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Institute *for* Healthcare Improvement

BMJ

PACK
Practical Approach to Care Kit

Practical Approach to Care Kit

Clinical Decision Support and tools to equip and empower Primary Health Care Clinicians & CHWs

BMJ

Knowledge TranslationUnit
University of Cape Town LUNG INSTITUTE

Knowledge Translation Unit, University of Cape Town Lung Institute
in partnership with
British Medical Journal

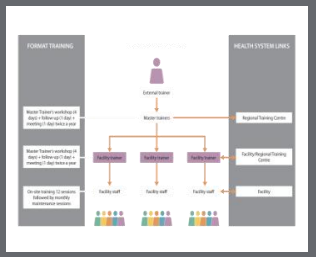
PACK PROGRAMME : PRACTICAL APPROACH TO CARE KIT

Goals: Equip & empower PHC clinicians & CHWs Enable UHC & SDG's

Pillar 1: Guide
Evidence based, symptom focused, integrated decision support

Pillar 2: Training
educational outreach approach, case-focused, team-based

Pillar 3: Health systems strengthening
Task-shifting & task sharing, meds/tests/equip availability



Pillar 4: M & E
Audit – registers, evaluate – training feedback, & focus groups, research

- **Target audience: ALL clinicians who deliver primary care: Nurses & Midwives, Doctors, Health Officers, CHW's**
- **Sector: Primary and Community Care**
- **Countries: Low and Middle Income countries**
- **Developed in South Africa over last 18 year & scaled to >3,000 clinics >30,000 health workers**
- **Programme made available globally through partnership between UCT Lung Institute KTU and BMJ and being implemented in Brazil, Nigeria & Ethiopia. Substantial interest from other countries & partners**

KTU vision:
"Improving primary healthcare - most underserved communities"

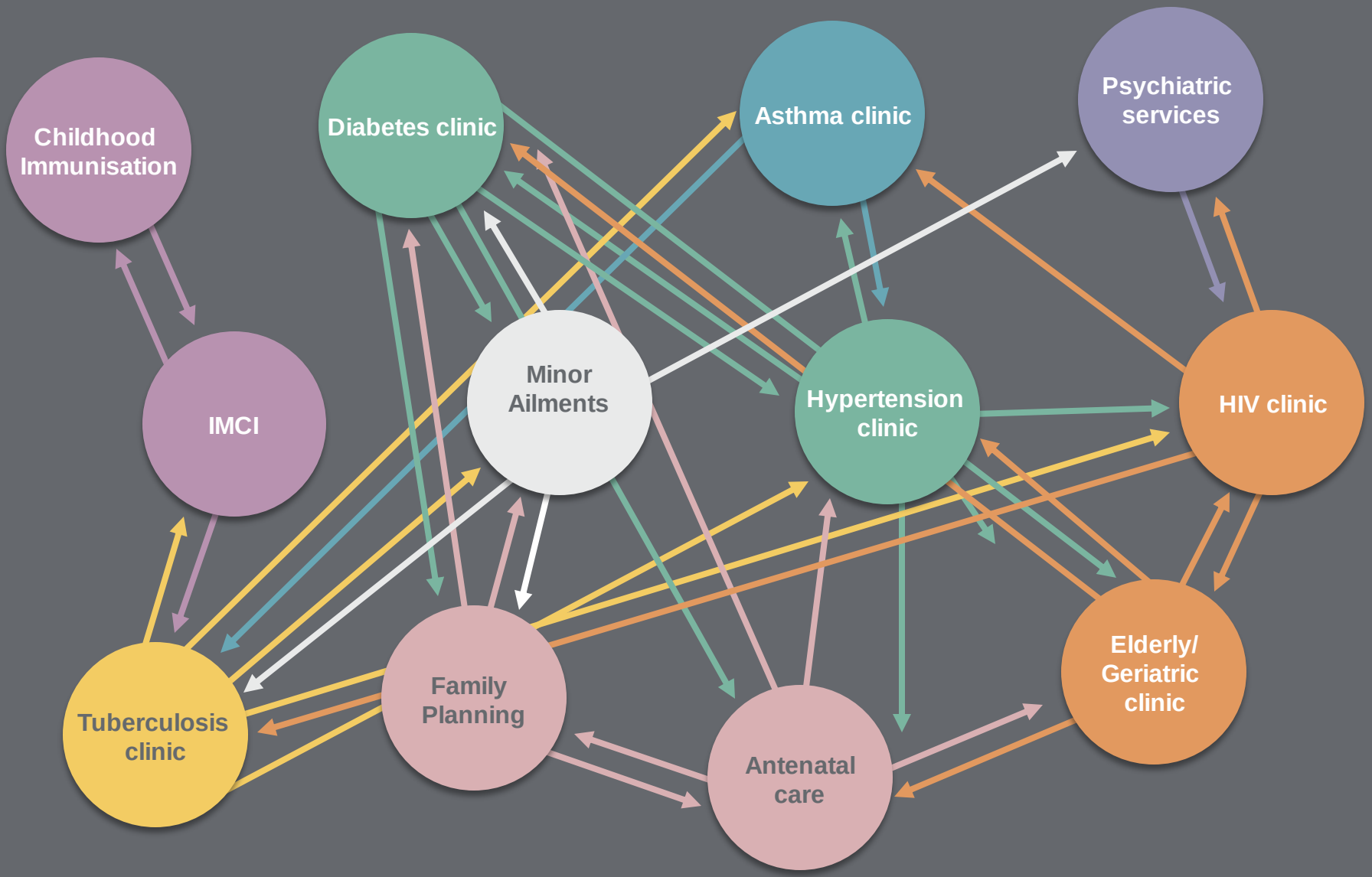
BMJ vision: "A Healthier World"

Impact & Sustainability

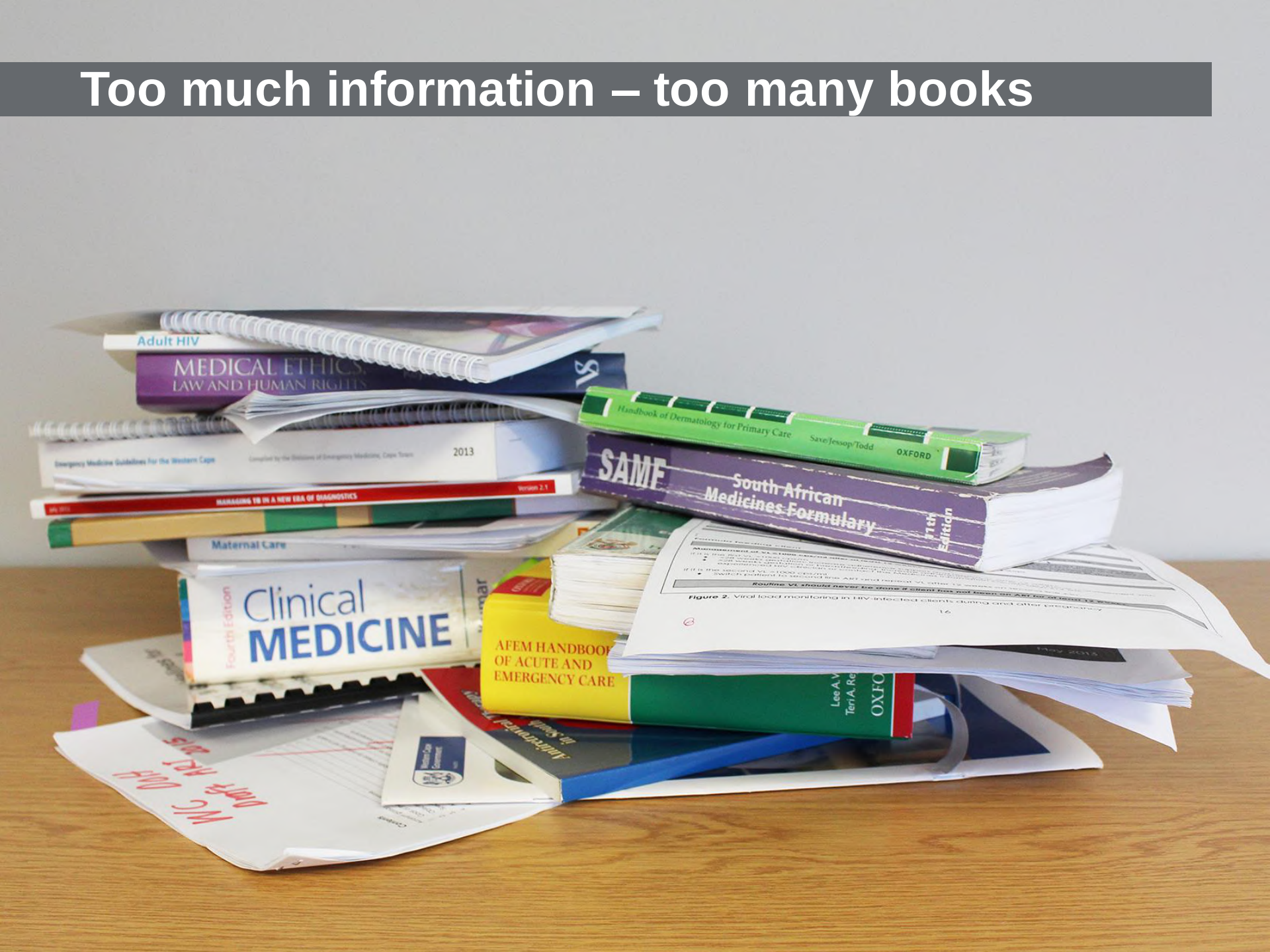
Many patients

Many symptoms, conditions and concerns

Fragmented services



Too much information – too many books

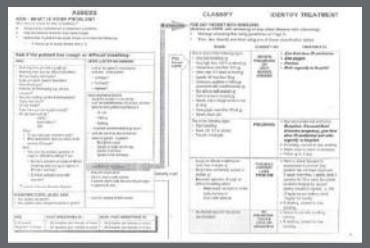


Too many complex illnesses and co-morbidities: Top 15 reasons for encounters in primary care in SA

Reason	n	%
Cardiovascular follow up	2592	10.0
Cough	1943	7.5
Pregnancy/ family planning follow up	1354	5.2
Headache	1231	4.8
Prevention/immunisation	591	2.3
General body pain	547	2.1
Fever	481	1.9
Throat symptom/ complaint	442	1.7
Endocrine meds	421	1.6
Back symptom/ complaint	413	1.6
Abdominal pain generalised	411	1.6
Diarrhoea	391	1.5
Immunological follow up	387	1.5

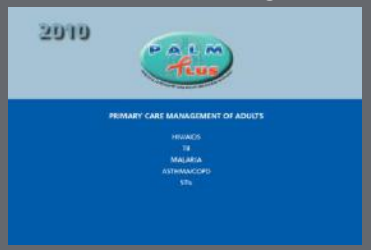
Mash B, Fairall L, Adejayan O et al. PLoS One. 2012 7(3):e32358

Pillar1: Evidence informed Guide - 18 years development by the KTU



+ Localised
+ Evidence-based implementation

+ HIV/ AIDS
+ ART Task-shifting



+ NCDs
+ Mental health
+ Woman's health

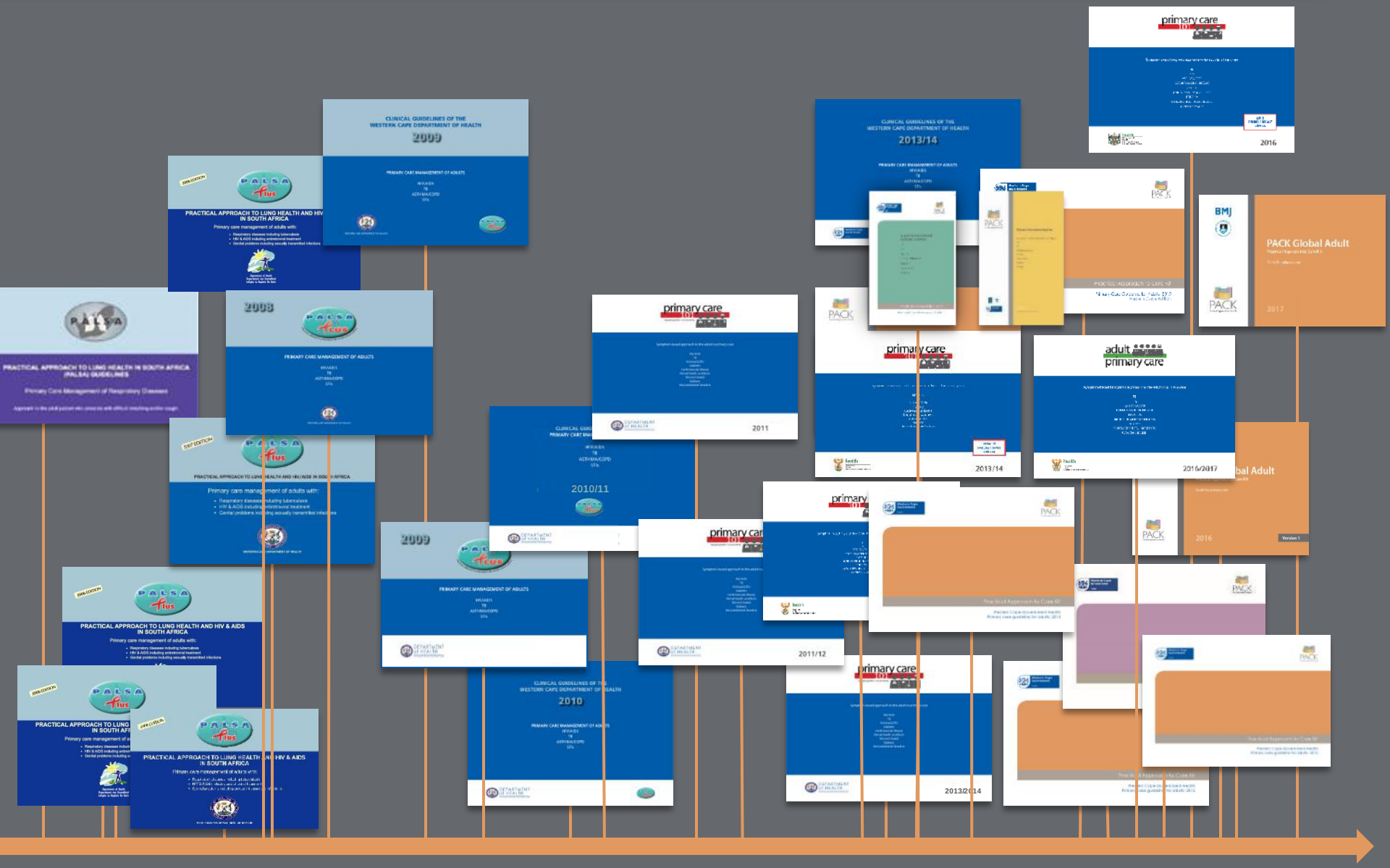
Started as an adaptation of WHO's Practical Approach to Lung Health

Expanded to be a comprehensive programme for adult primary care to meet the needs of health workers

1999 2002 2003 2007 2010 2013

PACK
Practical Approach to Care Kit

24 editions in first 14 years



Guide: Principles

- Comprehensive: covering commonest symptoms and chronic conditions:
  - NCDs: Diabetes, Hypertenstion, Asthma, COPD, MI, Stroke
  - Communicable diseases: TB & HIV
  - Mental health
  - Women's health
- Evidence-informed: W.H.O. + BMJ Best Practice
- Integrates multiple guidelines and policy into single resource
- Concise (116 pages)
- Simple algorithms and checklists
- User-friendly, accessible, point-of-care, clinical decision-support
- Intended to be localised to be policy-aligned
- Translated
- Updated annually (via linkage to BMJ Best Practice)

PACK extracts, compiles and harmonises primary care content from multiple guidelines and policies into a single document.

Guide: symptom-based approach

Contents: symptoms

Assess and manage the patient using his/her symptoms as a starting point

Guide: Integrating chronic care

Contents: chronic conditions

Diagnose and give routine care to the patient with a chronic condition

Weight loss

Give urgent attention to the patient with weight loss on ART:
- Weight loss in the patient on ART associated with one or more of: nausea, vomiting, abdominal pain, difficulty breathing or tiredness.

Management:
- Patient needs same day lactate measurement →64.

- Check that the patient that says s/he has unintentionally lost weight has indeed done so. Compare current weight with previous records and ask if clothes still fit.
- Investigate unintentional weight loss of > 5% of body weight.

First check for TB, HIV *and* diabetes

- Start worku… **TB** …72
- At the same…
- and consid…

- If status un… **HIV** …noea or
- The HIV pa…
- fever > 1 m…

- Check g… **Diabetes**
- To interp…

Ask about symptoms of common cancers:

Abnormal vaginal discharge/bleeding	Urinary symptoms in man	Change in bowel habit	Cough ≥ 2 weeks, blood-stained sputum, long smoking history
Consider **cervical cancer**. Do a speculum examination →30.	Consider **breast cancer**. Examine breasts/axillae for lumps →21.	Consider **prostate cancer**. Hard and nodular prostate on rectal examination →34.	Consider **bowel cancer**. Mass on abdominal or rectal examination, occult blood positive.	Consider **lung cancer**. Do chest x-ray.

Cancer

If food intake inadequate, look for a cause:

Nausea and/or vomiting	Loss of appetite	Ask, 'Are you stressed?	No money for food	The patient has an incurable illness and you would not be surprised if s/he died within the next year	Sore mouth or difficulty swallowing
→23.	• Eat small frequent meals. • Drink high energy drinks (milk, soup, sweetened fruit juice). • Increase energy value of food by adding sugar, milk powder, peanut butter or oil.		If available, refer to social worker.		**Oral/oesophageal thrush** likely →17

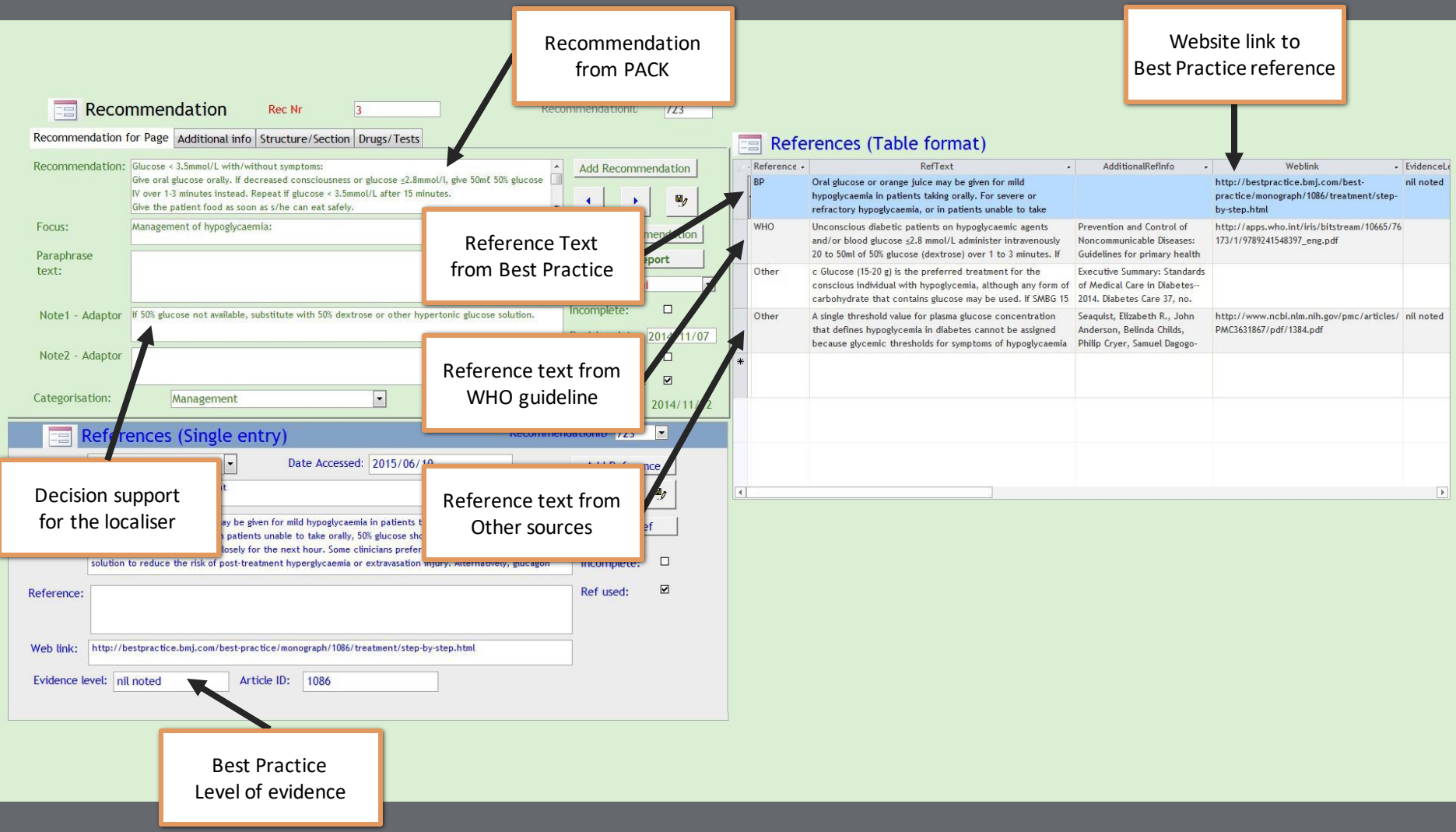
Depression

End of life care

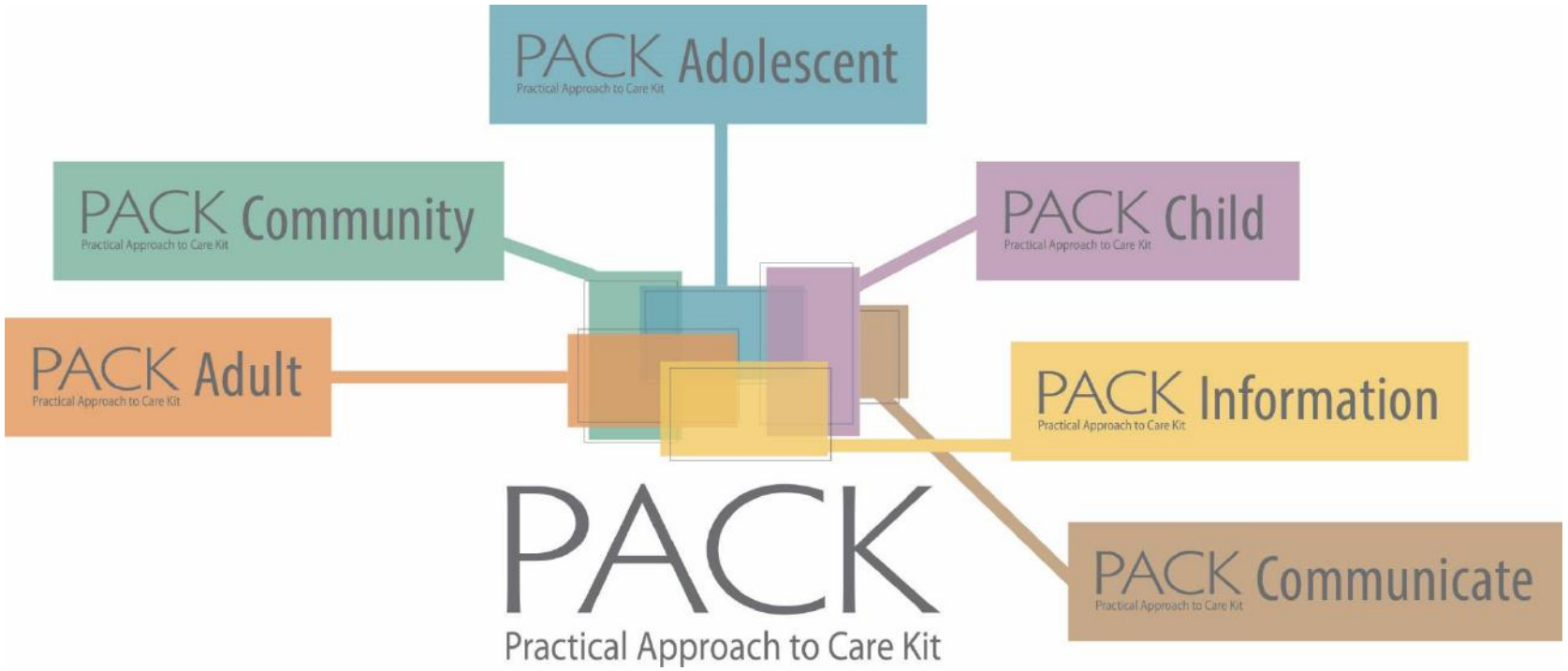
Check thyroid function (TSH) if none of the above and patient has any of pulse ≥ 100, tremor, irritability, dislike of hot weather or thyroid enlargement.

Refer within 1 month for further investigation the patient with persistent documented weight loss and no obvious cause.

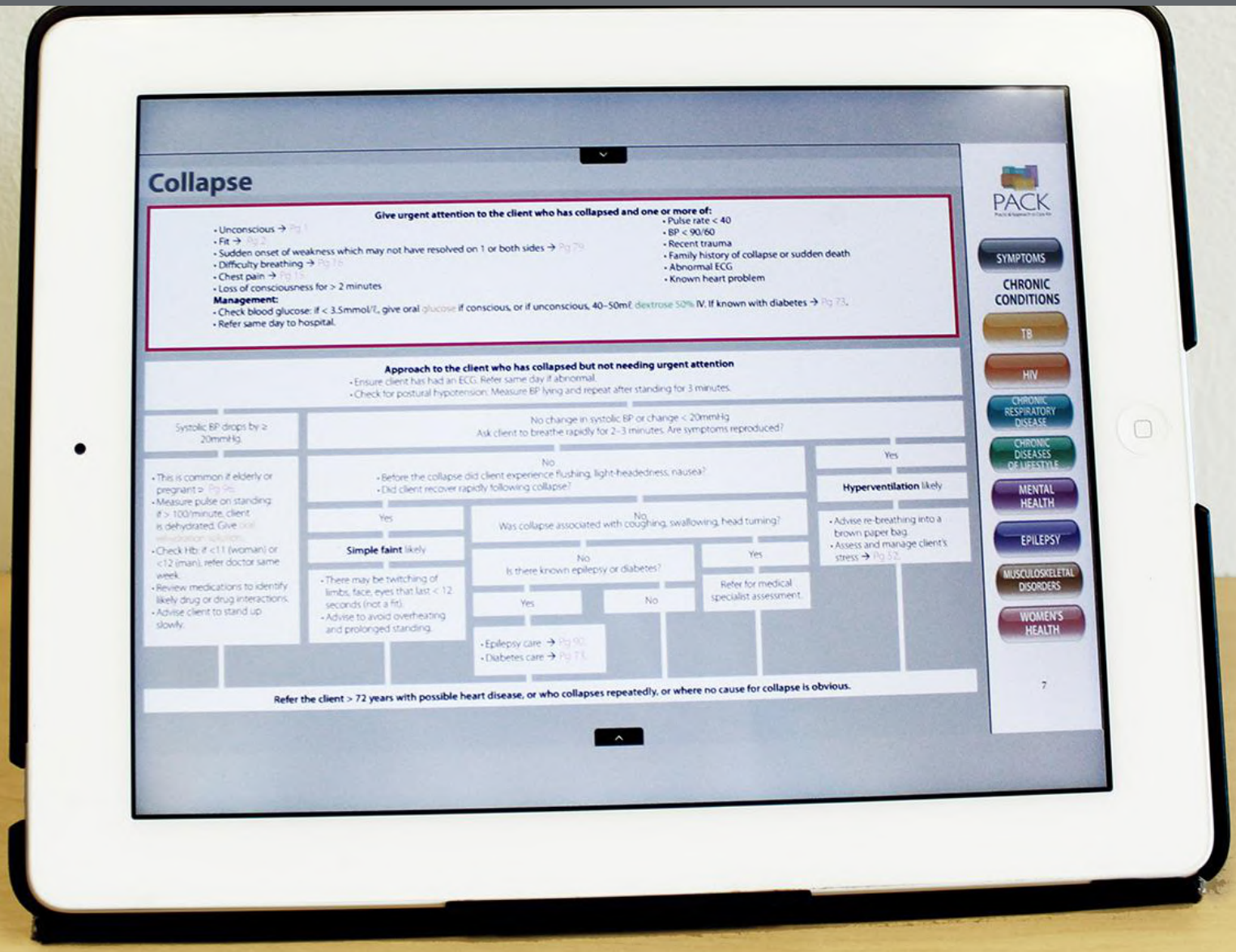
Guide: Evidence database



Guide: The PACK Suite of tools



Guide: ePACK


Collapse
Give urgent attention to the client who has collapsed and one or more of:
• Unconscious →
• Fit →
• Sudden onset of weakness which may not have resolved on 1 or both sides →
• Difficulty breathing →
• Chest pain →
• Loss of consciousness for > 2 minutes
• Pulse rate < 40
• BP < 90/60
• Recent trauma
• Family history of collapse or sudden death
• Abnormal ECG
• Known heart problem
Management:
• Check blood glucose: if < 3.5mmol/L, give oral glucose if conscious, or if unconscious, 40–50ml dextrose 50% IV. If known with diabetes →
• Refer same day to hospital.
Approach to the client who has collapsed but not needing urgent attention
• Ensure client has had an ECG. Refer same day if abnormal.
• Check for postural hypotension: Measure BP lying and repeat after standing for 3 minutes.
Systolic BP drops by ≥ 20mmHg.
No change in systolic BP or change < 20mmHg
Ask client to breathe rapidly for 2–3 minutes. Are symptoms reproduced?
• This is common if elderly or pregnant >
• Measure pulse on standing: if > 100/minute, client is dehydrated. Give oral rehydration solution.
• Check Hb: if <11 (woman) or <12 (man), refer doctor same week.
• Review medications to identify likely drug or drug interactions.
• Advise client to stand up slowly.
No
• Before the collapse did client experience flushing, light-headedness, nausea?
• Did client recover rapidly following collapse?
Yes
Hyperventilation likely
• Advise re-breathing into a brown paper bag.
• Assess and manage client's stress →
Yes
Simple faint likely
• There may be twitching of limbs, face, eyes that last < 12 seconds (not a fit).
• Advise to avoid overheating and prolonged standing.
No
Was collapse associated with coughing, swallowing, head turning?
Yes
Refer for medical specialist assessment.
No
Is there known epilepsy or diabetes?
Yes
No
• Epilepsy care →
• Diabetes care →
Refer the client > 72 years with possible heart disease, or who collapses repeatedly, or where no cause for collapse is obvious.
PACK
SYMPTOMS
CHRONIC CONDITIONS
TB
HIV
CHRONIC RESPIRATORY DISEASE
CHRONIC DISEASES OF LIFESTYLE
MENTAL HEALTH
EPILEPSY
MUSCULOSKELETAL DISORDERS
WOMEN'S HEALTH
7

Pillar 2: Training principles

- ***Educational outreach***
- **Capacitate and empower primary care** *clinicians as educators*
- ***Team based training*** for primary care health workers
- ***On-site*** (proximity)
- ***Multi-event*** over prolonged period
- ***Interactive***
- ***Case study focused***

A nurse bringing a problem TB case to an on-site training group to work through using the guideline

Training: Cascade model

Implementation and Training Plan

Brazil / KTU trainers

Equip PACK Master Trainers to comprehensively manage and co-ordinate PACK implementation in a state / region

Equip

PACK Master Trainer

- Attend a 4-day workshop
- Equip PACK MT's to co-ordinate, manage & mentor the implementation of PACK in Facilities which are there responsibility
- Co-ordinate PACK implementation in a state
- Monitor and evaluate

Co-ordinate

PACK Facility Trainers

- Attend a 4-day workshop
- 1 PACK Facility Trainer per facility (doctor, nurse/midwife)
- Know how to use the PACK materials (self-directed and/or attend workshop lead by PACK MT)
- Plan and manage an onsite training roster
- Monitor individual and group learning activities

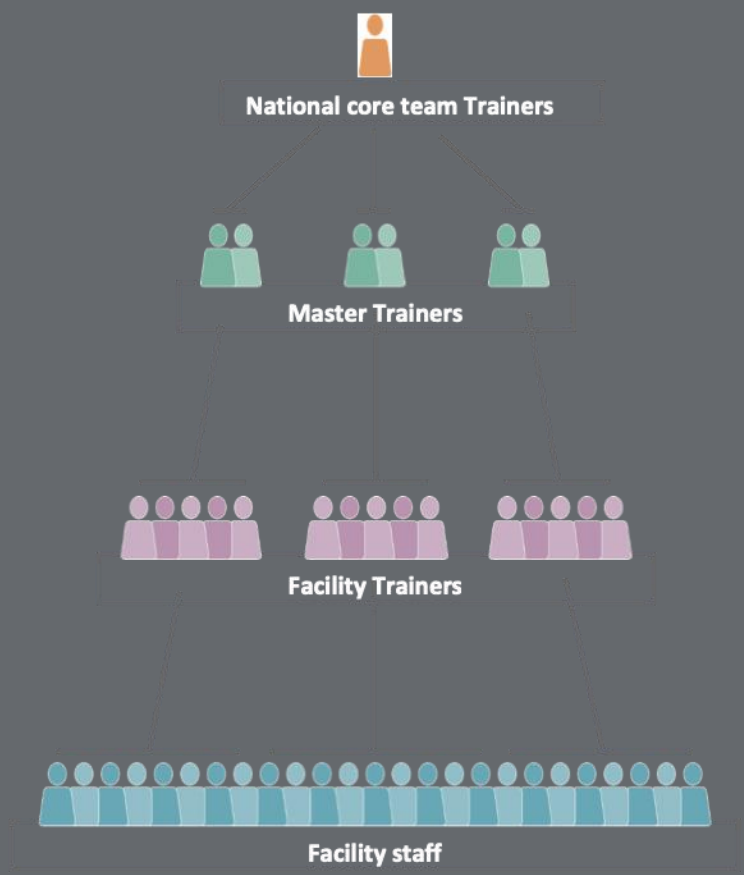
Manage

Facility staff

- Actively engage in PACK onsite learning activities
- Apply PACK guide in practice

Apply

Cascade Model

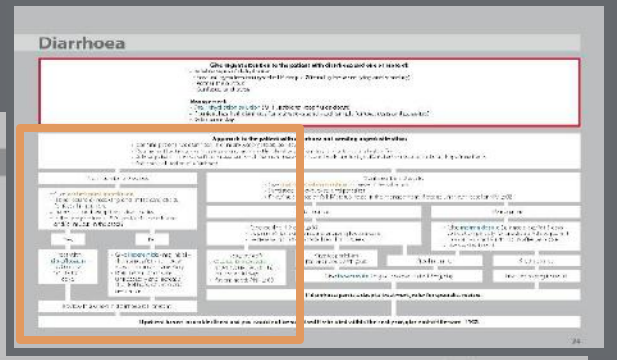


Training: The waiting room scene

Training: Educational outreach session


PLAY IT SAFE WITH ALCOHOL
FREE TB MASKS

Pillar 3: Health systems strengthening



• Ask about duration of diarrhoea.

Diarrhoea for < 2 weeks

- Give oral rehydration solution.
- If bed-bound or receiving end-of-life care, check
- ere blood

Yes

Treat with ciprofloxacin 500mg 12

No

- Give loperamide 4mg initially, then 2mg after each loose stool, maximum 12mg/day.
- Routine antibiotics are nd increase of antibiotic resistance.

Review in 2 weeks if diarrhoea still present.

HIV positive

- Give routine HIV care ⮌63.
- Lopinavir/ritonavir can cause ong
- Review symptoms and stool resul

Isospora belli

- Give co-trimoxazole 320/1600mg (4 tablets) 12

Cryptosp
Patient need

Give

If diarrhoea

If patient has an incurable illness and you would not be surprised if s/he

Orange text: professional nurse, clinical nurse practitioner, doctor

Blue text: clinical nurse practitioner, doctor

Green text: doctor only

Pillar 4: Monitoring and evaluation

Overview of trial results: Modest but consistent improvements across a range of outcomes and behaviours from the results of 4 South African pragmatic RCT's

Absolute effect sizes in the range seen in implementation science trials (5-15%)

Prescribing: cotrimoxazole prophylaxis[2], inhaled corticosteroids[1], aspirin[5]

Referral: appropriate referral of severe and complex cases[1,4]

Case detection: HIV[2], TB[1,2,4]

Health care utilisation: ↑ primary care visits, ↓ inpatient days[4,6]

1. Fairall LR et al. BMJ 2005;331:750-754.
2. Zwarenstein M et al. BMJ 2011; 342:d2022.
3. Bachmann MO et al. Int J Tuberc Lung Dis 2010; 14(3):311–317.
4. Fairall LR et al. Lancet 2012; 380:889-98.
5. Fairall LR et al. Submitted.
6. Fairall LR et al. Trop Med Int Health. 2010; 15(3):277-286
7. Stein J et al. BMC Health Services Research 2008, 8:240.
8. Georgeu et al. Implementation Science 2012; 7:66.

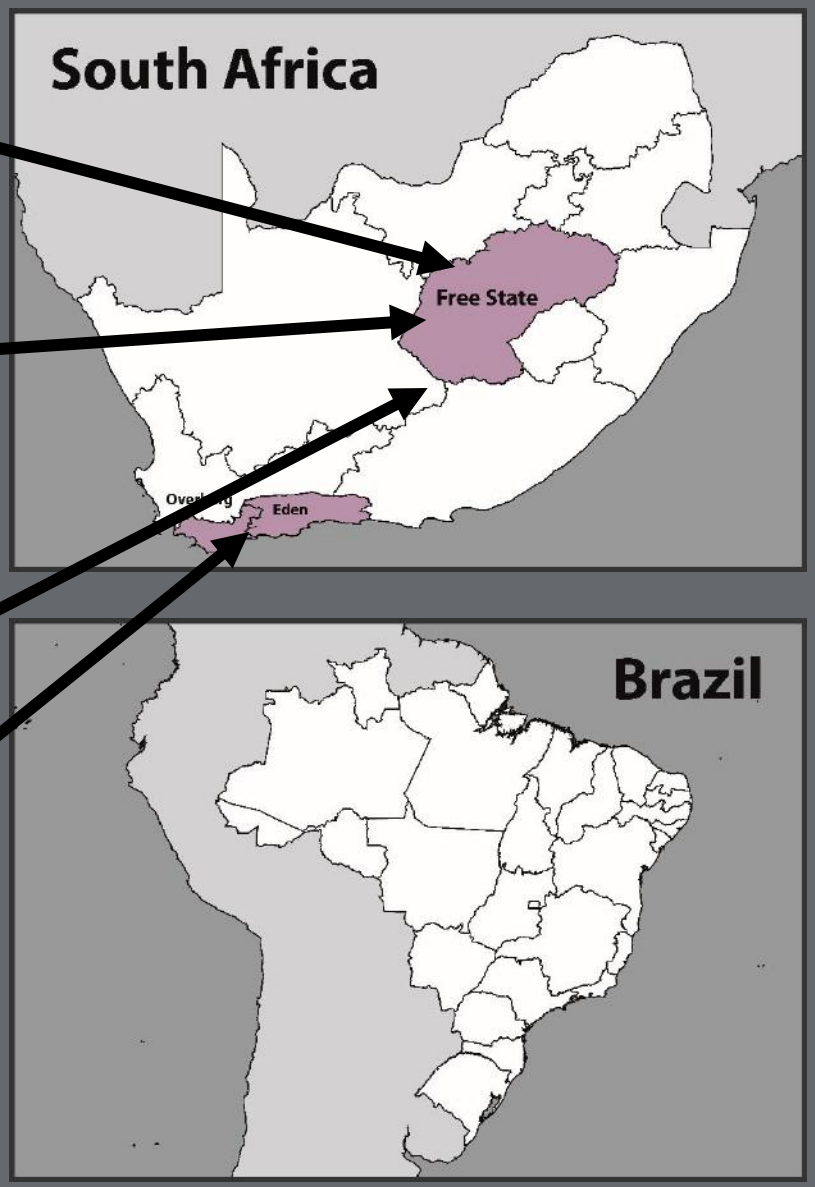
Pragmatic trials of the PACK approach

PALSA (Practical Approach to Lung Health in South Africa)
2002-2003
40 clinics; 2000 patients; 3 month follow-up
Fairall LR *et al*. BMJ 2005;331:750-754

PALSA PLUS (Practical Approach to Lung Health and HIV/AIDS in South Africa)
2004-2006
15 clinics; 10 136 patients; X month follow-up
Zwarenstein M *et al*. BMJ 2011; 342:d2022.

STRETCH (Streamlining Tasks and Roles to Expand Treatment and Care for HIV)
2008-2010
31 clinics; 16 483 patients; median 18 months' follow-up
Fairall LR et al. Lancet 2012; 380:889-98.

Primary Care 101
2011-2013
38 clinics; 4 393 patients; 14 months' follow-up
Fairall LR, Folb N et al. PLoS Med 13(11): e1002178.

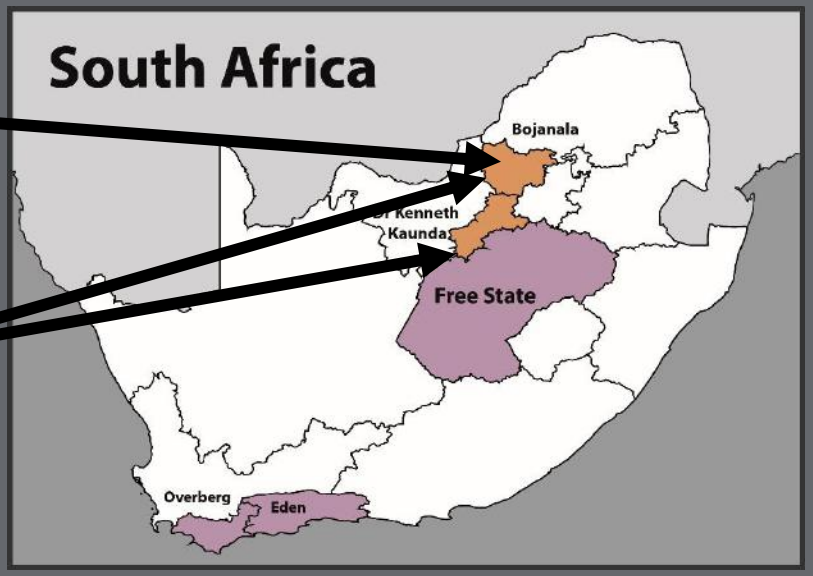


Pragmatic trials of the PACK approach

PRIME (Programme for Improving Mental Health Care)
2014 ongoing
20 clinics; X patients; 12 months' follow-up
ClinicalTrials.gov: NCT02425124

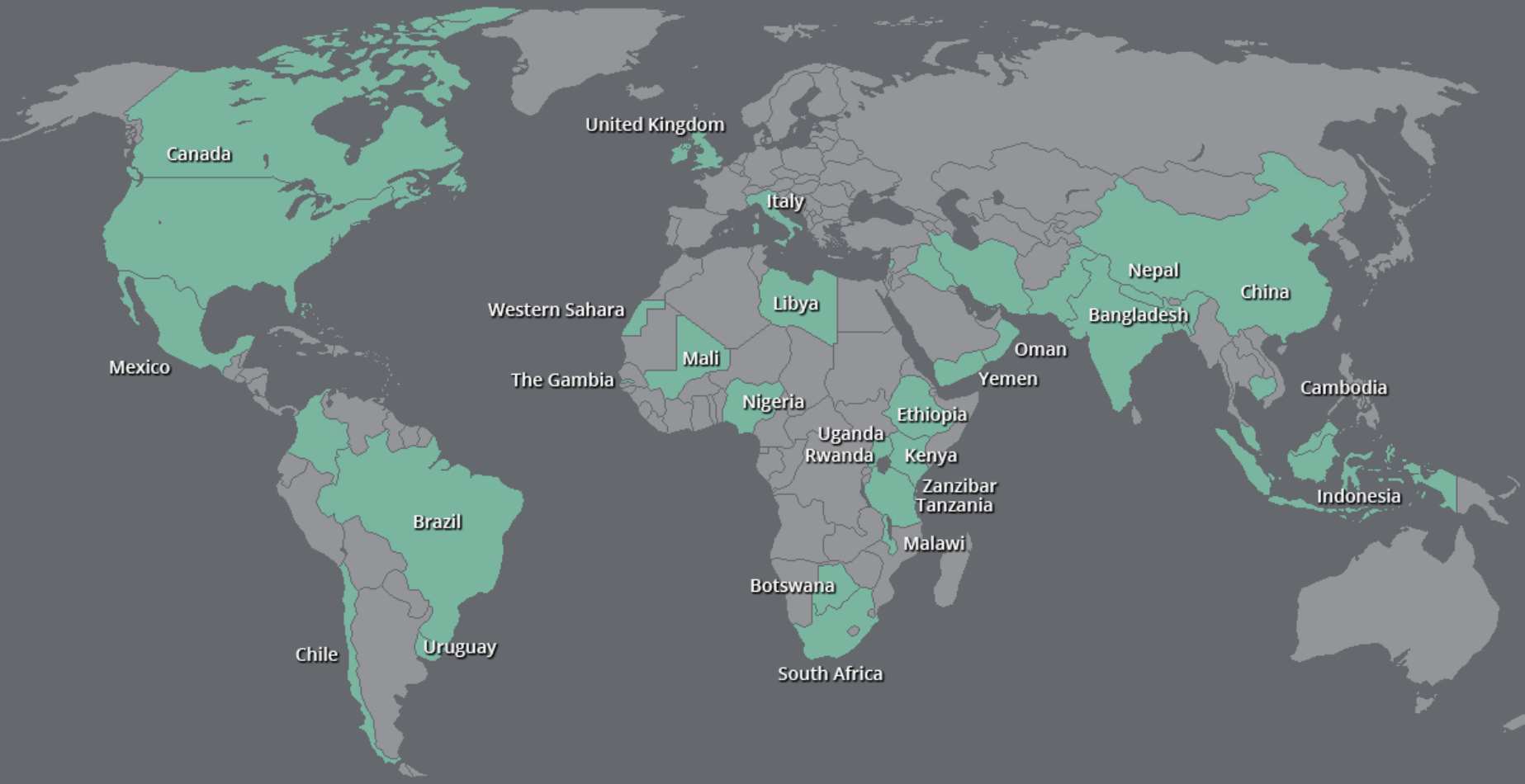
CobALT (CO-morBidity of AIDS/ HIV Affective disorder, and Long-Term Health)
2014 ongoing
40 clinics; X patients; 12 months' follow-up
ClinicalTrials.gov: NCT02407691

Effect on respiratory outcomes in Florianòpolis
2016 ongoing
48 clinics; X patients; 12 months' follow-up
ClinicalTrials.gov: XXX



Impact on primary healthcare workers: to equip & empower

Country interest in the PACK programme



PREFEITURA DE FLORIANÓPOLIS
SAÚDE

SUS

PACK Brasil Adulto

Practical Approach to Care Kit
Kit de Cuidados em Atenção Primária

Ferramenta de manejo clínico em Atenção Primária à Saúde

PACK
Practical Approach to Care Kit

2016

Versão Florianópolis

Impact on healthcare workers: to empower

"A tool for every day for every patient."

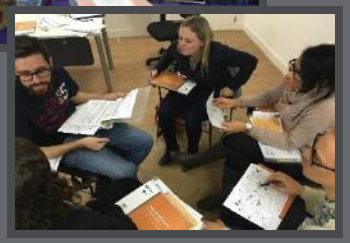
PACK: KEY MESSAGES

BMJs GLOBAL HEALTH PROGRAMMES:

1: Publishing - BMJ GH journal, HINARI access

2: Clinical Decision Support & Online Learning: CDS programme (Ukraine, Georgia, Azerbajaini, Jordan & Vietnam) & PACK (SA, Brazil, Nigeria, Ethiopia), mNutrition

3: Events - GH focused events eg East Africa Health summit 27 April (Uganda, Tanzania & Kenya)



PACK EVOLUTION

PACK developed in South Africa over last 18 years by the UCTLI KTU team

Purpose: To equip and empower PHC workers in LMICs

Status: Fully upscaled and embedded in PHC in SA MoH services in the "Ideal Clinic" programme. Strong interest from other LMIC's

KTU & BMJ have partnered to make PACK available globally

How PACK is delivered:

- 4 pillar programme
- 6 phases of implementation: engage, localize (6months), facility readiness (3 months), pilot training (6 months), review & evaluate (3 months), upscale
  ie. minimum 18 month pilot programme

PACK ROADMAP:

- Guide:
  - Adult - Child - Community - Adolescent - Maternity
  - Print - eBook - mobile app - interactive mobile app
- Training:
  - Onsite to blended learning (onscreen +face-to-face)
  - CPD accredited
- Health systems strengthening:
  - PHC facility readiness – meds, equip, test availability
  - Task sharing & task-shifting
  - Referrals
- M&E:
  - Training data collection & analysis
  - Clinical outcome evaluation
  - Health Economic evaluation

The UCTLI Knowledge Translation Unit team

Thank you

PACK

Practical Approach to Care Kit

www.knowledgetranslation.uct.ac.za

pack.bmj.com

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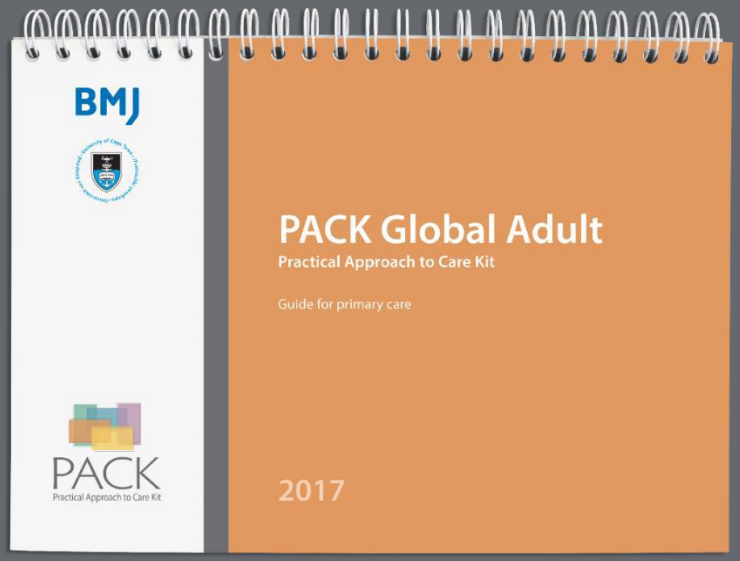
Knowledge TranslationUnit
University of Cape Town LUNG INSTITUTE



Guide localization

•PACK Global Adult guide (pdf)
•PACK Global Adult guide (Powerpoint) editable template
•PACK Global Adult Evidence and Decision Support document
•PACK Global Adult guide – equipment list, medication list, test list
PACK Global Adult guide – localization schedule
PACK Global Adult guide – printing specifications

Recommendations:

- Localisation kick-off workshop
- Localisation "dry-run"
- Trello tool for managing localization
- Specialist input + Primary care clinician input
- Engagement workshops
- User testing
- Content integration
- Print sample test runs

Training materials localization

•PACK Global Adult Lead/Master Trainers manual
•PACK Global Adult Facility Trainers manual
•PACK Global Adult board game , instructions & answers
•PACK Global Adult waiting room scene
•PACK Global Adult cases – bank of approx. 45 cases in 4 modules
•PACK Global Adult key messages
•PACK Global Adult training attendance records
•PACK Overview video
•PACK Training video's x 4
•PACK Guide video
•PACK Global Adult programme infographic
•PACK Global Adult guide infographic
•PACK Global Adult overview presentation (slides)
•PACK Global Adult training presentation
•PACK Global Adult training file (cover and spine)
•PACK Global Adult training tools – print specificaions
•PACK Global Adult – sample training certificates

Knowledge into Practice: core principles of the PACK programme

Addressing the needs of patient and provider in primary care

Evidence-informed implementation of evidence-informed care

Comprehensive: common symptoms and chronic conditions, 0-100 years

Team-based training within context of task-sharing

Easy to use: providers and in-country teams

Revised annually

Localised for each health system

Policy aligned