

## Overview of Knowledge Translation

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#### **Session overview**



Orientate you to the KT landscape



Share an example of KT from South Africa



Exercise to apply KT to existing and future learnings from HeLTI



## Orientate you to the KT landscape

### **Defining Knowledge Translation**

"Knowledge translation is the exchange, synthesis and ethically-sound application of knowledge — within a complex system of interactions among researchers and users - to accelerate the capture of the benefits of research for the public through improved health, more effective services and products, and a strengthened health care system."  $^{1}$ 

"The synthesis, exchange and application of knowledge by relevant stakeholders to accelerate the benefits of global and local innovation in strengthening health systems and improving people's health."<sup>2</sup>

"...is the umbrella term for all the activities involved in moving research from the laboratory, the research journal, and the academic conference into the hands of the people and organizations who can put it to practical use." 3

#### Closing the gap between what we know and what we do.

- 1. Canadian Institutes of Health Research available online at: http://www.irsc.gc.ca/e/7518.html
- 2. World Health Organization. Knowledge translation for health decision making, 2021. Available: https://www3.paho.org/hq/index.php?option=com\_content&view=article&id=9682:knowledge-translation-for-health-decision-making&Itemid=41010&Iang=en
- 3. Knowledge translation available online at en.wikipedia..org/wiki/Knowledge translation

### Getting knowledge into practice



- Knowledge translation\*
- Knowledge mobilisation
- Research utilisation
- Translational research
- Implementation science\*
- Improvement science\*
- Knowledge dissemination\*
- Knowledge diffusion\*
- Knowledge transfer

- Knowledge uptake
- Knowledge transfer
- Knowledge management
- Knowledge linkage and exchange
- Knowledge management
- Research into policy and practice
- Research mediation
- Applied health research
- Impact

## Implementation science:

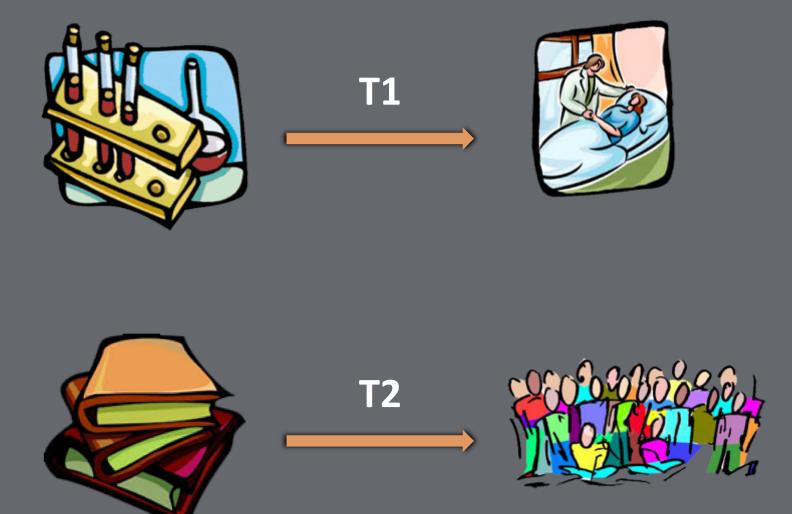
The scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice to improve the quality and effectiveness of health services and care.

## WHAT WE KNOW



## WHAT WE DO

# Types of translational research



## Integrated and end-of-grant Knowledge Translation



#### **End-of-grant KT:**

Researchers develop and implement a plan for making users aware of the knowledge that has been gained from the project

Examples: scientific publications, conferences, policy briefs, media

#### **Integrated KT:**

Stakeholders and/or potential research users are engaged in the entire research process.

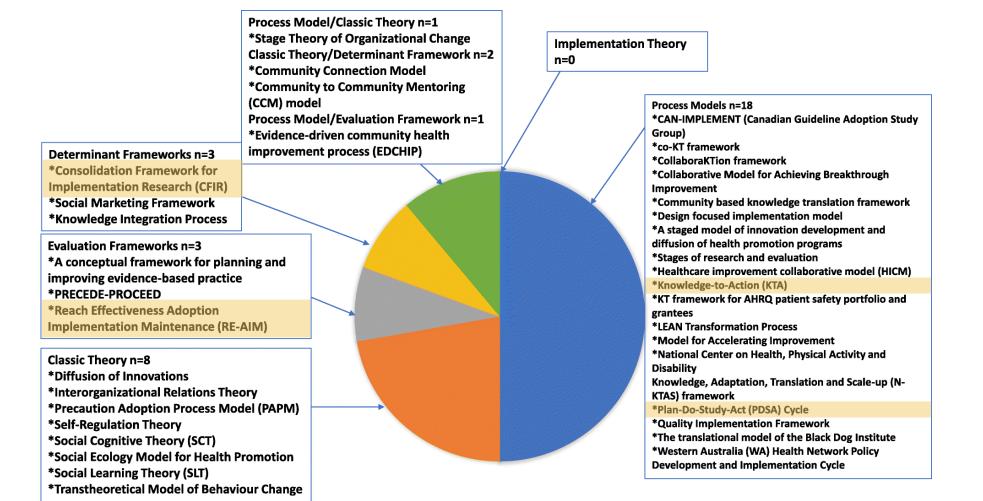
Examples: participatory action research, co-production

https://ktdrr.org/ktlibrary/articles\_pubs/ncddrwork/focus/focus18/#:~:text=With%20end%2Dof%2Dgrant%20KT, in%20the%20entire%20research%20process



## Theories, models, and frameworks for Knowledge Translation (n = 36)





Esmail R, Hanson HM, Holroyd-Leduc J, Brown S, Strifler L, Straus SE, Niven DJ, Clement FM. A scoping review of fullspectrum knowledge translation theories, models, and frameworks. Implementation Science. 2020 Dec;15(1):1-4.

### Knowledge translation components and processes



- Knowledge synthesis
- Dialogue/exchange
- Adaptation to context
- Evidence-informed programme design, monitoring and evaluation.
- Activities where knowledge, guidelines or recommendations are used in the provision of healthcare or other services.
- Appropriate training and incorporation of new guidelines into the local health culture and health education.
- Behaviour change to enhance the use of guidelines and recommendations in ways that improve health at an individual and population level.
- Evaluation of reach, uptake, acceptability and effectiveness.

STAGE (Strategic Technical Advisory Group of Experts), Duke T, AlBuhairan FS, et al. World Health Organization and knowledge translation in maternal, newborn, child and adolescent health and nutrition. Archives of Disease in Childhood 2022;107:644-649.



# Share an example of KT from South Africa

#### What is PACK?

#### Practical Approach to Care Kit

- Clinical decision support
- Healthcare worker training
- Health systems strengthening
- Learning health systems through parallel research programmes

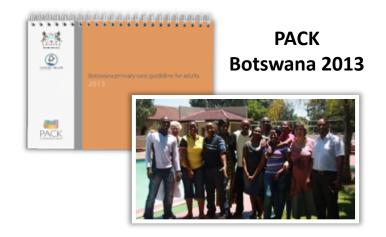
Enables frontline health care workers to provide updated evidence-based care to the community within which they serve



Fairall L, Cornick R, Bateman E. Empowering frontline providers to deliver universal primary healthcare using the practical approach to care kit. Bmj. 2018 Oct 24;363.

#### **PACK** reach

















## IMPACCT: WHO Clinical Services and Systems Unit in the Integrated Health Services Department



WHO's Guidance on Integrated Clinical Care (IC<sup>2</sup>)

Primary, emergency, critical, and operative care

Discussion on coordinating with the Practical Approach to Care Kit (PACK) 24 August 2021

World Health Organization



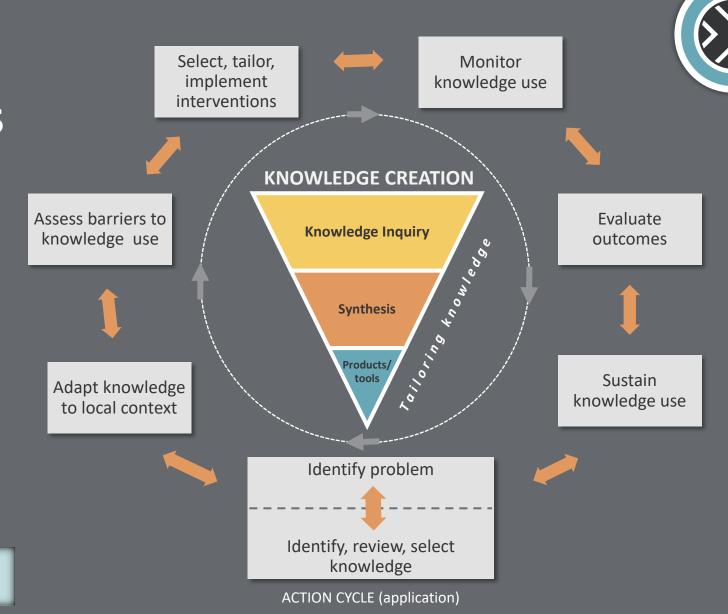
John Fogarty, Liz Gwyther, Nuhamin Tekle, Oyetayo Akala, Teri Reynolds | WHO Headquarters, Geneva, Switzerland



## KT in practice:

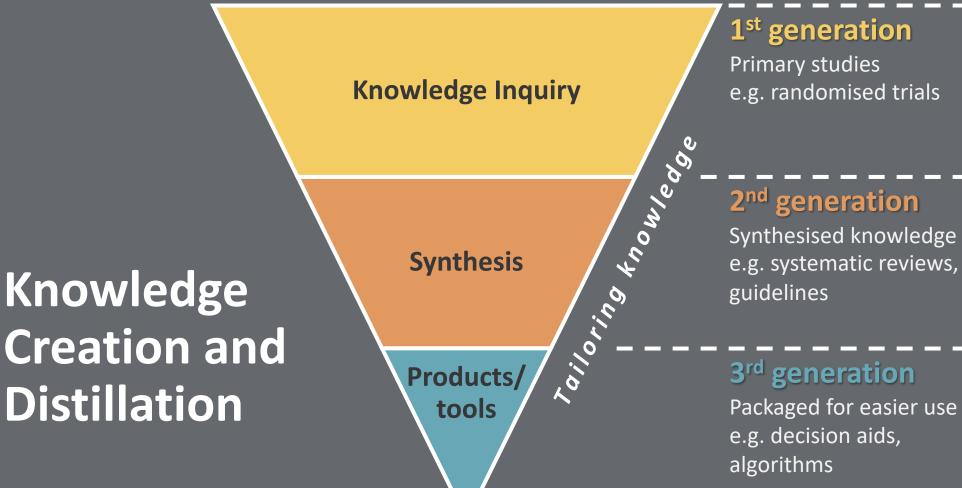
## (>) 1) Knowledge synthesis

## **Knowledge to Action Process**



Straus SE, Tetroe J, Graham I. Defining knowledge translation. Cmaj. 2009 Aug 4;181(3-4):165-8.





## PACK guide

## - a clinical decision support tool







PACK combines latest policies into one resource

#### **Ischaemic heart disease (IHD):** routine care

#### Assess the patient with ischaemic heart disease When to assess Assess Do initial assessment if not already done 5 117. Symptoms Every visit Ask about leg pain 59 and symptoms of stroke/TIA 116. In the past month, has patient: 1) felt down, depressed, hopeless or 2) felt little interest or pleasure in doing things? If yes to either $\supset$ 125. Depression Every visit 2 BP Every visit If known hypertension 5 113. If not, check BP: if ≥ 130/80 5 112. Diabetes risk At diagnosis, then yearly If known diabetes 5 110. If not known with diabetes, check glucose 5 13. At diagnosis, then yearly Random total cholesterol If total cholesterol > 8mmol/L, refer to specialist. Start simvastatin regardless of cholesterol level. If repeat cholesterol > 5mmol/L on treatment, discuss with specialist.

#### Advise the patient with ischaemic heart disease

- Help the patient to manage his/her CVD risk > 109.
- Patient can resume normal daily and sexual activity 6 weeks after heart attack if symptom free.
- Emphasize the importance of lifelong adherence to medication. Ensure patient knows how to use medication as below.
- Advise patient to avoid NSAIDs (e.g., ibuprofen), as they may precipitate chest pain or a heart attack.
- If patient is < 55 years (man) or < 65 years (woman), advise first degree relatives to have CVD risk assessment 

  → 108.
  </p>

#### Treat the patient with ischaemic heart disease

- D- Give aspirin 150mg daily for life. Avoid if peptic ulcer, dyspepsia, kidney or liver desease.
- Give simvastatin¹ 40mg daily at night for life, regardless of cholesterol level.
- Give metoproiol (immediate release) 50mg 12 hourly, even if no chest pain/discomfort Avoid in asthma/COPD uncontrolled heart failure, pulse < 50, systolic BP < 100.
   If patient also has hypertension, diabetes or chronic kidney disease, give enalapril 5mg daily and increase slowly to 20mg daily. Avoid in angioedema.
- If patient has angina, treat using stepwise approach as in table below: if angina persists 4 weeks after starting/changing medication, increase dose to maximum, then add next step. Ensure patient is adherent before increasing treatment. If medication not tolerated, stop medication and move to next step.

5	tep	Medication	Dose	Maximum dose	Note
1	1 0	Glyceryl trinitrate and	0.5mg sublingual with chest pain and before exertion	3 doses of 0.5mg with each episode of chest pain	If chest pain on exertion, rest and take 1st dose. If chest pain persists, take a further 2 doses 5 minutes apart. If no better 5 minutes after 3rd dose, patients must seek attention urgently. Avoid if sildenafil (or similar medication) used within past 24 hours.
	Q	Bisoprolol or	10mg daily	20mg daily	
		Carvedilol or	25mg 12 hourly	50mg 12 hourly	Avoid bisoprolol, carvedilol and metoprolol in asthma/COPD, uncontrolled heart failure, pulse < 50, systolic BP < 90 or intolerable side effects (headache, cold hands/feet, impotence, tight chest, fatigue).
		Metoprolol (immediate release)	50mg 12 hourly	200mg 12 hourly	(1000)
	2 2	Verapamil (immediate release) or	80mg 8 hourly	160mg 8 hourly	■ Avoid verapamil and amlodipine in uncontrolled heart failure, leg swelling, pulse < 50 or systolic BP < 90.
		Amlodipine	5mg daily	10 mg daily	Avoid veraparili and amiodipline in discontioned flear failule, leg sweiling, pulse < 50 or systolic br < 90.
L	3 6	Isosorbide dinitrate	5mg sublingual every 2 to 4 hours	10mg every 2 to 4 hours	Avoid if sildenafil (or similar medication) used within past 24 hours.

If above medications are contra-indicated/not tolerated or chest pain/discomfort persists on full treatment, refer to specialist.

<sup>1</sup>Avoid simvastatin if patient on lopinavir/ritonavir or atazanavir/ritonavir, discuss with specialist.



Collates **236 WHO** Guidelines (24K pages) into guide of 150 pages

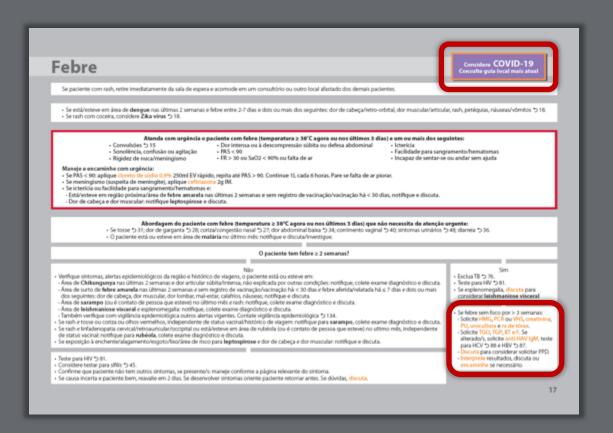


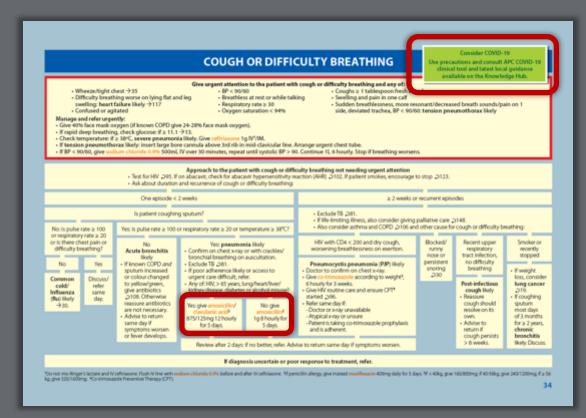
## KT in practice:

## (>) 2 Localised to context

## Localised to burden of disease and resources







Cornick R, Wattrus C, Eastman T, Ras CJ, Awotiwon A, Anderson L, Bateman E, Zepeda J, Zwarenstein M, Doherty T, Fairall L. Crossing borders: the PACK experience of spreading a complex health system intervention across low-income and middle-income countries. BMJ Global Health. 2018 Oct 1;3(Suppl 5):e001088.



## KT in practice:

The importance of service relationships

#### From research to service

- Educational outreach is used, delivering PACK to primary care clinicians as teams, in their health facilities
- This alternates learning with practice
- Online courses are consistent providing are standardised content delivery, enhanced by face-to-face mentoring

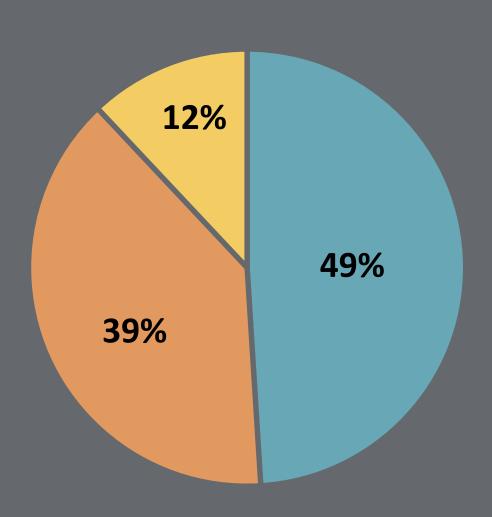




- 1. Simelane ML, Georgeu-Pepper D, Ras CJ, Anderson L, Pascoe M, Faris G, Fairall L, Cornick R. The Practical Approach to Care Kit (PACK) training programme: scaling up and sustaining support for health workers to improve primary care. BMJ global health. 2018 Nov 1;3(Suppl 5):e001124.
- 2. van Rensburg AJ, Petersen I, Awotiwon A, Bachmann MO, Curran R, Murdoch J, Ras CJ, Fairall L. Applying learning health systems thinking in codeveloping integrated tuberculosis interventions in the contexts of COVID-19. BMJ global health. 2022 Oct 1;7(10):e009567.
- 3. Curran R, Murdoch J, van Rensburg AJ, Bachmann M, Awotiwon A, Ras CJ, Petersen I, Prince M, Moultrie H, Nzuza M, Fairall L. A health systems intervention to strengthen the integration of tuberculosis and COVID-19 detection: Outcomes of a quasi-experimental study in a high burden tuberculosis district in KwaZulu Natal, South Africa. Tropical Medicine & International Health. 2023 Apr;28(4):324-34.

### **KTU** activities





- Research
- Training and Implementation
- International work

### **COVID** clinical content – PHC and Vaccine guidance



















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**Security Guards** 

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## KT in practice:

Co-production with patient/ community beneficiaries



## Pitfalls or opportunities?



- Drafting health circulars, press releases and presentations
- Application of research generated programme in different context
- Application of KT skills outside original scope of practice
- Fast-tracking intervention components to take advantage of policy windows
- Staying involved so that you can use research to optimise adopted interventions later
- Not all contributions are cost neutral
- Not all contributions are attributable



# Exercise to apply KT to existing and future learnings from HeLTI

## Activity 1 - 15 min



- in-country group discussion

 What 3 of your current learnings would you want to translate to your local government now?

Try framing these as a knowledge translation objective:
 "What would it look like if these were adopted?"

## Pathways to Impact: Example



Stakeholder category	Dissemination methods	Dissemination channels					
Objective: Guide policy decisions on how to optimise PACK Adolescent implementation							
Local policymakers (municipal, provincial and national levels in	1 (Opi Coolitation in 1 / Cort / (acrocoolit	Existing PACK Adolescent GDAG					
health and education sectors and social development)	Key informant interviews	<ul> <li>Monthly operational meetings with Western Cape Health Department (provincial and municipal)</li> </ul>					
	Research reports	Special meetings with Western Cape					
	Presentation of research findings	and National Health Departments.					
	Policy briefs	<ul> <li>Department of Basic Education and Department of Social Development</li> </ul>					
	Academic publications						

## Activity 2 – 20 min

## pathways to impact



<ul> <li>Stakeholder Categories</li> <li>National/ sub-national level?</li> <li>Health sector?</li> <li>Outside health sector?</li> </ul>	<ul> <li>Dissemination Methods</li> <li>What tools would you need to produce to engage these stakeholders?</li> </ul>	<ul> <li>Dissemination Channels</li> <li>What groups/ meeting/ for a exist or would need to be created to engage these stakeholders?</li> </ul>	What additional resources/ skills do you need to engage effectively and creatively?	How can WHO help?				
KT Objective 1 = Adoption of key learning #1								
KT Objective 2 = Adoption of key learning #2								
KT Objective 3 = Adoption of key learning #3								



## Tea/coffee



# Plenary feedback and consolidation of ideas



## Food for thought:

What are you planning to do with your future research findings?