SOP of IV line maintenance based on ANTT could be implemented and sustained over a period of 9 months. There was a reduction of HCAI from 25 per 1000 patient days to 5 per 1000 patient days. Qualitative experience showed the main determinant of compliance to scrub the hub was the sickness level of the neonate.

Conclusion

The strengths of our study were QI approach was used to implement and sustain evidence-based handling of peripheral intravenous catheters. The study investigated one of the most frequently performed procedures of NICU and could demonstrate a trend in reduction of HCAI. This study also adds to the evidence of the effectiveness of ANTT and shows the need to be part of the training curriculum of new staff. The study had a few limitations. Like other bundle approach, improvements could not be linked with specific intervention. Although infection rates improved, in the scrub the hub sub-component, drying for 30 seconds could only attain compliance up to 70% like other studies

By using a QI model of improvement, ANTT in IV line maintenance can be implemented in a stepwise fashion. Improving compliance with ANTT principles in IV line maintenance significantly reduced HCAI. Scrub the hub requires longer sustained efforts to become part of the practice.

REDUCTION OF HYPOTHERMIA IN TRANSPORTED NEONATES AT ADMISSION IN A TERTIARY CARE CENTER IN SOUTH INDIA - A NURSING TEAM LED QUALITY IMPROVEMENT INITIATIVE

Call for Posters topic: Safety

SHIVSHANKAR DIGGIKAR, NIRMALA SHALET, PRIYA S, PRAVEEN VENKATAGIRI
Ovum Woman and Child Specialty Hospital, India

Background

The current QI project was done at Ovum Woman and Child Specialty Hospital, Bengaluru, Indian. It runs a 16 bed NICU with about 200 admissions per annum and is predominantly an outborn unit. Majority of the admissions are high risk babies retrieved from peripheral centres (Nursing homes which has level 1 neonatal care, public sector hospitals, primary health care centres etc) with no or bare minimal facilities to handle high risk deliveries. Due to lack of regionalisation of care in Indian context high risk pregnancies are still delivered in centres not equipped enough to handle the complications and post-delivery babies are referred to level 2 or 3 neonatal units after discussing with parents.

When we analysed the data of these babies retrospectively for 6 months it was noted that 64% of the babies were hypothermic at admission despite all the necessary steps taken. We aimed to fix this issue thorough a one-year QI project.

Methods

Based on the issues analysed by Fish-Bone analysis we implemented following PDSA cycles

QI Phase 1

Training of all trainee doctors and Nurses about the importance of normothermia, warm chain maintenance, checking temperature at admission and documentation during transport by Lead/Nurse in charge.

QI phase 2

Replacement of ,Embrace (Phoenix medical system, Ltd) commonly used in Low-Middle income countries for transport of babies and back up battery of the transport incubator

QI phase 3

We formulated a '5 Point protocol(5Pp) as PDSA 3 (Table 2) which was implemented. This protocol was put up on the incubator and need to be filled by nurse during the transport. Compliance to the protocol was also stressed upon. This PDSA cycle was done for 8 weeks May- June 2019. Data was analysed.

QI Phase 4

Fourth meeting was on July1st 2019. Adherence to 5PP was assessed(July-August 2019)

QI Phase 5

Training of New trainee doctors about warm Chain(September -October 2019).

Outcome

Total of 96 babies were transported during QI period.The mean (SD) gestation in hypothermic group was 35(3.7) slightly higher than in normothermic group 34(3.4) but it was statistically significant. The distance travelled in hypothermic group was significantly more 7.3(5.5) compared to normothermic group 4.1(3.8) (p,0.01).D. There was no correlation seen noted between hypothermia at admission and gestational age (r, - 0.18), birthweight (r, 0.04) or distance travelled in kilometres (r, 0.02).There was positive correlation seen between adherence to '5 Point -protocol' and admission temperature (r, 0.86). Over 5 PDSA cycles the incidence of hypothermia reduced to 16% from 64%.

Conclusion

We reduced the incidence of hypothermia from 64% to 16% over 12 months period from the time of implementation. Compliance with '5 -point thermoregulation protocol improved from 80 % to 94% over 3 PDSA cycles.

Thermoregulation during neonatal transport is a huge challenge especially in Indian scenario due to multiple incorrigible factors contributing to its high incidence even in the best of the centres. Unless regionalisation of care at public and private sectors is initiated achieving normothermia in babies will be a challenge. QI initiatives is a way forward to deal with some of these aspects. Invo.lving nursing team who forms the core team of neonatal transport is imperative

SAFE INJECTION PRACTICES
Call for Posters topic: Safety

DR. VISHWA ARUN DESHMUKH, DR. DHANANJAY MANKAR
TISS, Mumbai, India

Background
Tata Institute of Social Sciences, is an institute located in the hustling city of Mumbai, Maharashtra, India. The institute offers a variety of courses in variety of domains for graduates, post-graduates and PHD students. The author of this project, Dr. Vishwa Deshmukh, is a student pursuing a post-graduate degree in Masters of hospital administration. The co-author of this project, Dr. Dhananjay Mankar, is a professor at the center of hospital administration. The project made is a review project on Safe injection practices, submitted under the topic, Safety. Unsafe injection practices result in healthcare problems like HBV infections, HCV infections, liver cancer, cirrhosis cases, HIV infections and death. According to the World Health Report, as of 2002, unsafe injection practices account for 30% HBV infections, 31% HCV infections, 28% liver cancer, 24% cirrhosis cases, 5% HIV infections and 0.9% of deaths worldwide.

Methods
The project submitted under the topic safety, is a review project on safe injection practices. During the making of this review project, no intervention and changes were done to the practice. It is solely based on studies made by various authors. The project was made by reading and reviewing various papers published on the topic concerned. Also, help of various info graphics and informative posters were studied in order to keep the project more informative. This project on, Safe injection practices explains the various methods of administering injections safely.

Outcome
The review project on safe injection practices tends to impact by providing a holistic overview about the rationale of safe practices of administering injection. After reading this project, healthcare professionals should get a holistic idea on what is the importance of administering injections safely, the various methods of safe practices, strategies to overcome various challenges.
The paper explains the rationale of safe injection practices. It explains the various safe injection practices. Some practical guidelines are also discussed in administering injections. It also throws some light on the needle stick injury and its management. This paper aims at reviewing some of the challenges that are faced during the safety practices while administering injections. Various managerial, educational and regulatory strategies that are formulated and should be implemented are also discussed.

Conclusion
Unsafe injection practices result in healthcare problems like HBV infections, HCV infections, liver cancer, cirrhosis cases, HIV infections and death. According to the World Health Report, as of 2002, unsafe injection practices account for 30% HBV infections, 31% HCV infections, 28% liver cancer, 24% cirrhosis cases, 5% HIV infections and 0.9% of deaths worldwide.
With patients at risk due to unsafe injection practices, the healthcare workers and personnel are also at equal risk of getting adversely affected by unsafe practices. One of the most important in needle stick injuries. Needle stick injuries are the injuries and wounds which are caused by needles, accidentally, puncturing the skin. These injuries can occur at any time while using or disposing off needles. There are around 3 million needle stick injuries estimated, that place globally, each year. Hence, it is essential we manage this type of injuries.

SAFETY REVIEWS FOR PROACTIVE IDENTIFICATION & MANAGEMENT OF RISKS IN STERILISATION ACTIVITIES IN SINGAPORE'S PUBLIC HEALTHCARE INSTITUTIONS (CENTRAL REGION)

Call for Posters topic: Safety

JOEL SIM, SANDRA HENRIETTA SUBNER, ADJUNCT ASSOCIATE PROFESSOR TAI HWEI YEE
National Healthcare Group, Singapore

Background

The National Healthcare Group (NHG) is a leading public healthcare group in Singapore which looks after approximately 40% of Singapore's population which resides in the central region. An incident whereby incompletely sterilised dental instruments were used in outpatient treatment occurred in December 2018. More than 500 patients were potentially affected, although the risk of infection was considered to be extremely low. To prevent future recurrence of similar incidents, NHG undertook a safety review, also known as Sterilisation Safety Walkabouts (SSWs), to proactively identify current gaps and manage potential risks in reprocessing activities. The NHG institutions involved included 2 acute hospitals, 2 specialty care centres and 6 primary care polyclinics. The safety review covered both centralised and decentralised sterilisation sites, as well as areas where sterile supplies are being used, across all settings (inpatient and ambulatory).

Methods

The SSWs, conducted between April and June 2019, were unannounced and led by two auditors (1 internal; 1 external). An audit tool was developed to review sterilisation processes for identification of potential failure modes and effects. Institutions supported the conduct of the SSWs as part of ongoing quality and risk management. Besides a thorough document review, staff interviews and site visits were conducted to better understand the daily workflows, constraints and challenges faced by staff. From the walkabouts, the audit team identified six key areas which could potentially increase the risk of harm associated with using incompletely sterilised medical instruments:

1. Environmental Aspects of Reprocessing
2. Cleaning, Packing and Sterilisation/Disinfection of Instruments
3. Use of Reprocessed and Single Use Sterile Supplies
4. Microbiological Surveillance for Endoscopes
5. Traceability of Reprocessed Instruments to Specific Patients
6. Staff Training and Competency

Outcome

Walkabout findings were shared with institutions' senior management to provide oversight and support for additional resources for implementation plans. An Implementation Committee was established in January 2019 to oversee the implementation of appropriate control and monitoring measures to mitigate against all identified risks. These measures allow for early detection of incompletely sterilised instruments to prevent cross-transmission and infection of patients and avoid unnecessary patient recall and testing. A standardised staff training curriculum and competency framework for sterilisation services was also developed to maintain consistent excellence in practice. Lastly, the Committee developed and endorsed 3 position statements to align international evidence-based practices across NHG for:

1. Use of chemical indicators and biological monitoring in sterilisation
2. Microbiological surveillance of endoscopes
3. Training and competency of staff involved in sterilisation services

Conclusion

Findings from the internal safety reviews proactively identified potential risks in sterilisation activities. Periodic cross-institution audits have been scheduled to re-assess institutions' policies, procedures and competency for continued quality assurance. All clinical services should have a rigorous quality assurance programme, including ongoing risk assessments/audits and periodic competency assessments, in place to ensure standards are consistently met. Reference to latest evidence-based standards (local and international) should be taken when developing policies, standard protocols, work practices and audit tools. Healthcare leaders should proactively identify and manage potential risks in their fields across multiple risk domains.

TIRED DOCTORS MAKE MISTAKES: THE ROLE OF OCCUPATIONAL HEALTH AND SAFETY LAW IN PROTECTING PATIENT SAFETY

Call for Posters topic: Safety

DANIELA GRADIL
Royal Darwin Hospital and Melbourne Law School, Australia

Background

It has consistently been demonstrated that excessive working hours and inadequate rest often lead to burnout and mental health illness amongst healthcare professionals. Some studies have even demonstrated that burnout and fatigue can lead to impairment in decision making comparable to the effects of alcohol intoxication with worse patient outcomes and potential for very serious mistakes that impact on Patient care.

In Australia there is currently no legislation limiting the maximum limit of working hours and minimum rest for healthcare professionals, which translates into a higher incidence of stress, fatigue and burnout when compared to other countries where clear legislation has been implemented such as the European Working time Directives. These include strategies such as mandatory 11 hours of rest between shifts, at least one day off per week, maximum limit of 48 hours of work per week over the course of four months and mandatory 4 weeks of paid leave per year.

Methods

In Australia, Professional Drivers and Pilots are currently protected under legislation under the National Transport Commission (Road Transport Legislation – Driving Hours Regulations 2006) and the Civil Aviation Order 48.1 – Flight time limitations – Pilots (2/12/2004) which regulate maximum time of working hours and rest in order to safeguard Professional Drivers and Pilots, as well as the public. Similarly to Drivers and Pilots, healthcare professionals are exposed to high risk of fatigue through long hours with demanding critical decision making that directly impact the public. However, in Australia these professionals are not equally safeguarded by legislation and also exposing patients to potential harm. There have been recommendations made by the National Code of Practice for Hours of Work, Shiftwork and Rostering for Hospital doctors in 2016 by the Australian Medical Association but that currently hold no legal authority to be implemented by employers.

Outcome

The Australian Work Health and Safety Act 2011 establishes a common national framework across Australia to safeguard the health, safety and wellbeing of employees in the workplace, establishing a duty of care of the employers towards employees and “other persons” "against harm to their health, safety and welfare through elimination and minimisation of risks arising from work”, which could be in the form of excessive working hours, inadequate rest and fatigue exposing both healthcare professionals and patients at risk.

This study aimed to look at current strategies that have already been demonstrated to be effective in other countries including the European Working Time Directives and legislation already being implemented in other professional fields in Australia and how this legal framework could be applied to healthcare professionals in Australia in order to minimise fatigue, mental health illness and improve the quality and safety of healthcare provided to patients.

Conclusion

Despite healthcare professionals’ fatigue and burnout being a recognised risk to patient safety, i.e. to the public comparable to Professional Drivers and Pilots, there are still no clear working time regulations for doctors in Australia.

There has been an attempt to address these concerns through recommendations by the National Code of Practice for Hours of Work, Shiftwork and Rostering, however these recommendations are seldom being implemented.

The Work Health and Safety Act 2011 establishes a duty of care on the employer towards their employees and the public, but currently vague on what concerns working time limit regulations. Legislation to safeguard the health and wellbeing of doctors and patients is imperative and it could be achieved by clearer occupational health and safety legislation on what regards safe working hours as already implemented in Europe.

TO IMPROVE ADHERENCE TO GUIDELINES IN THE MANAGEMENT OF BLOOD SUGARS AMONG IN-PATIENTS RECEIVING ENDOCRINOLOGY CONSULTATION FOR GLYCEMIC CONTROL

Call for Posters topic: Safety

DR ABID.S
Aster Medcity, Kochi, India

Background

The work was done in the Endocrinology department of Aster Medcity, Kochi (a quaternary hospital in South India).The Team consisted of Endocrinologists, Chief Nursing Officer, Nurse managers, Nursing Officers, Nursing educators, Staff nurses, Clinical Pharmacists & Core medical Trainee. Insulin is a high alert medication in our hospital. Often it is handled casually. The main error noticed is improper dosage delivery of insulin despite of complete prescription of insulin.The insulin medication errors are not reported by the nursing heads.

Methods

Sliding scale insulin charts of all inpatients receiving endocrinology consultation for insulin titration were secretly audited consecutively for 5 working days based on different wards.Total compliance was only 64% and the data of least compliance depending on wards was reported to the Chief Nursing Officer. CNO in turn transferred the data to the assigned Nurse Managers and Nursing officers of different wards.This led to the education about proper dosage calculation of insulin and its importance in better clinical outcome to the patient to all the staff nurses especially freshers.The Nurse Managers and Nursing Officers were put into active monitoring in their wards in all shifts. All the doctors will be advised for incident raising without fail if any error in insulin dosage has been noticed. All the clinical pharmacists of different departments will be advised to monitor compliance in their respective department.

Outcome

After the audit, rigorous education of insulin compliance was given among the nurses.The defaulters were reported and individually educated .This gave an opportunity to receive feed backs from the staffs.Their doubts were clarified and the importance of insulin compliance were reinforced among the other nurses. The Nursing educators were advised to make sure that all newly recruited staffs are familiar with in-hospital insulin sliding scale chart and the same was added to the competency assessment sheet of the nursing staff.A total of 484 readings of insulin prescriptions were taken during the audit and re-audit(audit-234, reaudit-250). Chi-square test was used to analyze the data.
Compliance in Audit = 64%
Compliance in Re-audit= 80%
Difference = 24% (C.I=16.52% to 31.21%)
"p" value = <0.05 (significant)
Thus there is a significant difference between audit group and re audit group. Results were good. Insulin dose compliance of 64 % has been increased to 88 % in a span of two weeks.

Conclusion

Early control of blood sugars were attained which led to better clinical outcomes and shorter hospital stay which in turn led to less monetary loss and decreased chances of hospital acquired infections. Problem encountered during the process of change was educating and creating awareness to a large number of nurses. The main message from my experience is " Bolus insulin delivery compliance is much low than we expect, but at the same time, improving compliance is an easier task than we expect''.

TRENDS IN ANTIBIOTICS CONSUMPTION AND ITS CORRELATION WITH RESISTANCE AT A TERTIARY CARE CENTER

Call for Posters topic: Safety

ANKIT BHARDWAJ, SANGEETA SHARMA, RENU GUPTA, ANUPAMA MITTAL
India

Background

Antibiotics are crucial for treating infectious diseases and have significantly improved the prognosis of patients with infectious diseases, reducing morbidity and mortality. However, the inappropriate and over utilization of antimicrobial's contributes to the emergence and spread of drug-resistant bacteria, resulting in ineffective treatments. The aim was to study trends in antibiotic consumption and correlate it with resistance pattern. The study was conducted at a tertiary care center, Delhi. Antibiotic procurement data for a period of 6 years (2012-2018) was collected from the Central Procurement Agency (CPA) and resistance pattern (antibiograms) in blood samples cultured from indoor and ICU patients was studied from (2016-2018).

Methods

This is a retrospective time series analysis of systemic antibiotics with no intervention was done. Antibiotic procurement was taken as proxy for consumption assuming that same has been used. ATC for systemic use (ATC code J01) antibacterial was used and defined daily dose (DDD) per 100 bed days was calculated. Antibiotics were further classified as Access, Watch, and Reserve (WHO AWaRe classification). Antibiotics consumption was ranked based on their volume of DDD i.e., drug utilization (DU90%) was calculated. Blood isolates from inpatient and ICU were identified by standard techniques. Resistance pattern of 4 gram negative pathogens namely Klebsiella, Acinetobacter, E. coli and Pseudomonas spp were studied.

Outcome

A total of 20 antibiotics (Access 12, Watch 13, and Reserve 1 [linezolid]) were consumed and DU (90%) comprising 6 antibiotics (3 each Access and Watch category) in order of consumption ceftriaxone (20.5%), metronidazole oral (12.9%), ciprofloxacin (Oral) (11.1%), azithromycin (9.7%), cefotaxime (6.1%), and amoxicillin (5.3%). Mean DDD doubled from 63.3 to 123 over the years.
Resistance to ceftriaxone was observed in Pseudomonas (100%), Klebsiella (84%), Acinetobacter (48%), E.coli (29%). Resistance to Ciprofloxacin was (Pseudomonas 79%, E.coli was 65%, Klebsiella 64% and, Acinetobacter 21%) $p<0.05$), With gentamicin also significant resistance was observed (Klebsiella 97%, E.coli 82%, and Pseudomonas 40% and acinetobacter 33%) without any change in DDD. Significant positive correlation was found between gentamicin and ciprofloxacin consumption and resistance.

Conclusion

Antibiotics consumption of the Watch group was high and increasing antibiotic consumption trends were observed. High resistance level was observed to commonly used antibiotics – third-generation cephalosporins, ciprofloxacin, and gentamicin especially Pseudomonas and Klebsiella. Development of resistance correlated with consumption. Hospital antimicrobial stewardship programs should be implemented to shift to the use of Access group antibiotics and restrict use of Watch antibiotics.

AN EEG ORIENTED INNOVATIVE APPROACH TO MANAGEMENT OF SPASTICITY IN CEREBRAL PALSY

Call for Posters topic: Technology, Innovation and Data

Dr HARINDER JASEJA
Vellore Eeg Center; Gwalior, India

Background

The work was conducted at Vellore EEG Center, Gwalior, India.
Incidence of cerebral palsy (CP) ranges from 1.5 to 4 per 1,000 live births and spasticity exists in as many as 61 to 76.9 percent of all patients with CP and adversely affects their quality of life (QOL). Cerebral palsy is the most common cause of spasticity and physical disability in children; yet, spasticity still remains a poorly understood phenomenon.
This study has been aimed to reduce spasticity that can reduce motor disability and eventually improve QOL in patients with CP and spasticity.
Epilepsy occurs in 25-45% of children with cerebral palsy. However, in CP with spasticity, the possibility of concomitant subtle or micro seizures that may be undetected and unreported is also high, and which also warrants due consideration and addressing; furthermore, the seizures are also likely to be associated with disruption of sleep architecture that may adversely affect learning and cognition and ultimately QOL.

Methods

The present study was based on patients with CP referred for EEG investigation for delayed milestones with or without seizures to confirm clinical diagnosis of epilepsy.
Patients with CP commonly exhibit interictal epileptiform discharges (IEDs), which are regarded as hallmarks of epilepsy, on their electroencephalograms (EEGs) even without clinical epilepsy. The IEDs are believed to contribute significantly to cognitive impairment in CP. However, the relationship and correlation between IEDs and spasticity in CP has not been explored deeply previously.
In the current work, the author has studied the relationship between spasticity and IEDs and has revealed an intrinsic relationship between the two. Furthermore, MRI findings also very often conform to localization of IEDs that are detected predominantly in the frontal regions, the areas that mainly control muscle tone in the body and also are most frequent sites of brain injury and lesions in CP patients with spasticity.

Outcome

The author's hypothesis that IEDs contribute to enhancement of spasticity in CP is not without scientific justification and appears appealing; therefore, contemplation on their treatment is justified to be beneficial in reducing spasticity. Therefore, based upon the revelation of close association between spasticity and IEDs, the author has highlighted the significance of EEG in CP patients with spasticity for detection of IEDs and contemplating their subsequent treatment, if detected, with the objective of reducing spasticity and motor disability.
In addition to association with spasticity, IEDs are also known to adversely affect learning and cognition that further compromise their QOL. Treatment of IEDs even without clinical epilepsy in CP has been proposed and published by the author earlier also as a management-guideline to improve the cognitive status and arrest further decline in it, and some studies have already shown improvement in cognitive status following this guideline.

Conclusion

Thus, based on above-cited studies and evidence, the author postulates inclusion of mandatory EEG in the management protocol of all CP patients with spasticity and subsequent treatment of IEDs when detected. An EEG can yield information that extends beyond mere detection of IEDs and diagnosis of epilepsy and therefore, EEG findings cannot be ignored in the determination of management in CP.
Since it is a postulation, drawing definite results and conclusions at this stage would be premature but nevertheless, highly favorable results are anticipated as the postulation is based on sound scientific studies and strong evidence and some studies have already shown improvement in cognitive status following this guideline.
The acceptance rate of treatment of IEDs even in the absence of clinical epilepsy appears high as it can exercise favorable impact on spasticity, cognitive impairment and unreported subtle or micro seizures with an eventual improvement of QOL of CP patients with spasticity.

CLINICAL AND COST EFFECTIVENESS OF POLYSOMNOGRAPHY AND PORTABLE DEVICE FOR THE DIAGNOSIS OF SDB: HEALTH TECHNOLOGY ASSESSMENT

Call for Posters topic: Technology, Innovation and Data

AKRITI CHAHAR, PROF SONOPANT JOSHI
Symbiosis International University, India
DR NOBHOJIT ROY
Monash University, Melbourne, Australia

Background

Sleep disordered breathing (SDB) includes a spectrum of disorders characterized by an abnormal respiratory pattern & Obstructive Sleep Apnea (OSA) is the most common and severe form of SDB. Community-based epidemiological studies from several parts of India have estimated that the prevalence of OSAS is 2.4% to 4.96% in men and 1% to 2% in women.It is highly prevalent though under recognized public health problem in India. OSA often undiagnosed especially in rural areas, where 70% of population resides in India. Increasing prevalence of SDB and a greater awareness of associated health risk, have resulted in high demand of testing for sleep studies.

PSG is Gold standard for diagnosing OSA. However, it is time consuming, expensive and requires technical expertise. Therefore, objective of this research is to assess diagnostic accuracy (sensitivity & specificity) and Cost Effectiveness of PSG (Level I) and Portable Device (Level III) for patients suspected to have sleep apnea disorder.

Methods

Health technology assessment (HTA) as per WHO, referes to systematic evaluation of properties, effect, and/or impacts of health technology. It is a multidisciplinary process to evaluate the social, economic, organisational and ethical issues of a health intervention or health technology. Clinical Diagnostic accuracy: Meta-analysis(MA) of comparative studies of level 2 & level 3 versus level 1 sleep tests in adults with suspected sleep-disordered breathing. We searched 3 research databases (Cochrane, PubMed, & Embase) from Jan 2007 for studies that reported on diagnostic accuracy parameters. Bivariate mixed-effects binary regression model used to estimate summary diagnostic accuracy parameters suing Revman 5.3 & STATA 14.Cost effectiveness analysis: Decision analytic model on Excel was built comparing Level I, Level III and doing nothing at first level, using 1 year time horizon with societal perspective in India was carried out to provide evidence based on the economic evaluation.

Outcome

Diagnostic Accuracy: 12 studies involving total 2570 patients were included in MA. Summary sensitivity of level III for mild, moderate & severe OSA was 89%, 79% & 72% in home diagnosed participants and 97%, 96% & 94% at lab. Whereas, specificity of level III for mild, moderate & severe was 71%, 87% & 45% for home and 85%, 89% & 88% at lab. Positive predictive value(PPV) for mild, moderate & severe OSA were 89%, 89% & 57% respectively at home. At lab PPV were 91%, 86% & 77%. Negative predictive value(NPV) for mild, moderate & severe OSA for level III were 72%, 78% & 61% at lab. NPV at home were 94%, 95% & 96%. Cost Effectiveness analysis: Incremental cost effectiveness analysis (ICER) of OSA screening compared with do nothing were calculated as INR 76,662.60/quality adjusted life year (QALY). Taking threshold value from WHO according to which if ICER value is less than 1 GDP then technology is cost effective. Therefore, level III screening is cost effective as ICER is less than 1 GDP.

Conclusion

In India, there is no national programme on OSA and so far budget has been allocated as per consensus with the expert committee or demand of the any state, without generating evidence. However, with the help of this HTA it could be drawn through Meta-analysis and economic evaluation the potential of implementing OSA screening in India. Level I study for diagnosis of OSA has several limitations which include necessity of performing the study in a sleep laboratory, technical expertise required, high cost and long analyzing time needed by the operator. However, level III study is home-based unsupervised portable PSG equipment. They are also known as portable level III sleep study devices. The perceived advantage of these home based portable monitoring are time, and recourse efficiency and lower cost.

Level III devices scored well for sensitivity, and specificity with a trade-off of increasing specificity and decreasing sensitivity as disease severity increased as given in the result.

DIGITALIZATION FOR QUALITY AT APOLLO HOSPITALS

Call for Posters topic: Technology, Innovation and Data

DR. SANJAY DALSANIA
Apollo Hospitals Enterprise Limited, India

Background

With ever-increasing expansion of its activities and need for monitoring and measuring the quality, patient safety and clinical outcomes, Apollo Group invented a novel approach to go digital in order to sustain the excellence. It is also essential to constantly oversee the procedures and processes across the group in light of concerns over issues of patient safety and outcomes of clinical care. Digitization is causing a quantum shift in the quality of healthcare delivered at Apollo Hospitals. A firm believer of quality care and patient safety culture, Apollo Group envisioned the digital transformation through various IT innovations and digital applications. Besides the indigenous hospital information system, Apollo Hospitals Group has forayed into digital quality systems by internally developing and successfully implementing numerous e-quality monitoring, analytical and safety culture promoting utilities at corporate as well as individual hospital level for various important functions.

Methods

1. TASCC: an extensively planned digital program which objectively monitors and evaluates special indicators and the clinical and internal processes
2. AIRS: To establish clear systems for reporting of information related to medical/healthcare errors, and to provide a confidential mechanism of identification, tracking, trending, and follow-up of all incidences
3. AAP is a web based tool designed to review compliance with JCI standards
4. e-QMP with Visual Data Analysis
5. Online Functional Help Desks: Function as a single point of contact for all end-users, related to IT, Maintenance, Biomedical Engineering, HR related issues
6. Online SUD Tracker
7. e-Vaccination System: to track the coverage of multi-dose vaccination amongst the hospital staff
8. Digital QR: One-stop online storage and making available all required resources for quality implementation and management
9. 360^0 Score Card: An annual on-site audit tool

Outcome

The variety of functions addressed by these innovations are essential and critical at times to manage quality in the hospital. These functions are usually carried out manually in other organizations. This takes a lot of efforts, time, resources etc and also results into many fallacies, inaccuracy and failure to achieve intended purpose. The quality of quality management and hospital administration largely depend upon the data and information which get generated through process performance, collated by various means and analysed through tools and techniques. These digital transformation at Apollo Hospitals hugely and positively impacted the process capabilities, constant monitoring and oversight upon them and critical clinical and administrative decisions taken based upon these data. It has also resulted in avoidance of non-value adding activities, increased the staff satisfaction and cost reduction.

Conclusion

The project was initiated and developed in-house with zero cost. No cost was incurred from the inception till the final phase of the project, except the man hours. This initiative was primarily carried out with intent to smoothen the compliance to critical processes, to streamline the data collection with necessary online records retention and to get rid of the difficulties of manual systems. We have observed over a period that an intended purpose of this initiative has been achieved. In addition to this, this has also resulted in the indirect cost benefits related to savings in stationery consumed for reporting and compilation of data at various departments of the hospital.

INNOVATIVE USE OF MOBILE-BASED TECHNOLOGY TO STRENGTHEN QUALITY AND RESPECTFUL CARE IN FAMILY PLANNING

Call for Posters topic: Technology, Innovation and Data

DR. VIVEK YADAV
CURE-NIPI, India
NEHA SRIVASTAVA
Jhpiego, India

Background

Lack of access to quality Family Planning (FP) services, comprising of informed choice & client-centered respectful care, continues to exist in India, depriving women from making timely & correct decisions about their reproductive needs. Government of India recommends Fixed Day Services (FDS) approach to ensure availability of FP services including voluntary female sterilization, on prescribed days. However FDS approach requires exhaustive planning & coordination for successful implementation. Suboptimal planning of FDS often results in adhoc service provision & denial of services to clients who often travel long distances, leading to unnecessary loss of time & wages. These unserved clients may choose to not return due to poor experience with the system. Studies show that client satisfaction is key to client's decisions to use and to continue using services, and is essential for long-term sustainability; making client & community's perspective of quality of care important for FP services.

Methods

Maternal and Child Survival Program (MCSP) was a 5-years global USAID cooperative agreement working with ultimate goal of preventing child & maternal deaths. In India, MCSP led by Jhpiego was working to expand access to quality FP services & contribute to India's FP2020 commitments. MCSP rolled out Parivar Swasthya Vaani (PSV), a mobile technology-based Interactive Voice Response System (IVRS) across 12 districts in Chhattisgarh and Odisha. The dedicated PSV toll-free phone line had 3 functions

i. Promote informed choice by providing women & communities access to critical information on all available FP services
ii. Streamline FDS processes at facility by allowing clients to pre-register at facility & time of their choosing. Pre-registration begins in community with initial screening of clients to determine their eligibility
iii. Improve systems' responsiveness and accountability by providing opportunity to serviced clients to share feedback on quality of services.

Outcome

Between July 2018 and June 2019, PSV had received 18,164 calls, of which 11,871 calls preregistered clients to receive voluntary female sterilization services across 103 program facilities in 12 districts in Chhattisgarh and Odisha and 2,663 calls collected client feedback on quality of family planning service provision and 3,530 calls provided information on Family Planning . Captured client feedback indicated an improvement in quality of services received as well as attitude of service providers. Of the clients who provided feedback (as compared to baseline):

- 89% felt comfortable in asking questions to providers and felt that their questions/concerns were answered adequately/satisfactorily (70% at baseline)
- 84% found privacy during counselling and examination to be adequate (67% at baseline)
- 47% reported having made a voluntary informed choice regarding the adopted method (26% at baseline)
- 8% reported a wait time longer than 2 hours (26% at baseline)

Conclusion

i. Mobile technology provides a huge opportunity to design user friendly digital health intervention enabling more women & communities to participate in an enabling environment free of power imbalance (between clients & providers)
ii. Pre-registration of clients improved quality & assurance of services:
    a. Strengthened community screening of clients reduced uncertainty in receiving FDS services
    b. Scheduling FDS services as per client's convenience

c. Improved client satisfaction by better provider-client interactions, drop in refusal of FDS services & reduced out-of-pocket expenditure

iii. Shift in delivery of services from provider-centric to client-centric

a. Client feedback collated as dashboards were presented during facility quality assurance meetings, creating a powerful feedback loop turning FP service acceptors & providers into active contributors

b. Strengthening transparency & accountability in health system by providing mechanisms for generating, collating & sharing client feedback

PULSE OXIMETRY MULTIMODAL DEVICE AT HEALTH & WELLNESS CENTERS: ENHANCING EFFICIENCY OF PNEUMONIA MANAGEMENT

Call for Posters topic: Technology, Innovation and Data

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IPE Global Ltd. USAID Vriddhi Project, India
DR VARUN ALWADHI
RML Hospital, India

Background

Pneumonia remains a leading cause of child mortality, India accounting for 32% of global burden and needs strong actions to achieve SDG Goals. An assessment of Acute Respiratory Tract Infection (ARI) case management practices in Health and Wellness Centres (HWC) showed; only 11% healthcare workers could correctly classify pneumonia, respiratory rate was recorded only in half of the children, 1% of children were referred and antibiotics were prescribed to 79% of children without justification.

The intervention addresses lack of clinical skills to measure respiratory rate and need for a diagnostic device for hypoxemia detection to aid healthcare workers in primary health facilities. A multimodal device has been introduced in 19 HWCs across 12 Aspirational Districts in 7 states of India following a training on an adapted IMNCI tool. Stakeholders involved are Community Health Officers and Auxiliary Nurse Midwives at the HWCs targeting children below 5 years reporting to the HWCs with ARI.

Methods

With landscape analysis of country's guidelines for pneumonia prevention, management, diagnosis and service delivery, diagnostic devices and baseline assessment of healthcare providers (to assess the clinical skills for managing ARI). An optimal technology solution has been identified with confirmed accuracy (through a study 'Measuring accuracy of the device at a tertiary hospital in India' - DOI:10.1186/s41479-020-00067-2), ease of use, availability in market & cost. In addition, human centered design approach was used to design the solution. The timeline for implementing the changes were:

Activity	Timeline
Concept development & approvals	Jan – Mar 2019
Device selection, validity study & IMNCI Adaptation	Mar-June 2019
Baseline & training	Mar - July 2019
Data collection, analysis & qualitative assessment	July 2019 – June 2020
Implementation	July 2019 – June 2020

Staff involved were CHOs and ANMs at the HWCs and patients were children below 5 years reporting to the HWCs with ARI.

Outcome

4336 children have been screened till June'20 out of which 24.3% have been diagnosed as Pneumonia 1% and 74.7% as severe and no Pneumonia respectively. 71% children between 1 – 5 years of age, 27% between 2 – 12 months and 2% < 2 months of age. 27% children reported fast breathing, 0.5% as General Danger Signs (GDS), 0.6% had SpO2 levels <90% and 1.3% were referred. Antimicrobials were used in 27.4% cases, whereas 59.6% cases have been treated with home remedies. Valid referrals (presence of either GDS, SpO2 levels <90% or both) were 55% and referral compliance was 70%.

Correct case management i.e. home remedies in cases without fast breathing, antimicrobials administration in children with fast breathing, GDS and SpO2 levels <90% and referrals has improved from 11% to 90% and antimicrobial usage rate has rationalized from 79% to 27.4%. Also, referrals (1.3%) improved by 40% and device usage identified 28% cases that would have been missed earlier.

Conclusion

Adopting a systems-based approach and integration with the current IMNCI guidelines, comprehensive planning, well defined training package and role clarity has helped the intervention demonstrate results and get scaled up.

Also, out of the 7 states, 6 state governments have approved funds in PIP for further scaling up the intervention.

There was no device breakdown reported and a separate qualitative assessment showed device is robust, easy to use and workers feel empowered. Continued use of device during COVID pandemic further proved its utility in infection prevention and correct management.
The integrated approach with an IMNCI protocol and the appropriate use of newer diagnostics can have far reaching policy implications for pneumonia management in the country.

RFID - NEED OF HOUR FOR IMPROVING PATIENT SAFETY AND PROVIDING BETTER QUALITY CARE IN TERTIARY CARE HOSPITAL OF A METROPOLIS

Call for Posters topic: Technology, Innovation and Data

DR (MAJ) KHUSHBOO GAUR
Military Hospital Jaipur, Armed Forces India
DR (COL) SAMEER MEHROTRA
Officers Training College, Lucknow, Armed Forces India

Background

a) Work done In various wards and departments (medical stores, operation theater) of tertiary care hospital in a metropolis of India
b) Medical stores mgt team, Nursing staff, OR team, ward healthcare workers, administrative staff are involved in study.

Problem: To determine the adverse events rate of the hospital and also to discuss how to reduce it inorder to provide quality of patient care and to increase patient satisfaction.

Methods

INTERVENTIONS:

a) Questionnaire based study on reporting of adverse events and near misses done inorder to assess the problem and its extent.
b) Panel discussion, clinical meetings, group discussions done formally and informally to involve the relevant staff. Statistical analysis of the questionnaire done using SPSS 23 and disseminated among the relevant staff inorder to increase the awareness about the problem.
c) RFID is used as an intervention and with the help of tags materials, equipment and various gadgets can be tracked.
d) Manpower trg is needed to be done and change management need to be instill in all workers as change is the only constant.
e) On job trg is done for all healthcare workers who are involved in the process and timelines need to be adhered to as it takes approx 3-4 months for trg and brimging change in system.
f) Feedback is very important as it helps in communicating the pros and cons of the system which is applied onground.

Outcome

Intervention leads to decrease in number of adverse events happening in hospital which further leads to better patient care and patient satisfaction in return.

Conclusion

a) Better quality patient care is provided.
b) Patient satisfaction survey done shows better clientele satisfaction.

Problem faced:

- resistance from the different work groups to accept the change.
- risk taking behaviour is absent.
- continual motivation is required for making the project success

Lesson learnt:

a) Change is only constant
b) Continual effort and hardwork has no alternative.
c) PERT chart and GANT charting need to be worked on more definitively if I were starting again.

TECHNOLOGICAL SOLUTION FOR HIGH-RISK CASE MANAGEMENT IN PREGNANCY CARE IN A TRIBAL AREA

Call for Posters topic: Technology, Innovation and Data

DR. AMEYA BONDRE, PRITEE DEHUKAR, TARANA MENDIRATTA, ZEESHAN ANJUM, ADITYA KULKARNI, SHANTANU PATHAK
CareMother, India

Background

Talasari is a tribal block (Maharashtra) with 77% below poverty line households, 47% literacy rate, fertility rate of 2.5, and four primary health centres (PHCs). The CareMother program worked with two PHCs, with 20 Auxiliary Nurse Midwives (ANMs) administering the subcentres, to improve health of pregnant women. Routine antenatal testing lacks 'high-risk management' enabled by technological inputs to ease operations. Thus, pregnant women at-risk do not receive timely attention at PHCs, to improve birth outcomes. We reviewed several studies examining the cultural and economic barriers leading to underused antenatal services in tribal areas (e.g. Saxena et al 2013, reporting 39% service use), and interviewed doctors and midwives in Talasari PHCs to understand their challenges in monitoring and treating high-risk pregnancies, before making developments in our solution.

Methods

In tribal areas, doctors and midwives need smart tools to identify and manage high-risk pregnancies. 'CareMother' consists of a portable kit used by the ANM/health worker for centre- or home-based tests, and a mobile application with a 'decision-support tool (DST)' for triaging high-risk pregnancies, delivering specific counselling messages, transferring real-time test results (Cloud data) for the (remote) doctors' prompt decisions, and referring mothers to higher centres. Trained workers deliver personalized care through the DST that fetches data from antenatal tests and classifies risk and further action. The CareMother team sequentially trained doctors and ANMs, on technology orientation, utilizing app functions, and managing high-risk cases. CareMother was deployed in phases (March 2018 -October 2019) with certain technological features taking precedence over others. Weekly supervision and problem-solving with ANMs was critical, by program managers of the implementing organization.

Outcome

Back-end data (n=2776) was analysed using Stata-IC. A dashboard with real-time indicators was developed for program managers. Descriptive statistics and tests of significant proportions assessed the effect of intervention activities on birth outcomes. Notably, mothers with two antenatal check-ups, as with 3 or 4, also showed positive outcomes - 83% had term births and 75% had normal birth weight neonates. These outcomes were significantly improved compared to mothers with one visit ($p<0.0001$). Mothers with any increase in haemoglobin and weight across >=2 visits had a significantly lower incidence of low birth weight and prematurity. 13% of women 'escaped' anaemia and 27% escaped underweight, relative to their first check-up diagnosis – such critical data is not tracked in traditional antenatal monitoring. Mothers receiving two visits showing positive outcomes was pertinent given the difficulties in achieving the recommended four visits in tribal areas.

Conclusion

Better neonatal outcomes correlate with better managed antenatal risks. Health workers should be leveraged via smart tools to achieve the same; this is possible even in a tribal area. This solution makes the health system more responsive to real-time antenatal disorders, to combat 'the three-delays' that lead to maternal (and newborn) mortality.

TELEMEDICINE IN INDIA

Call for Posters topic: Technology, Innovation and Data

DR. VISHWA ARUN DESHMUKH, DR. DHANANJAY MANKAR
TISS, Mumbai, India

Background

Tata Institute Social Science is a prestigious institute situated in the heart of Maharashtra, Mumbai city. The author is a student pursuing Masters in hospital administration. The co-author is a professor at the center of hospital administration in the institute. The department focuses on creating future hospital and healthcare managers by covering all the managerial aspects in the course. Telemedicine topic was chosen under the technology and innovation poster as it is a cutting-edge technology that will make healthcare available to all, just a click away. India is a developing country with a vast geography and dense population. The population is estimated to close up to 1.37 billion in 2019. To cater the healthcare need of this huge population, India has only 3.8 million of healthcare professional. It is merely impossible to cater to the healthcare needs with such a small number of workforce. Telemedicine is the answer for this problem.

Methods

The project made is a review article. There is no primary intervention or changes made to practice. The project is composed by reading and reviewing various articles, informative posters and published papers. The project is an overview of what telemedicine is, its benefits, its importance and needs. the data was collected from existing published articles and papers. the various papers were read thoroughly and useful data was compiled together to form this informative poster. The pictures and info-graphics used are also gathered and added from the internet to make the understanding of the topic easy and interesting. Telemedicine emerging trend and barriers to comply are also studied thoroughly and are included. Telemedicine is an emerging concept in digital health in India. The poster is made in such a way as to explain the current status of telemedicine in India and what opportunities it holds for us in the future.

Outcome

The outcome of this project enlightened us and hopefully it enlightens the delegates and the attendees of the conference, with the concept of telemedicine. While the project was being made, we were enriched with information regarding various aspects of telemedicine and how it is important and inevitable in the upcoming years. Telemedicine is a boon for a country like India with such a huge population to cater for healthcare. On the other hand, India lacks a solid health providing infrastructure and healthcare personnel. This creates reduction in the quality of healthcare services provided and burnout among the healthcare work force. Telemedicine can ensure that people get quality consultations and treatments from anywhere. Healthcare would be made accessible to all.

Conclusion

In the times of pandemic like COVID-19, we all are aware that how risky it is for people to go to the hospitals as there are chances of cross infections. In such times, telemedicine is an excellent solution if made aware about effectively. COVID-19 pandemic has made it difficult for people to access health. Proper awareness among the people about what telemedicine is of utmost importance to make them use and access telemedicine. COVID-19 is an emerging new disease which will have varying impacts on the human kind.

This literature review will enlighten the readers with a fair idea of telemedicine, the technologies involved in it, its importance, benefits and needs, barriers to setting up and comply with telemedicine. The aim is to explain telemedicine and its application and need in the Indian context.

THE IMPACT OF DIGITAL SOLUTIONS IN THE FIGHT AGAINST ANTIMICROBIAL RESISTANCE

Call for Posters topic: Technology, Innovation and Data

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Artemis Hospitals, Gurgaon, India

Background

A prospective observational study was conducted for a period of one year(Jan-Dec 2019) in an Indian tertiary care hospital. The irrational use of broad spectrum antibiotics is a global threat which leads increasing antimicrobial resistance (AMR), incidence of Clostridium difficile infections and increased health care costs especially in tertiary care hospitals. To combat AMR, there was a well designed AMS program in the hospital since 2008, yet access and implementation of antibiotic policy was a challenge to the clinicians. Moreover, the hospital ecology and susceptibility patterns of likely pathogens was lacking in the existing antibiotic policy. As a result there was an increase in non-compliance to treatment guidelines in the hospital. Therefore, digital antibiotic policy in the form of mobile apps was strongly needed for easy access and save clinicians' time to prescribe the right therapy

Methods

Intervention

- Jan 2019-Introduction of DigitalAMS app for empiric therapy and surgical prophylaxis policy(SAP) in Artemis MDConnect app.
- Enrolment and Training of clinicians to use mobile app.
- Antibiotic monitoring and auditing by clinical pharmacists with support of microbiologist. Inappropriate use was identified and interventions suggested to clinicians.
- Defined Daily Dose(DDD) of reserve antibiotics was calculated to measure drug consumption.

DigitalAMS app: DigitalAMS mobile app had antibiotic recommendations based on patient risk stratification(Type I to Type IV as per Carmeli's score), location(ICU/Wards) and type of infection(respiratory, blood stream, urinary and skin and soft tissue). Hospital ecology and latest antibiogram was also included.

Artemis MDConnect: The SAP was integrated with hospital mobile app Artemis MDConnect. SAP recommendation was based on type and duration of surgery, dose and route of administration and an alternate for beta-lactam allergies.

Outcome

Key Findings

- Positive feedback of Clinicians for mobile apps- Easy access of Antibiotic policies and user friendly.
- Empiric Therapy: Improved adherence to empiric selection of antibiotics was observed in subsequent months. Out of 450 files audited, 427 (93.5%) cases showed compliance to empiric policy. Adherence to De-escalation/ directed therapy was observed in 63.7% cases.
- Surgical Antibiotic Prophylaxis therapy: Increased adherence to selection (97.3%), timing (94.7%) and redosing guidelines in SAP. However, duration of continuing SAP for prolonged periods post surgery remained a challenge.
- Analysis of DDD: Decreased antibiotic consumption for Linezolid(94%), Colistin(73%), Meropenem(18%) and Vancomycin(47%) as per DDD data.

Conclusion

Irrational use of antibiotics lead to increasing AMR. Robust and effective AMS strategies are needed to combat this issue in hospitals. Digital solutions to implement AMS programs resulted in increased adherence to antibiotic prescription guidelines by clinicians. It is evident that application of user friendly technology brings a positive change in implementation of AMS strategies in Healthcare settings and may prove beneficial in controlling the spread of AMR.

THE IMPACT OF THE DESIGN OF AN ELECTRONIC SEPSIS ALERT ON THE NUMBER OF PATIENTS WITH CONFIRMED SEPSIS AT A LONDON MULTI-SITE HOSPITAL NETWORK

Call for Posters topic: Technology, Innovation and Data

ZAFIR ISLAM, LAURA KLAR, JONATHAN TURPIE
Imperial College Healthcare NHS Trust, UK

Background

Sepsis care at the Imperial College Healthcare NHS Trust is supported by an electronic screening protocol. It screens the observations (respiratory rate, blood pressure, heart rate) and laboratory results (blood glucose, white blood cell count, lactate, bilirubin and creatinine).

The digital alert system was introduced to all inpatient wards and emergency departments in the Trust over a period of 18 months in 2018 and has reduced the risk of mortality by 24%.

A sepsis alert is generated when a patient demonstrates signs of sepsis. A physician is notified that a prompt review is needed when they open the patient's record. The sepsis alert form (SAF) asks the clinician the following question: 'having reviewed the patient, does this patient have sepsis or severe sepsis?'

We found that the response rate for the SAF was approximately 62-68%. We aimed to increase engagement with the SAF by finding the reasons behind it and thus making changes to improve response rates.

Methods

The 'Sepsis Big Room' is a weekly multi-disciplinary meeting where staff share patient stories, discuss improvements to sepsis care and real-time data from our electronic system was reviewed. All adult patients who triggered a sepsis alert and had general acute admissions across the trust were included.

The meetings revealed that clinicians felt the options to the SAF did not allow/represent the diagnostic uncertainty of sepsis. Detailed discussions revealed concerns that the form was asking physicians to definitively rule in or out a diagnosis of sepsis. Furthermore, there was a fear of incorrect diagnosis, which can have detrimental to patient care. For these reasons, doctors were choosing not complete the SAF.

Therefore the options on the alert were changed from 'no' and 'known sepsis' to 'I don't think this patient has sepsis', 'this patient has treated sepsis', 'this patient is not under my care', and 'I require more information or review'.

Outcome

Since the changes were made, the percentage of completed SAFs increased significantly from an average of 65% to 94%. The increased number of forms completed led to an increase in the percentage of patients with a diagnosis of sepsis from an average of 28% to 45%. Furthermore, the percentage of patients who were coded as not sepsis significantly reduced from an average of 36% to 16%.

Conclusion

Increased engagement with the sepsis alert has meant our sepsis data is more reliable, allowing us identify specific areas/departments where sepsis care may need improvement.

The new options allowed the physician to confirm or refute a diagnosis of sepsis whilst simultaneously acknowledging a degree of uncertainty in this. Therefore, physicians were much more likely to engage with the SAF.

The increase in response rates of the SAF caused by our changes has likely reduced the phenomenon of alert fatigue because the alert would be silenced. This reduced the frequency of alerts, and thus reducing the chance of patient harm.

The Big Room enabled us to identify problems with the SAF which would not have been evident without the discussions between the different healthcare professionals during these meetings. The main lesson was the importance of including the target end user (i.e. healthcare professionals) when designing digital systems designed to improve patient care and safety.

THE POWER OF CHOICE: IMPROVING QUALITY OF CARE FOR FAMILY PLANNING SERVICES
Call for Posters topic: Technology, Innovation and Data

PRITI CHAUDHARY, NEHA SRIVASTAVA, KAMLESH LALCHANDANI, ADITI GUPTA
Jhpiego, India

Background
According to Track20 estimates, India's unmet need for the family planning (FP) is 18.9% with 44% of unmet need for spacing. However, due to the lack of awareness of newer modern contraceptive methods, overall method mix is greatly skewed towards the permanent methods, with sterilization contributing to almost 68% of all FP users. India scores poorly (second lowest among FP2020 countries) on Method Information Index (MII), FP2020 core indicator, suggesting substandard quality of care in FP especially in terms of ensuring informed choice. Higher scores on MII have also been associated with the continued use of FP. Furthermore, the latest national survey (NFHS-4) shows that only 18% health workers ever talked to female non-users about FP. Jhpiego, a not-for-profit and John Hopkins University affiliate, worked in the Indian states of Assam and Maharashtra, in seven targeted districts, to advocate and implement the Quality of Care (QoC) model for increasing access to quality FP services.

Methods
Jhpiego introduced Balance Counselling Strategy (BCS) approach for strengthening FP counselling and messaging. Training was followed by hand-holding of all providers through supportive supervision visits (SSVs) conducted by program team and select Community Health Workers (CHWs) through cluster meetings. CHWs were trained for conducting doorstep FP messaging while facility based counsellors were trained to promote informed choice at facility. They were trained on BCS cards and algorithm (originally developed by Population Council) and client wheel (Adapted from WHO's MEC Wheel 2015; Tool is simplified wheel for providers/health workers to explain various family planning methods available to their clients). Tools and job aides were developed in local languages. Jhpiego facilitated task sharing of FP counselling by strengthening skills of staff at facilities where designated FP counsellors were not available. CHWs (1,041) and facility based counsellors (118) were trained on BCS strategy.

Outcome
Project staff was engaged with training, process mapping, Supportive Supervision Visits (SSV) and monthly collection of Family Planning (FP) data from project focus facilities. In 2019, an improvement in method mix was observed, as proportion of Family Planning spacing methods increased by 8% and 14% in Assam and Maharashtra respectively. The clients coming to facilities (33,842) were counselled on Family Planning at health facilities of which 27% (97,783) of clients accepted FP method on the same day of counselling. In Assam, Community Health Workers (CHWs) reached out to 17,227 clients in the community of which 36% (6,233) were not using any contraceptive method at that time but after receiving FP counselling from CHWs, 23% (1,402/6,233) of these clients accepted FP method. As per Impact 2 (Marie Stopes International, 2018), the project impacted to:

- Number of unintended pregnancies averted: 64,560
- Number of abortions averted: 39,277
- Direct healthcare costs saved: USD 2,877,058

Conclusion
Balanced Counselling Strategy (BCS) is an important strategy to improve skills of facility based providers for family planning (FP) counselling for improving the knowledge of clients on family planning. Through our project, we were also able to demonstrate that BCS can be effectively used to engage community health workers (CHWs) to deliver family planning information and and conduct doorstep family planning messaging at the community level. Structured capacity building of community health workers allows improved family planning messaging leading to increased knowledge of clients on various family planning methods, aiding in motivating the clients to choose a family planning method of their choice and thereby helping in improving the method-mix . However, the current level of FP knowledge of CHWs is low and interventions to build their capacity on the same is required. Additionally establishing mechanisms for tracking performance of providers leads to improvement in quality of services

TRANSFORMING HEALTH SYSTEMS USING DATA: THE DISTRICT HOSPITAL QUALITY OF CARE INDEX
Call for Posters topic: Technology, Innovation and Data

NARESH CHANDRA JOSHI, DR DEVINA BAJPAYEE, DR PRASANT KUMAR SABOTH, DR AVINASH JAISWAL, DR HARISH KUMAR
IPE Global Ltd. USAID Vriddhi Project, India

Background
Effective use of data for action remains a paramount challenge in the public health system in India. Further, the data available is fragmented across various platforms. Use of data at the facility level for decision making and course correction continues to be an issue and absence of consolidated and holistic dashboards often limits decision making capacity. Addressing maternal and newborn mortality remains the priority focal area for NHM and improving Quality of Care (QoC) is crucial. To overcome the challenges on effective use of data and identification of gaps and accelerate improvement in QoC of MNH services, an Excel based decision making tool District Hospital Quality of Care Index (DQCI) was developed towards addressing gaps in MNH services through use of district and SNCU level data.
Use of data for action has been strengthened through DQCI across 25 Aspirational Districts of 5 states Haryana, Himachal Pradesh, Jharkhand, Punjab and Uttarakhand.

Methods
DQCI dashboards were developed quarterly using the data available in public portals; HMIS, SNCU online software, and observation data through interviewing key respondents like hospital manager, labor room focal person, operation theatre focal person etc.
Different variables were triangulated, and presented in a concise, easy-to-interpret manner under Infrastructure, Equipment, Drugs, Human-Resource, Practice indicators and seven indices in SQCI for quality of clinical care, mortality outcomes and optimal utilization of services.
The dashboard presents analysed data using color coding; indices on performance and quality, benchmarked against accepted global and national standards. It generates comparative analysis for all quarters in a planning-year
The tool was developed, pilot tested dashboards for four quarters were developed and shared subsequently with stakeholders at state, district and facility level resulting planned concurrent actions.

Outcome
DQCI has triggered action across all the Health Systems Strengthening building blocks. While data usage, regular and correct updating of HMIS & SNCU online has improved. Improvements are also visible in availability of human resources, drugs, logistics and service delivery.
State specific achievements

- Punjab - Screening of GDM and C-section audits started, ObGyn specialist posted to DH Moga.
- Haryana - ObGyn posted and ante-natal screening of GDM started in DH Mewat.
- Himachal Pradesh - GDM screening initiated and 24x7 power backup assured in DH Chamba.
- Jharkhand - Improved drug availability, increased spectrum of lab services, Paediatrician posted to DH Lohardaga and C-section audits initiated at DH Bokaro & Godda.
- Uttarakhand - Regular updation of drugs status in HMIS at DH Rudrapur.

Periodic sharing of SQCI provided guidance to program managers in mentoring and deriving actions to improve QoC in SNCUs majorly towards rationalizing antibiotic usage and improving KMC rates.

Conclusion
DQCI has proved to be a useful tool to support monitoring and address bottlenecks for RMNCH+A service delivery. Visualizing existing data in a summarized format empowers health providers to assess performance immediately in order to take informed decisions. Data from the previous quarter and year has helped the districts to plan and take appropriate actions. The design of dashboard ensures its acceptability and usability to monitor indicators under varied categories. Overall availability of data in a comprehensive and collated manner has enabled quick and effective decision making resulting in improved healthcare services.
Due to scope of project limited to MNCH services, many indicators related to other healthcare services; adolescent health, communicable and non-communicable diseases etc could not be incorporated. The successful adoption of the tool calls out for widening the scope including important indicators across various national and state health programs.

A PROJECT TO IMPROVE THE CONFIDENCE AND COMPETENCE OF SENIOR HOUSE OFFICERS IN MANAGING THE ACUTELY UNWELL CHILD

Call for Posters topic: Work in Progress

DR SHIVANI GULATI, DR AVINASH ARAVAMUDHAN
East Surrey Hospital, Redhill, UK

Background

Looking after an unwell child is an inevitable responsibility of any senior house officer (SHO) working in Paediatrics or Emergency Medicine. Despite this, formal training in managing unwell children is not a mandatory requirement for Foundation Doctors and GP trainees, who make up the majority of the SHO workforce. This project came about after I independently attended a European Paediatric Advanced Life Support (EPALS) course prior to my Paediatrics posting, which illuminated my knowledge and skills of the management of the acutely unwell child. It gave me the confidence to go into my forthcoming job, accompanied by frustration that I had not done the course sooner and that it was not offered to all doctors who work with children. From informal conversations with fellow SHOs about their hesitancies in caring for sick children and the lack of training provided to do so, I set out to quantify the problem and improve the confidence and competence of doctors in managing unwell children.

Methods

A questionnaire was distributed to SHOs who were part-way between or had just finished their Paediatrics or Emergency Medicine rotation; 22 responses were received. 91% (n=20) of doctors had never received formal training on the recognition of the acutely unwell child with the same percentage lacking any training on paediatric advanced life support. Disappointingly, 91% (n=20) of doctors felt they did not feel adequately trained in recognising an unwell child, yet only 50% (n=11) reported that they had been granted study leave to attend courses outside the mandatory curriculum. Almost unanimously, 95% (n=21) of doctors agreed that they would have found it useful to have paediatrics advanced life support (ALS) training incorporated into their training programme, hence this project sought to achieve just that.

Outcome

The findings were well received by our Paediatrics firm and Postgraduate Education Centre. Within weeks, simulation training was incorporated into our tri-weekly teaching rota, which continued once weekly throughout the coronavirus pandemic. The scenarios, both paediatric and neonatal in nature, have had positive feedback from all staff involved. I also presented my findings to our Foundation Programme Director and Chief of Medical Education, with whom I am collaborating to improve Trust-led training for rotating Paediatrics doctors. Our current stage of work involves making changes to the induction programme for Paediatric SHOs so that some form of resuscitation training is provided to doctors before starting their placement. The next stage of the process will involve quantification of feedback with a second round of data collection, using a proforma similar to the original questionnaire.

Conclusion

Preliminary feedback on the aforementioned changes has been well received by juniors and clinical leads. We anticipate forthcoming quantitative data to show heightened confidence and competence levels in SHOs. At the very least, we are guaranteed to have improved coverage of doctors receiving formal training on the recognition of the acutely unwell child by incorporating this into the mandatory Paediatrics induction programme. The main lesson I have learnt about the implementation of change is the importance of a solution that is pragmatic and finds a way of capturing all, if not most, of the affected cohort – in this case junior doctors. From my work, I hope that I have improved the confidence and competence of doctors in managing acutely unwell children and the next stage of the process would be to collect data on exactly this.

DECREASING THE RATE OF SURGICAL SITE INFECTION IN THE HOSPITAL

Call for Posters topic: Work in Progress

PROF. TAMKIN KHAN, DR ENAS MUSHTAQ
JNMC, Aligarh Muslim University, India
DR APARNA SHARMA
AIIMS, New Delhi, India

Background

The project was undertaken by the Department of Obstetrics and Gynaecology, JNMC, AMU, Aligarh .Our Department was sensitised to the need for Quality Improvement through Laqshya, Government of India Initiative for labour room in 2018.We were facing problems like high surgical site infection rate, poor documentation and records, no standard protocols, overcrowding and no admission discharge policy. There was a high rate of Surgical Site Infection leading to maternal morbidity, increased days of hospitalisation and more usage of antibiotics.

A Multidisciplinary Quality Improvement (QI) team was formed comprising of Obstetricians and Gynaecologists, Hospital Infection Control Team, Pediatricians, Staff nurses and MTS workers. The baseline data was collected from the Obstetric ward for a period of 1 month and it was found that the rate of Surgical Site Infection (SSI) was around 30%. Our aim was to decrease the rate of SSI from 30% to less than 5% over a period of 3 months.

Methods

Analysis of the problem: The Fish Bone Analysis was done. The problems identified were no Standard protocols, lack of knowledge and specific training of staff. The residents and staff were overburdened. There was no proper flow of Biomedical Waste in the Operation Theatre with no proper designation and distribution of work.

The Process Flow Chart was formulated.

PDSA 1:

PLAN: SSI was defined as wound infection or persistent fever >100°F for 48 hrs or more. The Antibiotic policy was formulated and Surgical safety checklist prepared and implemented from July 2019. Standard Sterilisation Procedure for OT was formed.

DO: There were strict implementation of policies with comprehensive training and monitoring.

STUDY: The data was reviewed weekly

ACT: The plan was adapted and modification of the definition of SSI was required as many patients with fever due to other causes were incorrectly diagnosed as SSI

PDSA 2: The definition of SSI was restricted to wound infection

Outcome

The rate of SSI has decreased in our patients. We are still continuing with the project and persistently the rates are less than 5% over a period of 1 year. The antibiotic policy has been prepared and adapted by the other departments of the hospital as well. The surgical safety checklist has been made and displayed in every maternity OT, which has not only helped in decreasing the rate of infection but also in avoiding other surgical/ anaesthetic mishaps from occurring.

We have improved our documentation and record keeping. The admission discharge policy has been made in collaboration with the department of pediatrics which has helped in overcoming the problem of overcrowding in our wards to a great extent. The work flow in the Operation Theatre has been streamlined and the duties and responsibilities of the workers have been well defined.

Conclusion

No plan is the best plan unless implemented and tested. Various QI projects have been started in the department and Multidisciplinary approach is used to address the various problems. Meticulous record keeping can be maintained. Regular training and monitoring of the staff is essential for Quality Improvement. The staff nurses and sanitary workers are also actively involved in the projects and play a key role. Unity is strength. With good team work and collaboration, wonderful things can be achieved.

ENSURING MATERNAL AND FETAL SAFETY IN ANTENATAL CASES USING DOPPLER - A QUALITY INITIATIVE

Call for Posters topic: Work in Progress

GURU THANGIAH ARUN, MS. REEM IBRAHIM ALBADER, EL SAID MOHAMAD AZIZ BEDAIR, NASSER JASSIM AL MASLAMANI
Hamad Medical Corporation, Qatar

Background

Hamad medical corporation (HMC), the principal public healthcare provider in the State of Qatar, is a not-for-profit health care provider. This quality initiative project is currently in progress in Al Khor hospital, a community service hospital, managed by HMC. Six Radiologists and twelve ultrasound technologists working in clinical imaging department of Al Khor hospital is involved in this quality improvement project and the focus was on pregnancy outcome. Ultrasound technologists in our clinical imaging department were competent in performing basic antenatal ultrasound but were found (by a retrospective audit) not competent enough in performing (and identifying abnormal) Doppler ultrasound in antenatal cases. This will affect the quality of scan reports and further affect the clinical care of antenatal patients. We aim to improve the competency level of our technologists in this regards to deliver safest, most effective and most compassionate care to patients.

Methods

We did retrospective audit of Doppler antenatal cases in October 2019 to check for technique and correct differentiation of normal and abnormal Doppler. The audit results and the need for changes in practice were conveyed to Head of clinical imaging team and supervisor of ultrasound technologist. We followed our action plan as planned: In November 2019, both Radiologists and technologists were updated regarding the recent changes in antenatal Doppler. In December 2019, both technologists and radiologists were provided with checklist and reporting templates along with schematic representation of normal and abnormal Doppler parameters and waveform for reference. All antenatal Doppler images were reviewed every month starting from December and any errors were classified categorically by Radiologists. Technologists were informed about their errors via their supervisor. In January and February 2020, Radiologists gave focused training in Doppler for technologists to improve quality further.

Outcome

In December 2019, approximately 13 % of Doppler antenatal cases done by technologists were found with errors by reporting radiologists using the checklists provided to them. Following their focused training by radiologists and regular supervision by their supervisor for two months, error rate in antenatal Doppler ultrasound decreased from 13 % to 6 % by the end of May. Radiologists prepared modified reporting templates following knowledge update and thereby their clarity in conveying the abnormal results to referring physicians improved. Feedback from referring physician clearly conveyed improvement in quality of reports. By correct performance and identification of abnormal Doppler waveform by technologists, and by proper reporting, mother and baby at risk of adverse outcome were identified, results were conveyed properly to referring physicians and timely appropriate management was given; Adverse outcomes were minimized, leading to improved quality clinical care comparatively.

Conclusion

By improving the competency and performance of technologists, adverse outcome in pregnant patients is reduced and safety of both mother and fetus is ensured. We expect and are targeting the error rate to fall below 3% by the end of 2020. Challenges encountered during the process: Uniformity among radiologists in filling the checklist and reporting template, inability to supervise all technologists simultaneously, timely communication of abnormal results to referring physician, time for training of technologists by radiologists during busy schedule, availability of radiologists for expert's lecture to update knowledge are few. Message we would like to give others are: 1. For quality improvement, updating and sharing the knowledge between team members is a must. 2. Involving all or main stake-holders simultaneously in the process of change is the key to quality improvement. 3. Reinforcing the change process by periodical interventions and from multiple sources is necessary.

IMPROVING DIETARY COUNSELLING PRACTICES IN OUTPATIENT DEPARTMENT FOR UNDER-5 CHILDREN WITH MALNUTRITION

Call for Posters topic: Work in Progress

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AIIMS, Gorakhpur, India
AMITESH YADAV, PRIYANKA SINGH
BRDMC, Gorakhpur, India

Background

Baba Raghav Das Medical College, Gorakhpur caters to a region that has traditionally lagged in child health indices. Quality initiative (QI) team of Department of Pediatrics reviewed health records of children under 5 years of age visiting OPD and found that only 30 % of under-5 children suffering from malnutrition received counselling regarding diet and feeding practices. The team decided to increase the proportion of under-3 children with malnutrition receiving dietary counselling from existing 30% to 70% over 4 weeks.

Methods

Using Fish bone analysis following points were discerned:

- Policy: Focus only on medical diagnosis and lack of departmental protocol
- People: Lack of sensitization of residents and hospital attendants
- Process: Nutritional counsellors not involved in OPD
- Place: No dedicated anthropometric station

Based on our analysis, new OPD workflow included

- “Anthropometry station” with trained hospital attendants.
- Feeding counsellors in OPD
- Provision for recording anthropometry using a self-inking stamp.

After piloting of planned intervention for a week and 2 Plan-Do-Study-Act (PDSA) cycles, the revised process flow was rolled out.

Outcome

Percentage of children with malnutrition who received dietary counselling increased from 30% to above 70% after 4 weeks of intervention. There was unanimous acceptance of planned intervention as medical team welcomed completion of anthropometry even before consultation started while nurse counsellors and hospital attendants felt empowered with more active participation in OPD care. Through individualised counselling, family centric home-based management of moderate malnutrition was promoted.

Conclusion

We realised that small changes can lead to big leaps in quality. Our QI initiative not only improved our practices in terms of feeding counselling but also helped in improving involvement of feeding counsellors and hospital attendants in OPD.

Our team found that serial anthropometric data for follow-up was in many cases lost and an electronic record of OPD visits instead of self-inking stamp will be even more beneficial.

IMPROVING QUALITY OF LIFE OF CHILDREN WITH CELIAC DISEASE AND OF THEIR PRIMARY CARETAKERS
Call for Posters topic: Work in Progress

SADAF HAMEED
Indian Council Of Social Science Research, New Delhi, India

Background
The study was conducted in a hospital setting, the sample comprised of 20 children with celiac disease (8-18 years of age) and their primary caretakers. The sample was recruited from Ram Manohar Lohia Hospital (New Delhi), Indraprastha Apollo Hospital (New Delhi) and a gluten free vendor. Patients and their families were invited to Kalindi Hospital (New Delhi) for the interventions. The study has been conducted to improve quality of life of children with celiac disease and their primary caretakers. Psycho-social interventions were used to improve quality of life of children as well as of their primary caretakers. Quality of life in children with celiac disease was assessed by using PedsQL generic core scales and quality of life of primary caretakers was assessed by WHOQOL (World health organization quality of life scale).

Methods
The sample was divided into treatment and control groups, each comprising of 10 celiac disease children with their primary caretakers. Psycho-education was used as a primary intervention to improve quality of life of children and of their primary caretakers. Psycho-education comprised of Videos and presentations for dissipating Celiac relevant information, its management, gluten free living, common challenges faced, precautions inside as well as outside home, maintaining a quality of life post diagnosis, adapting to change in family dynamics etc. This study is a pre-test post-test interventional design. The time between pretesting and post testing was 4 months. The patients and their primary caretakers were called every week for the psycho-education sessions.

Outcome
The final results of the study are still not available but based on the preliminary findings and the responses of the patients and their families, we can conclude that psycho-education along with brief social skills training proved beneficial in improving quality of life of celiac children and of their primary caretakers. The patients did not show the symptoms of gluten ingestion. The group psycho-education session was very helpful for the patients and their families as they discussed about all their fears with genetic expert, celiac experts and nutritionists. After getting extensively informed about the cross contamination when preparing gluten free meals the patients and their primary caretakers were more confident in preparing gluten free meals. Feedback from the patients and their families reflects that the social skills training helped them to be more assertive and attentive when going out to a restaurant and having a gluten free meals.

Conclusion
After looking at the preliminary results and the feedback from the patients, we can say that psycho-education can highly benefit newly diagnosed celiacs to manage celiac disease and their families to cope with the challenges of the disease, psycho-education can also help those who are celiac and on gluten free diet since long but they are non- compliant to gluten free diet thus, they are not able to manage their condition effectively. The problem encountered during the process is the lack of understanding among the celiac community about the role of a psychologist in managing the challenges associated with celiac disease, they were told about the importance of psycho-education and how a psychologist can help them and their child to better manage celiac disease and the other problem was difficulty in getting celiac patients to participate.

IMPROVING VACCINE COMPLIANCE IN A HOSPITAL SETTING
Call for Posters topic: Work in Progress

DR. MATHEW PEEDIKAYIL, DR. VINITA MATHEW, MS. VANDANA BHATIA
Ashok-One Hospital, India
DR. TARA KINRA
USA/India

Background
This quality improvement project is being conducted at Ashok-One Hospital, Mumbai. Available vaccines for Pneumococcal and Influenza infections are not administered to many eligible people leading to preventable hospitalisations and deaths. No previous effort had been taken to determine the vaccination rate in this hospital setting.
We analysed the barriers to vaccination as lack of awareness among patients and staff of the preventative benefits, eligibility, cost effectiveness, efficacy and safety of these vaccines. Lack of tools to implement prescribing as a routine practice also contributed to missed opportunities.
The initial aim was to increase Pneumovax [PPSV23] vaccination rate by 30% above baseline within one month for OPD patients screened as eligible and advised to take the by their doctor. A secondary aim was added to also increase Influenza vaccination [Influvac Tetra] rate by 50% above baseline within 3 months for OPD and to sustain continued quality improvement.

Methods
Screening was conducted in the OPD waiting room by our volunteer coordinator Ms. Vandana Bhatia who reviewed charts to exclude those already vaccinated in the last 5 years for Pneumovax or 1 year for Influenza vaccine. To those with qualifying medical conditions or age criteria she gave educational brochures and encouraged them to speak with their doctor about the vaccine. She followed up after the encounter to see if the vaccine was advised and if it was taken. A slideshow displayed on the OPD TV display and a poster reinforced patient awareness.
The Core team met regularly to discuss interventions, evaluate and analyze data, and plan strategies. Dr. Vinita promoted teamwork by advocating to administration and departments leaders for the importance of this project. Dr. Tara provided training at multidisciplinary staff meetings. Dr. Mathew designed tools of self-inking stamps and EMR advice to help clinical staff advise and document vaccination administration.

Outcome
Measurements were recorded by Ms. Bhatia during screenings and following up on vaccine registers. We discovered 50% of the OPD patients screened were eligible for Pneumovax and about 91% for Influenza vaccine. To date, doctors prescribed Pneumovax for 45% of patients found eligible and 25% for Influenza vaccine. Patient compliance was found to be 25% of patients advised taking Pneumovax and 27% for Influenza vaccine.
Overall vaccination rates increased 4-fold for the Pneumovax and 3-fold for Influenza vaccine compared to baseline data from months preceding this project. A positive change in attitudes and practices among staff and patients was evident. The hospital also sponsored its first administration of the Influenza vaccine to all the staff. The long-term impact to prevent disease and decrease hospitalisation will be followed in the future.

Conclusion
During the screening, we noticed that family members and staff from other departments were also influenced indirectly. Promoting awareness among patients also led to increasing awareness among staff and a positive change in the culture of the hospital to be more supportive of adult vaccination. In addition, we saw how observing trends, problem solving, and collaboration help us to address other problems faced in hospitals.
Major lessons learnt include the importance of 3 T's:

- Teamwork: It is vital to make all staff, including receptionists, pharmacists, nursing and doctors, equally responsible for ensuring that eligible patients are prescribed and encouraged to take vaccines.

- Training: We learnt the importance of training staff and raising awareness among patients about the indications for and the cost benefit of these vaccines.
- Tools: Providing the relevant tools to the patients and doctors is important.

QUALITY IMPROVEMENT IN SEPSIS: REDUCING DOOR TO ANTIBIOTIC TIME AND INCREASING THE BLOOD CULTURE RATES PRIOR TO ANTIBIOTIC ADMINISTRATION

Call for Posters topic: Work in Progress

DR CHARU MALHOTRA, DR AKSHAY KUMAR, DR SONALI VAID, MASTER NITESH JOSHI
AIIMS New Delhi, India

Background

Our Emergency Department (ED) caters to over 450 patients every day, with sepsis being the most common life-threatening medical emergency.The focus of our study were patients presenting to Emergency Department with suspected sepsis.A multifaceted Quality Improvement team was formed with doctors(faculty and residents),nurses and hospital attendants as an integral part of the team. Patients with Suspected sepsis had the highest mortality rate in the Emergency Department.It was found that there was significant delay in antibiotic administration for these patients. Also drawing blood cultures prior to antibiotic to antibiotic administration was not being practiced.

A baseline process study of patient's journey was done. The data was presented in a meeting to the whole team including doctors, nurses and health assistants.The causes of delays were discussed using process flowchart and fish bone analytical tools

Methods

Some Change Ideas – Testing and Implementation

1. Sepsis screening tool-This being our greatest challenge could only be achieved by implementing a simple yet effective sepsis screening tool.The tool could be used by nurses and doctors alike. In September 2019, a clinical sepsis screening tool which looked for clinical signs of infection in critically ill patients was accepted for use.
2. Availability of blood culture bottles
3. On-site training for residents, hospital staff and residents -In a busy emergency department we found on site training sessions lasting 5-10 minutes for both residents and nursing staff effective.Short session in morning from8-8:30 am were organised, in which the sepsis screening tool and bundle was discussed in a structured format .
4. Intervention and Post intervention Phase-Change ideas like, sepsis alert being triggered by the nurses and hospital staff remain to be tested.Also,regular teachings programs remain necessary for a sustainable improvement .

Outcome

The door to antibiotic time was reduced from median 187.5 mins (IQR 150-216 min) in pre-intervention phase to median 166 min (IQR 131-197.25 min) in the intervention phase (Mann Whitney UP Value -0.67).

As the study is in progress, the post intervention phase is yet to be completed .

Conclusion

As much as science, QI is a cultural change with its principal ethos being team work. Engaging all sections of hospital staff(doctors, nurses and hospital attendants) ,constructive intervention from all team members and persistent efforts are what makes the quality improvement projects a success.

Also regular motivation of the team by meeting and on-site training sessions were essential in keeping the project up and running so far.

Messages for others:

- To bring about sustainable improvement, the QI team needs to address both individual and system barriers
- On-site training can be an effective tool for teaching and training of hospital staff; may be used when didactic training sessions are difficult to conduct

STANDARDIZATION OF MIGRAINE TREATMENT
Call for Posters topic: Work in Progress

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Nuvance Health Systems & Ross University School of Medicine
HIDA NIERENBURG, MD, PAUL WRIGHT, MD
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Background
Migraine is the 8th leading cause of disability worldwide. Four million adults experience chronic daily headaches possibly due to inadequate treatment of headache. Headache accounts for $3.2 billion outpatient visits and $700 million emergency department visits. Best practices for the treatment of migraine include avoiding opioids or butalbital but this is continuously being done. Gaps in standards of care include lack of provider education, lack of awareness of patient stigma, lack of knowledge of effective treatment in patients with comorbidities, difficulty differentiating inadequately treated pain versus prescription misuse or abuse, amongst others. We plan to target different primary care settings that are part of the Nuvance Network, which is a large organization serving 1.5 million individuals in New York and Connecticut. The team involved in this study include physicians, mid-level providers, and residents from multiple specialties.

Methods
There will be quantitative research done to assess current practice of primary care providers in the emergency room and ambulatory offices with a survey. A questionnaire has been created to assess areas of potential gaps in knowledge and responses will be tabulated in standard numerical analysis. Subsequently, a series of educational lectures will be provided that address the gaps in knowledge from the survey. After completion of the educational period, knowledge will be re-assessed. Anticipated problems are capacity from providers to accept change and accepting their own bias when examining headache patients. In addition to this, we will form support groups to provide education and advocacy for these patients and caregivers. We also plan to participate in community outreach events like conferences to help spread awareness and connect with patients in the community and medical providers.

Outcome
This project will have a huge impact in patient care, since this population of patients is underserved and treated by primary care providers. Bringing awareness to providers of how to approach a patient with a primary headache disorder will have an impact in the patient's life and help minimize their disability from their condition. Given the high prevalence of this condition, educating primary care providers in the community setting will have a big impact in improving headache patient care. Not only this by presenting current standards for migraine treatment, we will help bring standardization of treating this illness across providers and improve quality of care and reducing burden on the healthcare system.

Conclusion
Our main message is to educate those in the healthcare community on who headache affects, identify gaps in current standards of care, conduct pilot studies as described above to assess prescribing patterns, provide education on complications and treatment, and advocate and fight against stigma in those who suffer from headache. The impact our study will have include addressing the needs of those people who suffer from headache and making an impact on the current opioid crisis in the United States. Our study will bring to light to patients, providers, and their caregivers how to break the cycle of pain through the effective management of headache disorders through the standardization of care and utilization of current therapies. Finally, we hope to help eliminate practices such as prescription misuse and abuse in the treatment of headache disorders while helping ensure that these patients voices are heard and their pain is treated appropriately.

STANDARDIZING THE CLINICAL NOTES FOR ADMISSION IN THE LABOUR ROOM IN A COMMUNITY HEALTH CENTRE IN RURAL NORTH INDIA BY MBBS STUDENTS

Call for Posters topic: Work in Progress

VARAD PUNTAMBEKAR, VAIDEHI RAKHOLIA, JATIN CHAVDA
All India Institute of Medical Sciences, New Delhi, India

Background

Context

The study was conducted at Comprehensive Rural Health Services Project (CRHSP), Ballabgarh a 50 bed Community Health Centre where around 400 normal vaginal deliveries are conducted per month

Team Involved –

a. Team Leader – Dr Varad Puntambekar (Intern MBBS student)
b. Team members
i. Dr Vaidehi Rakholia (Intern)
ii. Dr Jatin Chavda (Intern)
iii. Dr Rohit Nathani (Intern)
iv. Dr Blessy Joseph (Senior Resident CCM)
v. Dr Aditi Mohta (Junior Resident CCM)
vi. Dr Krithika (Junior Resident Obstetrics and Gynecology)
vii. Mrs Neelam (Nursing Officer)
viii. Mrs Sunita Malik (Nursing Officer in Charge)

Problem Statement

A way to standardize ANC admission process to reduce the rates of incomplete documentation at the time of admission to the labour room for delivery.

AIM

To improve the magnitude of completeness of Doctor's Notes for admissions into the labour room for delivery to 100% in 1 month.

Methods

Fish Bone Diagram

1. People - Lack of clinical skills, lack of knowledge
2. Policy - Lack of an official hospital policy.
3. Process - High flow of patients

Process map

1. Patient presents to Emergency
2. History Taking
3. Per Abdomen and Per Vaginal Examination
4. Admission into the labour room

In situations with high patient load, difficult to follow streamlined process

Timeline

1 Jan - Newly graduated intern doctors were made responsible for admissions in the labour room for delivery

5 Jan - First formal orientation of Interns by Obstetrics and Gynaecology Junior Resident

8 Jan - Provisional Hospital policy on required data fields for admissions in the labour room

12 Jan - Semi-structured proforma made by Dr Jatin (Intern) and Dr Blessy (SR, Community Medicine)

14 Jan - Pilot testing of the Proforma and minor modifications to improve user-friendliness. Used 1-1-1 strategy (1 patient - 1 intern - 1 form)

15 Jan - ANC Proforma implemented by motivated interns

Outcome

Results

1. Upward trend in magnitude of completeness of clinical notes
2. Reduction in variability in clinical notes
3. Increased number of completely filled clinical notes

Anticipated Benefits

1. Reduced rates of omission of therapy

2. Increased ease of documentation of clinical notes
3. Complete and accurate record maintenance at the hospital
4. Easy retrieval of information

Conclusion

Impact of Change

Seeing change lead to improvement motivated the team to continue the ongoing project and to take up new projects in the future. Strong professional relationships evolved amongst the members of the team.

“Whoever made that checklist for ANC admission did a good job. Don’t have to remember small details every time there is an emergency.”

Qualitative Feedback

Problems Encountered

1. Interns Unwilling to participate
   “This is just too much work, I won’t be able to help sorry”
   “I will only work if you can promise a publication”
2. People unwilling to change practices
   “I know what is best for my patients, please don’t tell me what to do.”
   “I like flexibility with my clinical notes and don’t really like a very structured format.”

We realized that it was not our duty to convince but to inform so that people can make judgments for themselves.

Lessons Learnt

A team meeting can occur anywhere

QI projects are difficult to sustain without deliberate efforts.

STRENGTHENING FETAL HEART RATE MONITORING DURING CHILDBIRTH IN SELECTED FACILITIES IN ASPIRATIONAL DISTRICTS OF JHARKHAND, ODISHA AND UTTARAKHAND (INDIA)

Call for Posters topic: Work in Progress

DR DEVINA BAJPAYEE, DR HARISH KUMAR, DR RITU AGRAWAL, DR SOURAV GHOSH DASTIDAR
IPE Global Ltd.USAID Vriddhi Project, India

Background

The intervention was implemented in public health facilities across 3 states of India.
The quality of care during childbirth remains critical for maternal and newborn survival. Half of all stillbirths and quarter of neonatal deaths result from complications during childbirth. Government of India's 'LaQshya – Labor room Quality improvement Initiative' targets strengthening care around birth. Intrapartum Fetal Heart Rate (FHR) monitoring is one such critical practice.
A baseline assessment done through record review, provider interview & observation showed though monitoring FHR once, was done for 70% of labor cases, frequency decreased for more than one time monitoring ; 33% providers were observed to monitor in correct frequency during first stage of labor and none for second stage. Detection of abnormal FHR was 3-5% and challenges in use of stethoscope (difficulty to locate FHR) and doppler (fluctuating/inaccurate reading, battery replacement) were reported.

Methods

A CEA certified FHR Monitor – by Laerdal Global Health was introduced across 3 levels (Medical College, District Hospital and CHC FRU) of health facilities as a Quality Improvement Intervention under LaQshya programme.
The device has a double crystal doppler ultrasound sensor to detect FHR and displays it with an audible (doppler) sound. It provides an alarm for abnormal FHR and can be used handheld or strapped on to mother for prolonged monitoring. These features make FHR monitoring easier, faster, and more reliable.
1 day orientation including hands on practice on pregnant women and refresher training on FHR monitoring protocols were undertaken on introduction of device in September 2019. Regular support along with monthly record review and quarterly qualitative assessment is being done. Infection Prevention protocols on cleaning and disinfecting the device and its accessories between every use were implemented during COVID pandemic.
End line evaluation is planned in September 2020.

Outcome

The device is being used for FHR monitoring and is well accepted in all levels of intervention sites. Data till Feb'20, shows significant improvement in frequency of FHR monitoring: % Pregnant Woman (PW) in labor monitored more than 3- 4 times in Medical Colleges increased from 8% to 23.3 % & in CHCs from 11.9% to 32.5%, % PW in labor never monitored decreased from 13.3% to 1.2% in CHCs.
50 % of PW in first stage of labor and 40% in second stage were observed being monitored as per the standard protocol. At baseline, none of the cases were monitored as per protocol.
Furthermore, interviews with beneficiary brought out that hearing fetal heart sound was reassuring to them. 85% of beneficiaries interviewed reported the device was used intermittently, 20% said device was strapped on for prolonged monitoring with them able to squat and sit and be mobile.
The % cases detected with abnormal FHR increased from 3-5 % in baseline to 6.4% and still birth reduced from 2% to 1.1 %.

Conclusion

The intervention highlights that introduction of appropriate technology empowers health providers. The design feature of device ensured its acceptability and usability by providers. It improved experience of beneficiaries by allowing the PW to be mobile and take preferred position during labour with the device strapped to her abdomen, and hear the sound of her baby's heartbeat.
The intervention led to improved FHR monitoring and increased detection of abnormal FHR for taking appropriate obstetric action.
Comprehensive planning has helped demonstrate early results. 2 states have slated for scale up through government finances across their aspirational districts.

A key challenge in implementation was to ensure provision of adequate number of functional devices for monitoring all PW in labour in the identified high case load facilities. For this, the project signed a MoU with the manufacturers of the device, for ensuring smooth procurement, maintenance and troubleshooting support.

TELE-REHABILITATION - A HEALTH CARE DELIVERY MODEL FOR THE PERSONS WITH DISABILITIES USING CHARMHEALTH - TELE-MEDICINE AND ELECTRONIC HEALTH RECORDS SYSTEM

Call for Posters topic: Work in Progress

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Background

The work is being done at Department of Physical Medicine and Rehabilitation, Sree Balaji Medical College and Hospital, Chennai, Tamilnadu. INDIA.
As per Indian Census 2011, out of the 121 Crore population, about 2.68 Crore persons are 'disabled' which is 2.21% of the total population. Majority of the disabled population (1.86 crores which amounts to 69%) reside in rural areas. Because of their geographical location, cost, transportation and the disability per se, the disabled persons face difficulties to access a health care facility. At the same time, it becomes imperative to offer health education, early detection of health issues and their timely management among disabled for their better Quality of Life. Our aim is improve healthcare services for the disabled with the use of Information and Communication Technology (ICT).

Methods

Tele Rehabilitation with "ChARM Health" - An Electronic Health Record System with Video consultation facility is used for persons with disability to get connected with doctors for their advice related to prevention, cure and rehabilitation of their problems and diseased condition. Validated templates for history taking and clinical examination are included in the ChARM Health EHR system, for standardization. The health records are stored and maintained online for better monitoring of the patients' condition and their progress. Advice and prescriptions are given online by the doctor within the purview of Telemedicine Guidelines of India 2020. At the end of the consultations, patient's feedback is obtained. Online awareness sessions are conducted periodically for good health and disease prevention. Over a period of 6 months, we are planning to have Rural Health Centres in the community with health care personnels as the "Hub and Spokes" model, connected with Telemedicine network.

Outcome

With ChARM Health EHR system, video consultations were done for 58 patients with Spinal Cord Injury (SCI), mostly from the rural places of Tamilnadu, South India. Out of 58 persons with SCI, major cause was due to Road Traffic Accident (n=51, 88%) followed by Fall from height (n = 7, 12%). Levels of SCI were Cervical (n = 16, 28%), Dorsal (n = 34, 58%), Lumbar (n = 8, 14%). Complications as Neurogenic Bladder, neurogenic bowel, pressure sores, spasticity, contractures are seen among the patients, which are being studied on this work. With our Tele – rehabilitation, disabled persons are able to have easy access to the doctors and paramedical personnels to get medical advice for their health problems. Timely consultations and advice helps them to manage their health problems effectively thereby preventing complications. With the electronic storage of clinical details and tele communication, follow – up visits are planned with online schedulers and SMS alerts.

Conclusion

In India, we have around 18 million people with disabilities, mostly residing in rural areas who need timely health care. Our main objective is to utilize the technology for the benefit of disabled persons, to create knowledge about health and to manage their health problems with the best possible resources. As of now we have completed 58 video consultations and we are on process to reach more people who would benefit with this work. Though we have difficulty in making people to get accustomed with video consultations, we could observe the changes among them with better compliance for the same. As this work is on progress, we believe that ChARM Health Tele - rehabilitation would enable quality health care for persons with disability beyond regional boundaries and practical constraints, thereby provide them a better Quality of Life.

HAMAD HEALTHCARE QUALITY INSTITUTE (HHQI)'S - NATIONAL VALUE IMPROVEMENT COLLABORATIVE

Call for Posters topic: Quality, Cost, Value

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MARYANNE GILLIES
Institute for Healthcare Improvement (IHI)

Background

Hamad Healthcare Quality Institute (HHQI) National value Improvement Collaborative 2019 is aligned with the Qatar national Strategy vision which aims at achieving efficient performance and providing high quality health services. It focuses on 3 areas, efficiency, effectiveness and value creation at identified targets of healthcare sector with an aim of “Improved health for Qatar’s population, through an integrated health system to achieve better health, better care and better value for all. Taking this strategy into operations is not only us in HHQI partnering with IHI, it’s the Front-line Staff who are driving Quality and improving patient experience along lowering costs and achieving efficiency, in other words, improving value. It was piloted in one HDU unit and after its success , it was spread to 6 units in HMC and then was launched as “National Value Improvement Collaborative” in 2019 with 27 units in 13 hospitals across Hamad medical Corporation and other facilities across Qatar.

Methods

The methodology is combination of visual management, box score, weekly huddles & the management approach that integrates the tools into daily work engages the local team in continuously tracking performance & implementing improvements to reduce costs & increase quality, supported by improvement capability, will & leadership support.

We utilized the IHI spread and scale up model and this approach was spread to 6 more units and then as a collaborative to 26 units across the system. The approach enables rapid cycles of improvement to be implemented at the frontline to achieve unit-based outcomes and high-level strategic goals. The plan was:

1. Develop prototype in initial units
2. Testing Scale up within the pilot Hospital
3. Testing scale up in other hospitals, January 2019
4. Spreading to 26 units across system, October 2019
5. Phased approach to rapidly get to full scale
6. Building will for change & spread
7. Developing local implementation ideas
8. Building the infrastructure & tools for scale-up

Outcome

Medication reconciliation increased from 0% to 100% in HHCS and 67% - 96% in HGH
Joy at work increased from 0% to 50%, Direct nursing care hours increased from 0% to 53% inAWH Pediatric unit
Improve theater utilization from 70% to 80%
Percentage of Cancellation of Elective Surgery decreased by 50%,
Expected reduction of 86.65% in the amount of wastage of ENT packs used in Dental Surgery with implementation of the new pack that was tested
Drop of average number of blood samples per patient by 60%
Improvement in VTE risk assessment from 60% to 100%
Noise level reduced from 70 dB to 28 dB -NCCCR
20% reduction in total number of lab samples -NCCCR
Reduction in cancellation of procedures in IR suite from 8 to 4 per week-IR
Staff satisfaction with handling bedridden patients improved from 30% -80%
It has resulted in increase patient outcomes, patient and staff experience, Joya at work and great value for the organization in terms of cost and efficiency

Conclusion

Always, The HHQI efforts over the past months focused on supporting the spread & sustainability of the VI scale-up facilities has reached a degree of belief and merged all into National Value Improvement Collaborative (NVIC). It has resulted in improved patient outcomes, improved staff and patient experience, Improved joy at work, reduce waste, increase efficiency and decrease cost.

Lessons learnt:

- Engagement from all staff and units in scale-up plan is a must
- Leadership support is key
- Adequate delegation and distribution of power should be present
- Coaching in some units from within
- NVIC learning sessions were very effective
- The coaching sessions clarify the gaps and opportunities for improvement
- Capacity building is an important win
- Support from the HHQI coaches in terms of coaching the teams

PREGNANT WOMEN'S AWARENESS ABOUT (GDM) AND THEIR PERSPECTIVE ABOUT USING EDUCATIONAL FILMS IN PUBLIC HEALTHCARE FACILITIES: A QUALITATIVE STUDY IN BANGALORE

Call for Posters topic: Population and Public Health

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Professor of Clinical Epidemiology & Consultant Paediatrician (Childhood Obesity) - London School of Hygiene & Tropical Medicine & University College London Hospital.

Background

Women developing Gestational Diabetes Mellitus are subsequently at a higher risk of developing Type 2 Diabetes later in life. Screening and effective management of women with GDM is essential in preventing progression to type 2 diabetes mellitus. Although the burden of Gestational Diabetes Mellitus is high in India, Gestational Diabetes Mellitus screening and management is suboptimal in public hospitals. We aimed to explore the perspectives of healthcare providers regarding the barriers and facilitators from the health system context that restrict the timely screening and effective management of Gestational Diabetes Mellitus India is experiencing an epidemic of obesity-hyperglycemia, which coincides with childbearing age for women. Maternal Antecedents of Adiposity and Studying the Transgenerational role of Hyperglycemia and Insulin (MAASTHI) is a cohort study in the public health facilities in Bangalore, India. The objective of MAASTHI is to prospectively assess the effects of glucose levels in pregnancy on the risk of adverse infant outcomes, especially in predicting the possible risk markers of later chronic diseases. The primary objective of the proposed study is to investigate the effect of glucose levels in pregnancy on skinfold thickness (adiposity) in infancy as a marker of future obesity and diabetes in offspring. The secondary objective is to assess the association between the psycho-social environment of mothers and adverse neonatal outcomes including adiposity. The study aims to recruit 5000 pregnant women and follow them and their offspring for a period of 4 years. The institutional review board at The Indian Institute of Public Health (IIPH)-H, Bangalore, Public Health Foundation of India has approved the protocol. All participants are required to provide written informed consent.

Purpose of the study:

This study mainly focused on educational film on gestational diabetes. Therefore, through this study, we aim to understand the socio-cultural context of health care, particularly, pregnancy care, and also participant's knowledge, perceptions, and experiences regarding gestational diabetes and also their families about using video films.

Women spend a lot of time (by themselves) within the hospital space when they visit for ANC. Waiting time is nearly 3-4 hours. The film would be the best way to engage and educate them provided the film is appealing culturally.

Methods

Data were collected between March to June 2019 from two selected public hospitals in Bengaluru, South India. These two hospitals cater mostly to women from lower socio-economic backgrounds. Jayanagar General Hospital (JGH). Srirampura Referral Hospital (SRRH) slum, with most high-risk pregnancy cases, particularly GDM cases being referred to tertiary centers for the subsequent management and delivery. Both the facilities reportedly follow national guidelines in screening for and managing GDM. These hospitals also endorse the ongoing cohort study, entitled "Maternal Antecedents of Adiposity and Studying the Transgenerational role of Hyperglycemia and Insulin" (MAASTHI).

The list of women MAASTHI, who are tested positive and negative for GDM were identified. Then, who fulfilled the study requirement, that is socio-economic and educational criteria were contacted through phone and briefed about the study, those agreed to participate were invited to the interview venue (a room in hospital site). Those who were willing were interviewed at hospital venue (10 IDI), and those requested to be interviewed at home location were interviewed at their home. Most Women participant with and with/without GDM were interviewed at hospital, but most of the family members of the women with /without GDM were interviewed at home (18 IDI). In that we selected the very informative interviews and transcript and translated, prepared the report by using NVivo software.

Interview instruments.

The topic guides for the interviews were developed through a pilot study for a larger trial assessing a film-based intervention for improving screening and management of GDM.

Outcome

Based on the qualitative interviews, our understanding is that there is openness to watch educational film. Audio visual (videos: YouTube) and visuals alone (posters) seem to be more appealing than reading materials (e.g. Handouts, pamphlets, newspapers, printed IEC material).

Most respondents (pregnant women) watch You-tube videos to learn about the type of lifestyle changes (what to eat, what exercise to do, positive thinking etc) to improve pregnancy outcomes. Confidence and comfort to access the pregnancy-related health information from YouTube, in the language of choice makes it appealing.

It appears that women find it handy to (easy to access) watch YouTube videos. And audio visuals seem to be more engaging and less boring and, moreover they access it at their convenience. Thus, based on our experience of interacting with pregnant women, we are confident that the film based on education of GDM would be well received, provided it fulfils the requirements of easy access, convenience, use of local language.

Conclusion

Through our study, we found that the knowledge about GDM among the pregnant women was quite low and partial. The condition of GDM seemed to be taken less seriously as the perception exists that it will be resolved post pregnancy. There is need for clear and precise knowledge to both general public and health care professionals.

What may appeal women?

- The messages coming for a doctor has a value. Doctor's words valued and respected and trusted the most. Suppose doctor prescribes film, there is absolutely no doubt on women watching and learning
- Emotional connect: families are important, messages coming from dear ones (mother, daughter or husband) seem to make a deep connect
- Social Aspirations: Nothing much evolved so far, but we are planning explore on this in future interviews.

Need/ requirement:

It is quite obvious that the knowledge about GDM is quite low and partial. GDM seem to take less seriously because it is a condition that may disappear. There is need for clear and precise knowledge to both general public and health care professionals.

21-23 April 2021
London

2021 dates tbc
New Delhi

2-6 November 2020
Copenhagen
(now a virtual conference)

7-9 June 2021
Sydney

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