

Using a mentorship model to localise the Practical Approach to Care Kit (PACK): from South Africa to Brazil

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ABSTRACT

Brazil's Sistema Único de Saúde, or Unified Health System policy, has delivered major improvements in health coverage and outcomes, but challenges remain, including the rise of non-communicable diseases (NCDs) and variations in quality of care across the country. Some of these challenges may be met through the adaptation and implementation of a South African primary care strategy, the Practical Approach to Care Kit (PACK). Developed by the University of Cape Town's Knowledge Translation Unit (KTU), PACK is intended for in-country adaptation by employing a mentorship model. Using this approach, the PACK Adult guide and training materials were localised for use in Florianópolis, Santa Catarina, Brazil, as part of an initiative to reform primary care, expand care for NCDs and make services more accessible and equitable. The value of the collaboration between the KTU and Florianópolis municipality is the transfer of skills and avoidance of duplication of effort involved in de-novo guide development, while ensuring that materials are locally acceptable and applicable. The collaboration has informed the development of the KTU's PACK mentorship package and led to a relationship between the groups of developers, ensuring ongoing learning and research, with the potential of assisting the further scale-up of PACK in Brazil.

INTRODUCTION

The centrepiece of Brazil's Sistema Único de Saúde or Unified Health System is the Family Health Strategy, which aims to provide comprehensive primary care delivered by multidisciplinary teams.¹ The scale-up of these teams has been rapid; by June 2018, 43 384 teams covering over 134 million people, or almost 65% of Brazil's population, had been established.² Despite improved health outcomes like a decrease in under-five mortality³⁻⁶ and reduced hospital admissions,⁷⁻⁹ there are continuing challenges. These include a rise in non-communicable diseases (NCDs)³ and variations in the quality of primary care, with unequal distribution

Summary box

- ▶ The Practical Approach to Care Kit (PACK) programme, which has been developed, tested and scaled up in South Africa provides locally applicable, evidence-informed guidance and training for clinicians working in primary healthcare facilities.
- ▶ Health officials in Florianópolis, Brazil recognised that the PACK programme might strengthen primary care services through provision of integrated comprehensive guidance for health workers.
- ▶ Through a process of mentorship between the Knowledge Translation Unit in Cape Town and health workers from Florianópolis, a localised version of the PACK Adult guide and training materials for use in Brazil were developed.
- ▶ Lessons learnt from this collaboration have informed the development of a PACK localisation package to mentor adaptation of the PACK programme for other countries.

of health workers, high turnover and poor management.¹⁰ Integrated provision of clinical care by doctors and nurses has improved accessibility and efficiency of primary care.¹¹ However, a restrictive legal framework has hampered clinical practice by nurses¹² and may have contributed to diverting their role toward administrative rather than clinical responsibilities.¹³

Florianópolis, a city of 486 000 in Santa Catarina state,¹⁴ was the first municipality in Brazil to achieve universal health coverage and has received awards for healthcare innovations.^{15 16} However, the quality of care between its clinics remains variable and barriers to access persist.¹⁷ This prompted a primary care reform in 2010, which targeted timely access to quality comprehensive care. The Primary Care Services Portfolio,¹⁸ published in 2014, introduced changes in the organisation of primary care, including the

redefinition of roles within the health team.¹⁸ In parallel, new nursing protocols were developed that provided for additional legal and technical support for the scope of practice for nurses.¹⁹ This reform prompted a search for tools suited to the practice of primary care, including integrated clinical guidance and South Africa's Practical Approach to Care Kit (PACK) programme was identified as potentially suitable.

The PACK programme comprises four components: (1) a clinical decision support tool (the PACK Global Adult guide), which provides a comprehensive and integrated approach to common presenting symptoms and chronic conditions among adults attending primary care in low-income and middle-income countries (LMICs),^{20,21} (2) a training and implementation strategy, that employs a cascade model for scaling up and an onsite, team-based training approach informed by adult education principles,²² (3) a health system strengthening component and (4) monitoring and evaluation elements. Developed and tested by the University of Cape Town's Knowledge Translation Unit (KTU) over almost two decades,²³ the programme has been adopted by South Africa's department of health as part of the Ideal Clinic initiative²⁴ to improve and standardise primary healthcare. It has been introduced in primary care facilities throughout South

Africa, reaching over 30 000 primary care health workers. Four randomised controlled trials have shown modest but consistent improvements across multiple health outcomes,²⁵⁻²⁸ and qualitative work has shown improved job satisfaction among health workers.^{29,30}

This paper describes the localisation of the PACK programme to the Florianópolis primary healthcare context and highlights the learnings from this experience. This paper forms part of a Collection of reports in which the development and methods employed in PACK are described.

LOCALISATION OF PACK USING A MENTORSHIP MODEL

A goal of the PACK programme is to provide comprehensive, evidence-informed and policy-aligned clinical guidance at the point of care that addresses the needs of end-users and trains them to use it in their daily practice. To achieve this, the guide content and training programme needs to be localised to fit the context for which it is being developed. The PACK mentorship model is described more fully elsewhere³¹ but includes localisation of the PACK guide and training programme, addressing local health system issues, user testing and initial implementation and evaluation. Although an

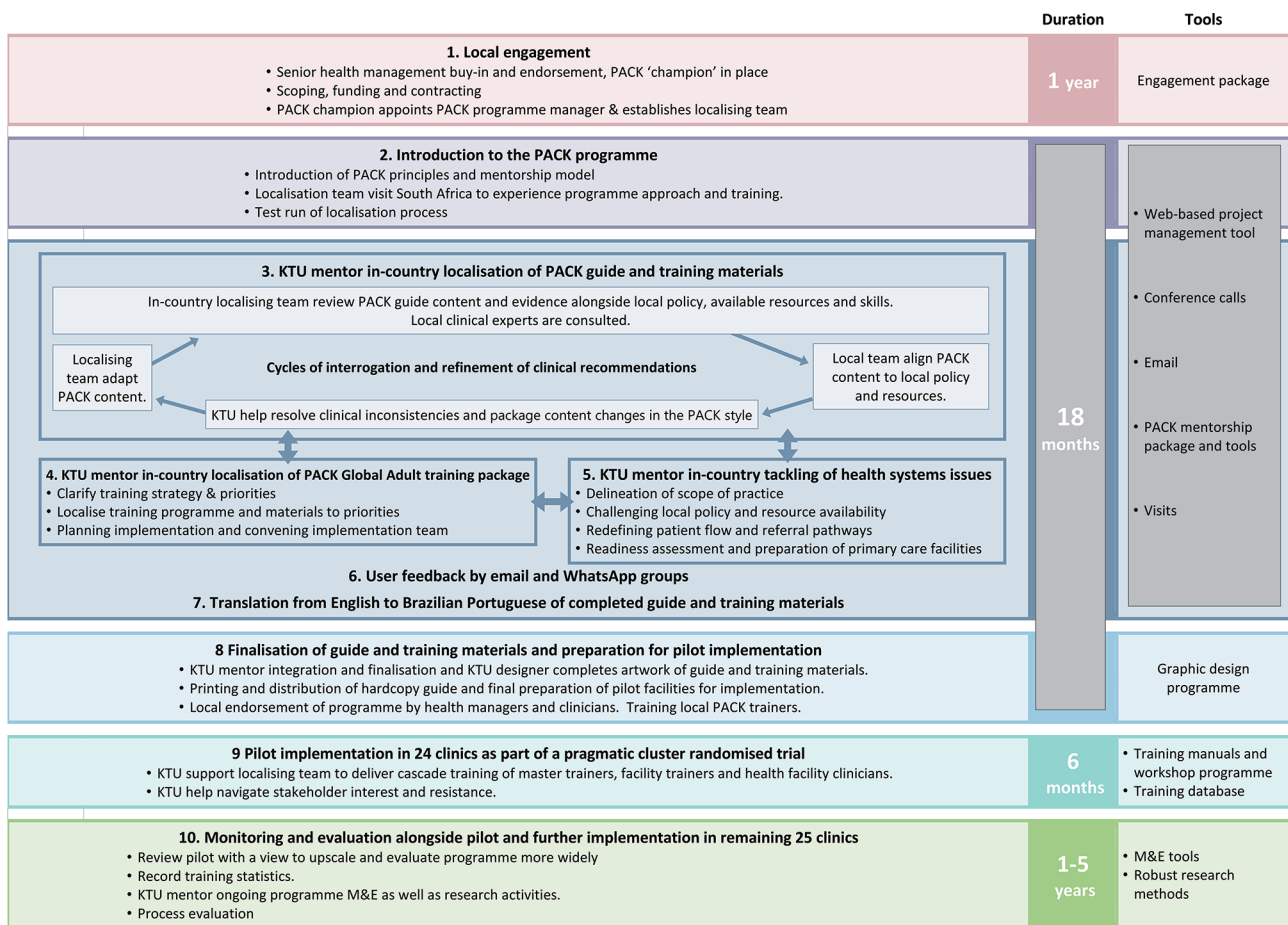


Figure 1 Step-by-step mentorship of Practical Approach to Care Kit programme localisation and initial implementation in Brazil.

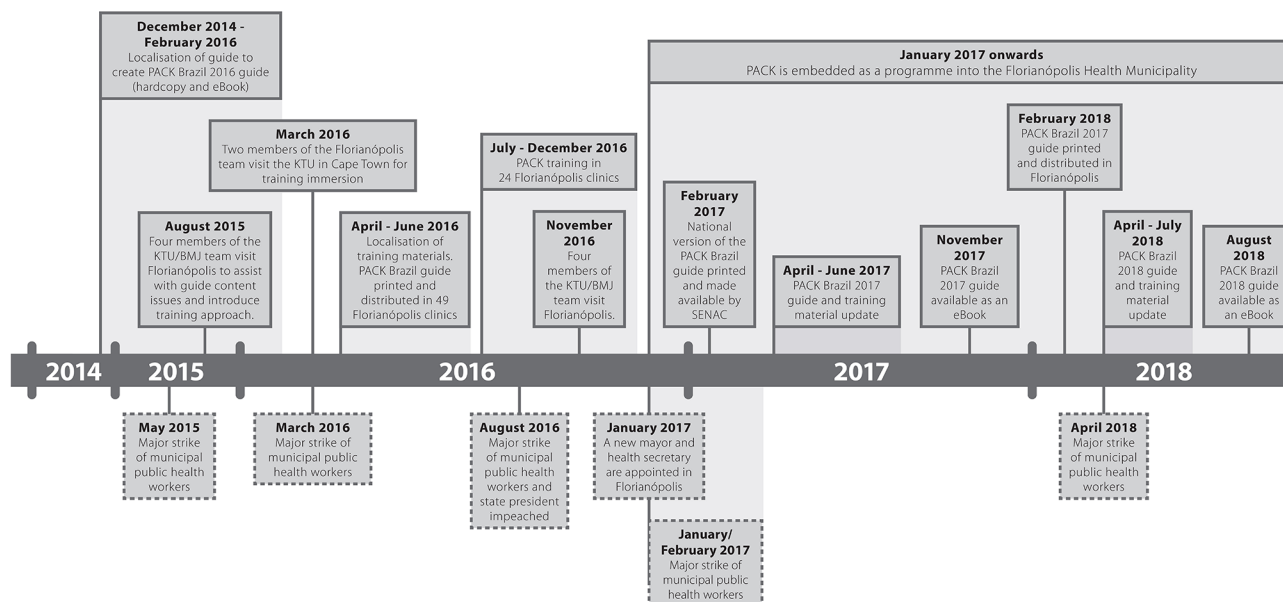


Figure 2 Timeline of localisation, initial implementation and updating of Practical Approach to Care Kit in Brazil.

earlier version of PACK, known by a different name (PALSA—Practical Approach to Lung Health South Africa),^{32 33} had been localised for Minas Gerais state in Brazil (PAL GARD),³⁴ Mexico (Programa AIRE),³⁵ Malawi (PALM),³⁶ the Gambia (PALSA PLUS Gambia)³⁷ and PACK in Botswana (PACK Botswana),³⁸ the Florianópolis version was the first time a mentorship model was used. Figure 1 provides details of this mentorship process, and figure 2 shows the timelines involved.

Mentorship was performed almost exclusively remotely, by email, an online project management tool (Trello) and teleconference calls, with only three face-to-face opportunities. Early in the process, KTU members visited Florianópolis to introduce the in-country mentees to the PACK principles and style of guide presentation, to discuss content issues and introduce the training approach. Following completion of the guide, the Florianópolis team members visited Cape Town for an immersion training course, in order to experience first-hand the PACK training principles in action. The third occasion was during the initial implementation stage, when a KTU team visited Florianópolis to review the successes and challenges of the programme, and plan further evaluation.

Localisation of the guide

A KTU content mentor (CW) worked closely with an in-country team led by a local family physician (RZ) over 14 months to complete the 103-page PACK guide for Florianópolis.

The generic PACK Global Adult guide content, was divided into 13 clinical sections, uploaded onto Trello, and each page of each section was reviewed and revised through an iterative process of consultation between the KTU mentor and mentees in Florianópolis. The localising team worked off editable localisation templates of the English guide provided by the KTU. The evidence

underpinning each recommendation in the PACK Global Adult guide was provided in an Evidence and Decision Support document developed by the KTU in collaboration with the British Medical Journal (BMJ) Knowledge Centre.²⁰ For the Florianópolis version, the team reviewed both this document and municipal and national guidelines and protocols listed in figure 3. The local team then engaged with local health workers and stakeholders to ensure that final decisions on content were applicable and acceptable for Florianópolis.

For the Florianópolis version, additional pages were developed to address health issues that were not already covered in the PACK Global Adult guide. These were for the promotion of preventive care and screening (“General health assessment”) and for support for tobacco cessation (“Tobacco use”). These topics were prompted by patient requests for “a general check-up” and the fact that medications for tobacco cessation were available to patients attending primary care facilities in Florianópolis. A recent Zika virus outbreak in Brazil necessitated the inclusion of reference to this infection on relevant symptom pages (for example “Eye symptoms” and “Skin symptoms”) and in the maternity care section. Throughout the guide, along with clarifying referral pathways, a page detailing referral protocols was added to standardise patient referrals from primary to secondary care, a particular challenge faced in Florianópolis. Many of these content additions have since been integrated into the Global and subsequent localisations of the PACK Adult guide.^{39 40} An example of recommendations that were omitted in the Florianópolis version was the use of GeneXpert testing for suspected tuberculosis, as this is not part of local practice.

An important aspect of PACK is an emphasis on a team approach to care and task sharing. This is achieved by clear identification in the guide of the roles of each

Table 1: List of local guidelines consulted during localisation and updating of the PACK Brazil guide (as at September 2018)

1.	Abordagem e Tratamento do Fumante – Consenso. INCA, 2001
2.	Estratégias para o cuidado da pessoa com doença crônica: o cuidado da pessoa tabagista (Cadernos de Atenção Básica, n. 40). Ministério da Saúde, 2015
3.	Prevenção clínica de doenças cardiovasculares, cerebrovasculares e renais (Cadernos de Atenção Básica, n. 14). Ministério da Saúde, 2006
4.	Estratégias para o cuidado da pessoa com doença crônica: hipertensão arterial sistêmica (Cadernos de Atenção Básica, n. 37). Ministério da Saúde, 2013
5.	Estratégias para o cuidado da pessoa com doença crônica: diabetes mellitus (Cadernos de Atenção Básica, n. 36). Ministério da Saúde, 2013
6.	Saúde mental (Cadernos de Atenção Básica, n. 34). Ministério da Saúde, 2013
7.	Controle dos cânceres do colo do útero e da mama (Cadernos de Atenção Básica, n. 13). Ministério da Saúde, 2012
8.	Atenção ao pré-natal de baixo risco (Cadernos de Atenção Básica, n. 32). Ministério da Saúde, 2012
9.	Protocolos da Atenção Básica: Saúde das Mulheres. Brasília: Ministério da Saúde, 2015
10.	Procedimentos (Série A – Normas e Manuais Técnicos) (Cadernos de Atenção Primária, n. 30). Ministério da Saúde, 2011
11.	Rastreamento (Série A – Normas e Manuais Técnicos) (Cadernos de Atenção Primária, n. 29). Ministério da Saúde, 2010
12.	Acolhimento à demanda espontânea (Série A – Normas e Manuais Técnicos) (Cadernos de Atenção Básica, n. 28, v. 1). Ministério da Saúde, 2011
13.	Acolhimento à demanda espontânea: queixas mais comuns na atenção básica (Cadernos de Atenção Básica, n. 28, v. 2). Ministério da Saúde, 2012
14.	Doenças respiratórias crônicas (Cadernos de Atenção Básica, n. 25). Ministério da Saúde, 2010
15.	Vigilância em Saúde: dengue, esquistossomose, hanseníase, malária, tracoma e tuberculose (Cadernos de Atenção Básica, n. 21). Ministério da Saúde, 2008
16.	Manual de recomendações para o controle da tuberculose no Brasil. Ministério da Saúde, 2011
17.	Manual de recomendações para controle da tuberculose no Brasil. Ministério da Saúde, 2014
18.	HIV/Aids, hepatites e outras DST (Cadernos de Atenção Básica, n. 18). Ministério da Saúde, 2006
19.	Protocolo Clínico e Diretrizes Terapêuticas para Manejo da Infecção pelo HIV em Adultos. Ministério da Saúde, 2018
20.	Protocolo Clínico e Diretrizes Terapêuticas para Prevenção da Transmissão Vertical de HIV, Sífilis e Hepatites Virais. Ministério da Saúde, 2018
21.	Protocolo Clínico e Diretrizes Terapêuticas para Hepatite C e Coinfecções. Ministério da Saúde, 2018
22.	Dengue: diagnóstico e manejo clínico – adulto e criança. Ministério da Saúde, 2016
23.	Manual Técnico para Diagnóstico da Infecção pelo HIV. Ministério da Saúde, 2016
24.	Protocolo Clínico e Diretrizes Terapêuticas para Profilaxia Pós-Exposição (PEP) de Risco à Infecção pelo HIV, IST e Hepatites Virais. Ministério da Saúde, 2018
25.	Protocolo Clínico e Diretrizes Terapêuticas para Hepatite B e Coinfecções. Ministério da Saúde, 2017
26.	Protocolo Clínico e Diretrizes Terapêuticas para Atenção Integral às Pessoas com Infecções Sexualmente Transmissíveis (IST). Ministério da Saúde, 2016
27.	Manual Técnico para Diagnóstico da Sífilis. Ministério da Saúde, 2018
28.	Estratégias Para o Cuidado da Pessoa com Doença Crônica - O Cuidado da Pessoa Tabagista. Ministério da Saúde, 2015
29.	Dengue - diagnóstico e manejo clínico: adulto e criança. Ministério da Saúde, 2016
30.	Protocolo de atenção integral às pessoas em situação de violência sexual. Secretaria Municipal de Saúde de Florianópolis, 2016
31.	Protocolo de acesso da endocrinologia. Secretaria Municipal de Saúde de Florianópolis, 2016
32.	Protocolo de acesso da infectologia. Secretaria Municipal de Saúde de Florianópolis, 2017
33.	Protocolo de acesso da mastologia. Secretaria Municipal de Saúde de Florianópolis, 2015
34.	Protocolo de acesso da ortopedia. Secretaria Municipal de Saúde de Florianópolis, 2017
35.	Protocolo de acesso da otorrinolaringologia. Secretaria Municipal de Saúde de Florianópolis, 2017
36.	Protocolo de acesso da psiquiatria. Secretaria Municipal de Saúde de Florianópolis, 2017
37.	Protocolo de acesso da reumatologia. Secretaria Municipal de Saúde de Florianópolis, 2016
38.	Diretrizes brasileiras para o rastreamento do câncer do colo do útero. INCA, 2016
39.	Diretrizes para a detecção precoce do câncer de mama no Brasil. INCA, 2015
40.	Câncer de próstata: vamos falar sobre isso?. INCA, 2017
41.	Calendário Nacional de Vacinação. Ministério da Saúde, 2018
42.	Manual dos Centros de Referência para Imunobiológicos Especiais. Ministério da Saúde, 201
43.	Protocolos de encaminhamento da atenção básica para a atenção especializada - v. 1: Endocrinologia e Nefrologia. Ministério da Saúde, 2016.
44.	Protocolos de encaminhamento da atenção básica para a atenção especializada - v. 2: Cardiologia. Ministério da Saúde, 2016.
45.	Protocolos de encaminhamento da atenção básica para a atenção especializada - v. 3: Reumatologia e Ortopedia Adulto. Ministério da Saúde, 2016.
46.	Protocolos de encaminhamento da atenção básica para a atenção especializada - v. 4: Ginecologia. Ministério da Saúde, 2016.
47.	Protocolos de encaminhamento da atenção básica para a atenção especializada - v. 5: Cirurgia torácica e Pneumologia. Ministério da Saúde, 2016.
48.	Protocolos de encaminhamento da atenção básica para a atenção especializada - v. 6: Urologia. Ministério da Saúde, 2016.
49.	Protocolos de encaminhamento da atenção básica para a atenção especializada - v. 7: Proctologia. Ministério da Saúde, 2016.

Figure 3 List of local guidelines consulted during localisation and updating of the PACK Brazil guide (as at September 2018).

cadre of health worker. The standard approach is to colour code each medication in the text according to local prescribing authority for each cadre; for example, nurse, doctor or both. In the Florianópolis guide, this was extended to identify the authority to request investigations, perform procedures and refer patients.

The first PACK Brazil Adult guide (called PACK Brasil Adulto - Versão Florianópolis) was completed and published as an A4 hardcopy booklet in April 2016. Following its release, a national version was developed and made available later in 2016 through Serviço Nacional de Aprendizagem Comercial (Senac),⁴¹ a Brazilian government publication and professional education institution. This version, created to better reflect national protocols, was developed by the Florianópolis team, in collaboration with the KTU and Senac clinical editors.

Since the first guide in 2016, annual updates of both the PACK Brazil Adult Florianópolis and national versions for 2017 and 2018 have been developed by the team in Florianópolis, assisted by the KTU, to reflect updated evidence, revised local policies and needs and modifications prompted by user feedback. Electronic versions of each edition have also been made.

Localisation of the training and implementation materials

The PACK training approach has been successfully used to scale-up PACK and its predecessors in South Africa and is detailed in another paper in this Collection.²² Localisation of the PACK training and implementation materials took place over a 3-month period, beginning in April 2016. These included training manuals and activities, case scenarios and key messages.

The localising team were already familiar with adult educational principles and outreach training strategies used by PACK, however, they had limited experience of applying them in practice, instead relying on traditional didactic-style lectures. As recommended by the KTU, the PACK model of continuous on-site, in-service training in regular 1 to 2- hour sessions, employing interactive small group learning techniques guided by facilitators, was adopted. This prompted the KTU to develop additional PACK training materials, including a training video,⁴² to better communicate this approach.

An important step in PACK training localisation was to prioritise the content of training, as it is not possible to cover all the contents of the guide in the initial 12 session PACK training course. In Florianópolis, this decision was informed by research on the demand for clinical services in Florianópolis,⁴³ and a review of ICD-9 codes recorded for clinic visits. The topics selected included tuberculosis, which was being decentralised from hospital to primary care, and back pain, which accounted for a large proportion of primary care visits among adults. A decision to use interprofessional pairs of doctors and nurses to support training predated the introduction of PACK. However, PACK's clarity around roles and PACK training helped to translate this into practice.

After delivering an initial 12 on-site training sessions, training pairs visited clinics monthly. Content queries were addressed during these sessions and sometimes new content requested; for example, a new training case scenario on dengue fever. Engagement between the localising team and primary care health workers using PACK in Florianópolis is ongoing via email and through

a mobile app group (WhatsApp Messenger). Health workers are encouraged to question guide recommendations and provide feedback on training and systems issues.

EVALUATION AND RESEARCH

Within 22 months of the start of the PACK programme, 26 training sessions had been delivered to 160 health workers in 24 clinics in Florianópolis between August 2016 and June 2018. Training in some clinics was delayed by municipal strike action, but despite interruptions, training coverage is high with 100% of eligible health workers exposed to at least one training session, and 70% having completed all 12 initial training sessions.

The effectiveness of the PACK training approach on patient care and outcomes (specifically diabetes, cardiovascular and respiratory endpoints) is being compared with passive dissemination of the PACK guide in a randomised evaluation.⁴⁴ Electronic medical record data for more than 350 000 medical and nursing primary care consultations per year are being used, rarely available in LMIC settings. Outcomes are currently being analysed.

Our previous research has suggested that local professional rules, work conditions, support with implementation of guidelines and local health system issues have a significant impact on the implementation and outcomes of the PACK programme.^{29 45} Currently, a process evaluation in Florianópolis involving PACK trainers, trained health workers and local PACK programme leads, is assessing the acceptability, feasibility and uptake of the programme among primary care practitioners.⁴⁶ Preliminary findings suggest a positive response to the PACK programme.

CHALLENGES AND LEARNINGS

Tackling the language difference

Localisation of guide content was performed in English using the English PACK Global Adult guide as a template. This enabled KTU mentorship of the process, which was highly valued by the localising team, and made possible by their bilingualism. Following content finalisation, local health workers performed translation of the English version of the PACK Brazil guide into Brazilian Portuguese. Owing to limitations of time and funding, professional translators could not be employed, and back translation to check the validity of the translation was not performed. Subsequent updates to the guide and training materials have been based on the Brazilian Portuguese versions with correspondence in English for any content-related queries. New content has been co-developed by the localising team and KTU mentor in English and then translated. In future non-English localisations, it will be important to consider the localising team's ability to engage in English and the need for professional and bilateral translation processes to ensure complete fidelity of the content.

Local ownership

Our experience with Florianópolis confirms that intense engagement between mentors and the in-country localising team is essential during initial stages of adaptation and implementation but then diminishes with each annual update, as the local team gains skill and experience and the PACK guide becomes locally owned. However, mentors emphasise and local teams accept the importance of both clinical feedback from local end-users, particularly for updates, and support from the global PACK community to assist with queries and share updates and improvements to the programme.

Overcoming interprofessional challenges

New local clinical protocols to expand nurses' roles to include NCD care evoked resistance from some nurses to the increased scope of practice and additional duties, and from some doctors who perceived it as a threat to their role. These attitudes were identified as potential challenges to PACK uptake at the clinic level, but the delineation of prescriber levels and clinical roles provided both clarity and confidence and general acceptance of the new nursing protocols. In addition, the joint learning and clinical discussion created by the PACK doctor–nurse training pairs helped to reduce doctor resistance to task sharing with nurses. Along with management commitment to address existing legal and policy barriers to teamwork, this was important to achieving task sharing and uptake of the programme.

Prompting health systems change

Engagement with local stakeholders throughout the development process provided the means for identifying and addressing health system barriers, and for facilitating rapid implementation and embedding of PACK into the local health system. It also provided the opportunity to make changes in clinical management practices, question the availability of certain medications and equipment and change the scope of practice at the primary care level—issues that are directly relevant to individual clinical practice. Examples include reducing the frequency of blood pressure checks in well-controlled hypertensives, access to urine dipsticks, optimising the duration of antibiotics for bacterial sinusitis and deciding when to refer newly diagnosed diabetic patients (Box 1). Ongoing discourse between programme leads, local health workers and managers has resulted in an engaged community of practice empowered to debate clinical recommendations within a context of co-learning and development.

In addition, the PACK experience in Florianópolis led to the embedding of PACK in the management structures of the Florianópolis municipal Clinical Management Department, to lead the development of evidence-based technical documents, protocols and guidelines. Although creation of a specific post may not be viable for all LMIC settings, dedicated units (such as NCD units in local health ministries as laid out by the WHO Global

Box 1 Adapting diabetes care recommendations for Practice Approach to Care Kit (PACK) Brazil

During the adaptation of the pages on diabetes care, two issues that could be addressed in PACK were identified. First, the development of clinical protocols for care delivered by nurses, and second, the need to review referral pathways to specialised care. The introduction of PACK was identified by local health authorities as an opportunity to address these processes. For example, a discussion arose about nurses' authority to initiate intravenous saline solution without a medical order. This led to the decision to colour-code not only medications, but examinations, procedures and tests as well. Thus, PACK came to serve as the comprehensive reference source for defining the roles of doctors and nurses in primary care, placing pressure on the nursing protocols to adopt task sharing and a greater role of nurses. A further example of this process was prompted by discussion on the feasibility and need to refer all diabetic patients younger than 35 years of age to specialist care. This led to the decision to create a page about appropriate reasons for referral, describing criteria for referral and referral pathways (for example, urgent/non-urgent specialist consultation, teleconsultation and emergency referral). In this way, small changes in the PACK diabetes pages served as a prototype of bottom-up, clinically driven health system change.

NCD Action Plan 2013–2020⁴⁷), may prove suitable for embedding PACK within health systems.

Political instability

Localisation and implementation of the PACK programme in Brazil was, and continues to be, affected by an unpredictable period in Brazil, marked by austerity measures and political instability with frequent changes to health leadership and policies.⁴⁸ Figure 2 depicts episodes of upheaval during the localisation and initial implementation of PACK Brazil. The localising team's full engagement with the PACK programme resulted in better than expected uptake despite these issues. However, they continue to present a challenge to the rollout of PACK more broadly across Brazil.

Funding and upscale

Since 2016, the KTU in partnership with the BMJ and the Florianópolis team, have continued to invest effort in producing an annual update of the PACK Brazil guide and training materials. In the absence of designated funds, this work is driven by the high level of commitment from both teams to see the PACK programme used to support quality primary care throughout Brazil. Although PACK is a low-cost intervention, this situation is not sustainable, and the sourcing of funds for the PACK Global programme, particularly for LMICs, remains a critical objective.

NEXT STEPS

The PACK programme continues to form part of primary care in Florianópolis and results from the process evaluation and trial will provide a greater understanding of its effectiveness. Following the release of the national

version of the guide, there are ongoing discussions at federal, state and municipal levels as well as with various non-governmental organisations and private health-care providers in the hope of actualising broader scale up of the PACK programme across Brazil. In addition, there is potential for expansion of the localised PACK programme in Brazil to include other components of the PACK "suite"; for example, a guide for children and adolescents,⁴⁹ and for lay health workers.

CONCLUSION

The localisation and implementation of PACK Adult for Florianópolis is an example of skills transfer and "south-south" collaboration, resulting in the production of a programme that is evidence-informed and locally acceptable, applicable and scaleable. The importance of adapting guidelines to each local context is recognised as a critical step in the development and implementation of best practice guidelines in LMICs, yet these countries often lack the skills and resources to perform this activity and are reliant on outside support. Consequently, such programmes often fail or become outdated. In contrast, PACK originates in such a country and has been effectively implemented and progressively improved in South Africa for almost two decades. The PACK Florianópolis experience illustrates that the programme is capable of export to other continents and across language barriers using a mentorship model. While it remains to be seen whether the PACK programme will be more widely adopted in Brazil, and be sustainable, its initial uptake and the new skills and enthusiasm of those that are supporting its updating and further development, suggest a positive future.

The PACK Florianópolis experience has also provided valuable insights and improvements that will be used in collaborations with other countries wishing to adopt this approach.

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