Development of multimedia resources to support provision of person-centered care in maternity care

Acknowledgement of Country

- We acknowledge the Traditional Custodians of the various lands on which we meet today and the Aboriginal and Torres Strait Islander people participating in this meeting/webinar.
- We pay our respects to Elders past, present and emerging, and recognise and celebrate the diversity of Aboriginal peoples and their ongoing cultures and connections to the lands and waters of NSW.



Introduction & Housekeeping



Prof Ana Hutchinson



Dr Damien Khaw

Ms Stacey Goad, Midwife Epworth HealthCare

Dr Jane Willcox

Scenario

Preparing new parents for discharge form the maternity unit



Design Thinking Process

•5 Steps

- Empathize
- Define
- Ideate
- Prototype
- Test
- Ground Process in Evidence-based practice



Five-stage design thinking model proposed by the Hasso Plattner Institute of Design at Stanford

Step 1: Empathise

Research your users' needs

Focus on user-centric research.

Gain an empathic understanding of the problem you are trying to solve. Consult experts to find out more about the area of concern and conduct observations to engage and empathize with your users. You may also want to immerse yourself in your users' physical environment to gain a deeper, personal understanding of the issues involved—as well as their experiences and motivations.

Step 2: Define

Organise the information received in *Step 1 Empathise*

Keep a human-centric lens with the consumer at the centre

- For example Need to understand clinicians' goals of care and consumers' goals – define commonality and differences
- Pitch the problem statement with your perception of the consumers' needs
- Ground in evidence and behavioural theory

Stage 3: Ideate Challenge Assumptions and Create Ideas



DEVELOPMENT OF INNOVATIVE SOLUTIONS TO THE PROBLEM STATEMENTS YOU HAVE CREATED LOOK AT THE PROBLEM FROM DIFFERENT PERSPECTIVES AND IDEATE INNOVATIVE SOLUTIONS TO YOUR PROBLEM STATEMENT. USE BRAINSTORMING TECHNIQUES

Stage 4: Prototype



FIRST THREE STAGES.

EXPERIENCES.

Step 5

Test – Try your solutions out

Next Steps



Partnering with people with lived experience







You are a midwife: you are assisting at someone else's birth. Do good without show or fuss. Facilitate what is happening rather than what you think ought to be happening. If you must take the lead, lead so the mother is helped, yet still free and in charge. When the baby is born, the mother will rightly say: 'We did it ourselves!' (Lao Tzu, 5th century BC)



Co-design/Co-produce/Co-create/Co-develop

Mechanism whereby stakeholders can collaborate, generate relevant knowledge and apply it to healthcare practice

- End users or intervention target audience
- Administration and decision makers
- Funders
- Health researchers, academics, policy and practice partners



McGill, B., Corbett, L., Grunseit, A. C., Irving, M., & O'Hara, B. J. (2022). Co-Produce, Co-Design, Co-Create, or Co-Construct-Who Does It and How Is It Done in Chronic Disease Prevention? A Scoping Review. Healthcare, 10(4), 647.





Why is consumer partnership important?

- Ethical and democratic right "People have a right and duty to participate individually and collectively in the planning and implementation of their health care" (WHO, Declaration of Alma-Ata, 1978)
- Better service delivery and health outcomes (Turakhia, P.; 2017)
- Better relationships with health consumers, other services and the broader community
- Accreditation and legal requirements
 - Australia National Safety and Quality Health Service Standards, Standard 2: Partnering with Consumers.







Value adding

Health service

- Informs about needs of diverse range of people who use services and access barriers.
- Enables plan, design and deliver person centred services and meet their needs

Consumers

- Increased awareness and control
- Positively input into services
- Improved healthcare to meet user needs



Home » "I didn't 'volunteer' as such for these roles, they just 'fell upon' me. I really enjoy what I do."

"I didn't 'volunteer' as such for these roles, they just 'fell upon' me. I really enjoy what I do."

May 21, 2020 · News, Our Stories





Nature of consumer engagement





Adapted from INVOLVE research cycle





- Member of steering committee
- Co-develop program/research question and plan
- Collaborate on funding or ethics submissions
- Inform design and methods
- Inform feasibility (e.g. consumer access, participant outcomes/burden)
- Review consumer facing materials
- Participate in commission/project management recruitment/funding decisions





- Outcomes in lay language to consumer audiences
- Co-presentation of results (e.g. conferences, health forums, media)
- Co-author published outputs
- Inform consumer groups/local networks



- Interpret feedback
- Help review research process and sustainability from user perspective





- Steering committee input to ensure program user validity
- Review translation process from consumer perspective
- Advocate for practice translation
- Assist in establishment of consumer feedback mechanisms





Things to keep in mind

- Planning required
- Recruitment accessing hard to reach consumers
- Training and coaching of consumer advocates and staff
- Acknowledgement, development opportunities, payment
- Consistent across individual, service, network and system
- Feedback and evaluation
- Private versus public
- Partnership not tokenism







Resources

Papers

- McGill, B., Corbett, L., Grunseit, A. C., Irving, M., & O'Hara, B. J. (2022). Co-Produce, Co-Design, Co-Create, or Co-Construct-Who Does It and How Is It Done in Chronic Disease Prevention? A Scoping Review. *Healthcare (Basel, Switzerland)*, 10(4), 647.
- Turakhia, P.; Combs, B. Using Principles of Co-Production to Improve Patient Care and Enhance Value. AMA J. Ethic 2017, 19,1125–1131.
- Bombard, Y., Baker, G.R., Orlando, E. et al. Engaging patients to improve quality of care: a systematic review. Implementation Sci 13, 98 (2018).
- Farmer, J., Bigby, C., Davis, H. et al. The state of health services partnering with consumers: evidence from an online survey of Australian health services. BMC Health Serv Res 18, 628 (2018).
- Williamson L. (2014). Patient and citizen participation in health: the need for improved ethical support. The American journal of bioethics : AJOB, 14(6), 4–16.
- Chudyk, A.M., Waldman, C., Horrill, T. et al. Models and frameworks of patient engagement in health services research: a scoping review protocol. Res Involv Engagem 4, 28 (2018).

Policies/Frameworks/Resources

- World Health Organisation. WHO community engagement framework for quality, people-centred and resilient health services (2017)
- Cochrane Training. Patient and public involvement in research: What, why and how? https://training.cochrane.org/resource/patient-and-public-involvement-research-what-why-and-how
- Health Care Consumers' Association. Consumer and Community Participation Framework. Canberra, Australia: Health Care Consumers'
- Association. March 2021. Queensland Government Consumer and Community Engagement Framework (2012)
- NICE Guideline NG44 Community engagement: improving health and wellbeing and reducing health inequalities (2016)
- NHMRC Consumer and Community Engagement
- Health Issues Centre. Consumer Model -Partnering with Healthcare Organisations (2022)

Prerequisites to design

Where to Start?



- What? How?
- Who? Access?





Finding Out Consumers' Needs







Engage with Clinicians

Engage with Research, Policy & Practice





Understanding the Stakeholders & Service



What is being done to solve the problem already?

- What are the existing systems?
- Which clinicians are involved?

How can my solution fit in with what exists?

- Which staff *should* be involved?
- How to garner support with stakeholders?
- How does it cohere or interfere with existing systems and technology platforms?



Liaising with Clinical Staff

What are the clinical staff looking for from their prospective?

How to effectively engage them



Does clinical engagement need to be a part of the research process?

Interviews, Surveys Focus Groups





Understanding Previous Evidence

What degree of review is required for the project?

- Literature Review
- Current Policy & Practice
- Conferences
- Other Healthcare Services





Identifying Team Members / Working Group







GROUP EXERCISE: Who will you partner with?

- Which stakeholders will you partner with?
- How will you identify and recruit them?
- How will you co-design or co-produce in the project management cycle?



Technical Solutions



Section Overview: IDEATE ↔ PROTOTYPE

- 1. Understanding technical solutions
- 2. Planning and communicating the technology design (storyboarding)



IDEATE

Understanding technical solutions







What are the intervention targets?

Common mechanisms



My In-hospital Care Goals



Follow these goals to maximise your recovery while in hospital:

Manage your pain with oral pain medications

Each day, go for a walk inside your room or within the ward.

Keep your wound clean and dry

 \bigcirc

Monitor yourself for signs of infection: redness, increased pain, heat, breast swelling or lumps, pain while breastfeeding, feeling ill, or fever.

Try to eat and drink well to help your recovery, energy and milk supply

Ask your midwife for a laxative if you require one.

Sim, I. (2019). Mobile devices and health. *New England Journal of Medicine*, *381*(10), 956-968.



Cognitive aids

Mechanism of operation

- Presentation of audio-visual / text information
- Designed to help consumers, carers or healthcare practitioners to think through or understand an issue



Sim, I. (2019). Mobile devices and health. *New England Journal of Medicine*, *381*(10), 956-968.





txt4tw&



Obstetrics and Gynaecology

DOI: 10.1111/1471-0528.14552 www.bjog.org

General obstetrics

A mobile health intervention promoting healthy gestational weight gain for women entering pregnancy at a high body mass index: the txt4two pilot randomised controlled trial

JC Willcox,^a SA Wilkinson,^{b,c} M Lappas,^d K Ball,^a D Crawford,^a EA McCarthy,^{d,e} B Fjeldsoe,^f R Whittaker,⁹ R Maddison,⁸ KJ Campbell⁸

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Accepted 3 January 2017. Published Online 20 February 2017.

Objective To determine the feasibility and effectiveness of an mHealth intervention promoting healthy diet, physical activity and gestational weight gain in pregnant women.

Design Randomised controlled trial (RCT).

Setting Australian tertiary obstetric hospital.

Population One hundred pregnant women who were overweight or obese prior to pregnancy.

Methods Women recruited at the first antenatal clinic visit were randomised to either an intervention or a control group. The intervention consisted of a tailored suite of strategies delivered (from first antenatal visit until 36 weeks' gestation) via multiple modalities available on mobile devices.

reporting that the intervention was helpful. Secondary outcomes demonstrated a significantly lower GWG in the intervention group (7.8 kg ± 4.7 versus 9.7 kg ± 3.9; P =0.041) compared with the control group at intervention completion. Intervention group women reported significantly smaller reductions in total, light- and moderate-intensity physical activity from baseline to completion of the intervention (P = 0.001) compared with the control group, but no differences in consumption frequencies of key food groups.

Conclusion An intervention that aimed to deliver healthy diet, physical activity and GWG guidance utilising innovative technology can be feasibly implemented and produce positive physical activity and GWG outcomes.



What constellation of digital healthcare contacts are required?



Svendsen, M. T., Tiedemann, S. N., & Andersen, K. E. (2021). Pros and cons of eHealth: A systematic review of the literature and observations in Denmark. *SAGE open medicine*, 9.





GROUP EXERCISE: Deciding on the intervention

- **1) Recall** the key problem in post-discharge care that you intend to address using digital health.
- **2) Put yourself** in the place of the consumer what type of intervention and technology do you think would be useful?

• If the technology does not exist - invent it!





Storyboards

IDEATE - PROTOTYPE





Example storyboard



Reason for storyboards

What are storyboards?



Blueprints of a product

Why use storyboards?



Understand the *human contexts* of use



Maps of the visual design



Explore user flow and potential experiences



Guides for the adaptation to the technology platform



Communication - multidisciplinary members and stakeholders. 'Common visual language.'





Use of storyboarding in the design process Guide external developer Step 3. Guide in-house Adapt to developer technology Step 2. Create outline **OR** storyboard Step 1. Consumer co-design INST

PATIENT SAFETY

Epworth































Mystay Obstatries

Solger Grganisation

Lóg In

Register Back

¹Rationald

Design storyboards vs. design outlines

Outline – textual description / instructions

Position	Colour (as HEX)	Icon	Button Title	Links to page
Left, 1	#d59900	http://materialdesignicons.com/icon/ hospital-building	My Day	My Day
Right, 1	#07bbc6	http://materialdesignicons.com/icon/ dumbbell	Exercises	Exercises
Left, 2	#ff57b2	http://materialdesignicons.com/icon/ pill	Managing My Pain	Managing My Pain
Right, 2	#5958ff	http://materialdesignicons.com/icon/ account-group	My Healthcare Team	My Healthcare Team
Left, 3	#3aac4c	http://materialdesignicons.com/icon/ medical-bag	Keeping Me Safe	Keeping Me Safe
Right, 3	#a755dd	http://materialdesignicons.com/icon/ account-heart	Leaving Hospital	Leaving Hospital

Storyboard – visual depiction







Planning for data collection

- Early during IDEATION → embed data capture processes into system planning
- User feedback to drive future iterative development



Planning for data collection



