

Facilitators and obstacles to implementing the practical approach to the care kit/pack Brazil

Facilitadores e obstáculos para implementar a abordagem prática do kit de cuidados/ pacote Brasil

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ABSTRACT

Contextualization and objective: Clinical protocols are instruments that can be used to keep professionals up to date and to improve the quality of healthcare. In 2016, the implementation process of the Practical Approach to Care Kit/PACK Brazil began, a protocol developed in South Africa that trains primary care doctors and nurses to diagnose and deal with common adult conditions. This study aimed to explore the factors that interfered in the implementation of PACK Brazil with health professionals who had been trained in the protocol.

Methodology: Semi-structured interviews were carried out with an intentional sample of doctors and nurses from primary healthcare centres in the city where the protocol was implemented. The thematic matrix technique was used to analyze the information collected.

Results: 14 interviews were conducted; 6 of the interviewees were doctors and 8 were nurses; 13 were female. The thematic matrix divided the interview data into two themes: facilitators for the implementation of the PACK; and obstacles to implementing the PACK. The implementation of the PACK Brazil revealed facilitators related to the intervention process itself, such as the methodology used in training for the protocol. Although the acceptance of the PACK Brazil has

been positive among health professionals, difficulties related to the individual characteristics of doctors and nurses and organizational obstacles were encountered when using the protocol.

Final Considerations: The implementation of protocols in primary care can be a challenge, especially when it is intended to adapt materials from different socio-cultural environments. This study showed that the efforts made by the PACK Brazil implementation team were reflected in the high level of acceptance of the protocol by the interviewees. However, individual and organizational aspects of the studied context proved to be obstacles to the use of the PACK Brazil.

Key words: Primary Care, Protocols, Implementation, Health Professionals.

RESUMO

Contextualização e objetivo: Os protocolos clínicos são instrumentos que podem ser utilizados para manter os profissionais atualizados e para melhorar a qualidade da saúde. Em 2016, teve início o processo de implementação do Practical Approach to Care Kit/PACK Brasil, um protocolo desenvolvido na África do Sul que treina médicos e enfermeiros da atenção primária para diagnosticar e lidar com as condições comuns dos adultos. Este estudo visava explorar os fatores que interferiram na implementação do PACK Brasil com profissionais de saúde que haviam sido treinados no protocolo.

Metodologia: Foram realizadas entrevistas semi-estruturadas com uma amostra intencional de médicos e enfermeiros dos centros de saúde primária da cidade onde o protocolo foi implementado. A técnica da matriz temática foi utilizada para analisar as informações coletadas.

Resultados: Foram realizadas 14 entrevistas; 6 dos entrevistados eram médicos e 8 eram enfermeiros; 13 eram mulheres. A matriz temática dividiu os dados das entrevistas em dois temas: facilitadores para a implementação do PACK; e obstáculos para a implementação do PACK. A implementação do PACK Brasil revelou facilitadores relacionados ao próprio processo de intervenção, tais como a metodologia utilizada no treinamento para o protocolo. Embora a aceitação do PACK Brasil tenha sido positiva entre os profissionais de saúde, dificuldades relacionadas às características individuais de médicos e enfermeiros e obstáculos organizacionais foram encontradas ao utilizar o protocolo.

Considerações finais: A implementação de protocolos na atenção primária pode ser um desafio, especialmente quando se trata de adaptar materiais de diferentes ambientes sócio-culturais. Este estudo mostrou que os esforços feitos pela equipe de implementação do PACK Brasil se refletiram no alto nível de aceitação do protocolo por parte dos entrevistados. Entretanto, os aspectos individuais e organizacionais do contexto estudado provaram ser obstáculos ao uso do PACK Brasil.

Palavras-chave: Atenção Primária, Protocolos, Implementação, Profissionais de Saúde.

1 INTRODUCTION

The Brazilian Federal Constitution stipulates that access to healthcare is the right of every citizen and the duty of the state. The regulation of the public health system in Brazil - Sistema Único de Saúde (SUS) – sets out three levels of care, with primary care being the preferred gateway to the system^{1,2}.

A network of public health centers, with teams of primary care professionals, is responsible for coordinating the care of individuals and families, and for intersectoral actions for health promotion and disease prevention^{1,2}.

Data from 2016 identified about 40,000 health teams in Brazil, as well as the positive effects they have had on the population's health, such as the reduction of infant and under-5 mortality, and a decrease in hospitalizations due to causes related to primary care¹⁻⁵. Despite advances made by SUS since its creation, many challenges remain with regard to structural, organizational and professional practices. Adequate financing, a lack of a political commitment to raise the quality of primary care, as well as the qualifications, level of knowledge and skills of health professionals working in SUS are some crucial factors for increasing the population's access to healthcare, and the uniformity and effectiveness of the care provided^{1,2}.

Clinical protocols can be used as tools to promote professional development, standardization of care, and to ensure the quality of diagnoses and therapies based on scientific evidence^{6,7}. In the context of primary care, given the epidemiological and social diversity of the problems that health professionals face, the protocols can guide conducts and procedures, improve the success rates of the health team and assist in planning care within the healthcare system^{6,7}.

The Practical Approach to Care Kit (PACK) is a protocol focussed on professional development and the quality of primary care. It was developed and tested over the past 15 years by the Knowledge Translation Unit at the University of Cape Town, South Africa⁸. It is a tool to support clinical decision-making (a set of algorithms) integrated with a training and implementation strategy based on the principles of educational extension. The PACK aims to train doctors, nurses and other health professionals to diagnose and manage the common conditions of adults in primary care, covering symptoms and chronic conditions^{8,9}.

All the content of the PACK is aligned with the Best Practice educational resource (from the British Medical Journal Editorial group), which ensures that it is constantly updated based on the best scientific evidence available⁹. It has been tested in four major clinical trials in African countries in the past decade. The results point to the effectiveness of the intervention in: promoting modest but consistent changes in a series of behaviors and health outcomes; promoting

improvements in the care of infectious and chronic non-communicable diseases simultaneously; and promoting improvements in quality of care indicators¹⁰⁻¹³.

In 2016, the PACK implementation process was initiated in Brazil, and a reference city in national primary care was chosen to conduct the pilot. The implementation process included: adapting the protocol to the situation in Brazil, so that it could be modified according to the epidemiological scenario and health system in Brazil; choosing and training tutors to carry out training for health professionals in basic health centres; delivering protocols to primary care health centres and training health professionals; making a preliminary assessment of the effect of the PACK training on the diagnosis and treatment of clinical conditions¹⁴.

In order for protocols to achieve their potential for improving clinical practice and people's health, not only should great care be taken in their development, but there should also be activities to evaluate their implementation¹⁵. Thus, factors that facilitate the use and obstacles that impact the use of the protocol can be identified¹⁶.

Wong et al¹⁷ point out that the results of complex interventions are highly context-dependent, and different contexts can change the processes by which interventions produce their results. Context can be defined as the set of organizational resources and opportunities available to participants in an intervention, encompassing organizational structure and human interaction, as well as the professional training and motivation of the personnel involved, and is influenced by the broader political environment¹⁸.

There is a general lack of research that investigates aspects related to protocol implementation in developing countries, and further research is required¹⁶. This study therefore aims to fill the existing gap by investigating factors that interfered with the implementation of the PACK with health professionals who were trained in the protocol.

2 METHODOLOGY

This is a qualitative study that used the interview technique and with the *grounded theory* as its methodological guidance.

The study took place in Florianópolis/SC, chosen as a pilot city for the implementation of the PACK/BRAZIL.

Data from 2018 showed that Florianópolis (approximately 430,000 inhabitants) had one of the best structured local PHC systems in Brazil, with 120 Family Health Teams (EqSF) comprising doctors, nurses and technicians, working in 49 primary care health centres, which share medical records electronically. The municipality had a primary care coverage of 100%, according to the

parameters of the Ministry of Health¹⁹, and about 90% of the PHC teams were judged to be above or well above the national average, according to the last cycle of the Access and Quality Improvement Program (PMAQ-AB)²⁰.

An intentional sample of doctors and nurses was invited to participate, all of whom had undergone training in the PMAQ/Brazil, from primary healthcare centres in different health districts with different population sizes. The invitations to participate in the interview were made by telephone or personal visit with the manager of each primary healthcare centre. This manager subsequently chose at least one doctor and one nurse from the clinic to participate in the research. Data saturation was used to define the number of respondents.

The interviews took place in the research participant's workplace, between the months of October 2019 and March 2020. The duration of the interviews was on average 30 minutes. After the interview, the participants answered a questionnaire which included questions about age, training received and length of service at the health centre. They also signed an informed consent form to participate in the study.

A semi-structured script was used to ensure consistency in the data collected, encourage participation, as well as to guide the focus of discussions.

The script presented 14 questions (Figure 1), which were designed so that the sequence and complexity of the questions could gradually increase the interviewee's confidence and response capacity, as well as establish a trusting relationship with the interviewer. Additional resources of interview techniques were used to explore, expand and clarify the interview participants' responses.

All the interviews were recorded and transcribed.

Figure 1: Semi-structured script used during to conduct the interviews	
1. Opening questions	How would you describe your experience of the PACK training? To what extent do you think you will be able to use the PACK after the training?
2. Follow-up questions	In what ways did your routine change after the PACK training? When did you find complicated about using the PACK? Are there any situations that you always used to face in clinical practice which the PACK approaches in a different way?
3. Detailed questions	With regard to respiratory diseases, how does the PACK influence your conduct? And with regard to cardiovascular diseases? And with regard to diabetes?
4. Questions with a higher degree of complexity	The PACK increases nursing autonomy. How do you see this issue? Tell us about the support given by the management of the basic health clinic to doctors and nurses in using the PACK? Tell me about the support offered by the Municipal Health Department for the use of the PACK.
5. Closing questions	What do you think about the content of the PACK? What do you think about the layout of the PACK? Do you have any suggestions for improving the PACK?

The transcripts were compared with the audio recorded during the interview to verify accuracy. The interviews were coded and analyzed using the thematic matrix technique²¹, which includes the following steps: detailed reading and rereading of the transcripts to become familiar with the data; identification of topics in the transcripts to begin organizing the data; indexing the themes in the transcripts; transfer of data from transcriptions to a thematic matrix (always relating the topics to the comments made by the interview participants). The project was approved by the Ethics Committee of the Federal University of Santa Catarina (protocol 1.539.125).

3 RESULTS

14 interviews were conducted; 6 of the interviewees were doctors and 8 were nurses; 13 were female; most were over 30 years of age (n-11); with more than 5 years of professional training (n-11) and work experience in primary care (n-13). The thematic matrix grouped the interview data into two themes: facilitators of the implementation of the PACK; and obstacles to implementing the PACK. Figure 2 shows a summary of the aspects identified for each theme. Participants and their comments on each theme are presented in the form of acronyms accompanied by their professional categories.

Figure 2: Summary of the main aspects identified regarding the themes of facilitators and obstacles to the implementation of the PACK

Theme 1: facilitators of the implementation of the PACK	Aspects related to the protocol and its implementation: - Training Methodology - Design	Aspects related to the health professionals - Acceptance	Organizational aspects: - Management support - Physical access to material
Theme 2: obstacles to the implementation of the PACK: Follow-up questions	Aspects related to the protocol and its implementation: - Not reported	Aspects related to the health professionals - Prioritization of conduct and/or previous experience - Trust in other protocols - Limitations related to therapy choices	Organizational aspects: - Demanding work schedule

3.1 THEME 1: THE PACK IMPLEMENTATION FACILITATORS

The interviews indicated facilitators related to acceptance, methodology, management support, design and access.

PACK acceptance was very high among the research participants. The doctors interviewed reported satisfaction with the increase in autonomy for nurses provided by PACK. They also felt safer to delegate nursing care and noticed an improvement in nursing performance in clinical referrals. They concluded that the PACK helped nurses to think more about the questions raised by the doctors, and in many cases the problems were all but resolved.

“Before the PACK, the behaviour was very automatic, and with the PACK, we realized improving resolvability, in what we can solve.” (D, doctor)

“I had doubts in some clinical situations whether the nurse could prescribe or not. Now I would say that you can do it and you don't need me. It helps to overcome the limitations of the professional. Using the PACK gives you more security and you know if you need to intervene or not.” (Y, doctor)

“That nurses can attend to patients in the clinic with autonomy is revolutionary. They can solve a lot of things.” (T, doctor)

“We can attend to more people. With the PACK they can solve a lot. Even the cases that need the doctor, they move things forward, the doubt becomes more objective.” (W, doctor)

All the medical professionals interviewed said that they encourage the use of the PACK and that they always ask nurses: *“Have you seen this issue in the PACK?”* (Z, doctor).

From a nursing point of view, the PACK is valued as a good instrument in the inter-consultation with the doctors in the team, attributing to the protocol the fact that they feel more comfortable to discuss the cases and to favour joint decisions. In addition, the PACK is seen by nurses as a good tool for communicating with the patients about their health.

“In situations where young people ask for routine exams that are not recommended for their age. You can show it, look, it's here in the PACK.” (X, nurse)

“I show the patient and I feel that they like it, and that they feel safe when they see the procedure for their situation described.” (V, nurse).

The interviewees highlighted the methodology used in the training as having a positive and illuminating effect on their use of the PACK. The most positive points emphasized were the use of examples of clinical cases and the interaction between the participants. In addition, the regularity and duration of each training session, the place where the training takes place (workplace), and the fact that the trainers are professionals from the actual health centres were all

highlighted, because according to the interviewees, they kept the learning active and professionals motivated to use the PACK.

“A pleasurable time, discussing cases and sharing experiences” (I, nurse)

“The PACK training should be institutionalized!” (W, doctor)

“The first time it was introduced I didn't even open it, as I thought it would be very difficult to understand” (T, doctor)

All those interviewed had already done the training at the time of the interview; however, upon receiving the PACK for the first time, some did not have immediate access to training. Participants who initially only received the PACK material at their workplaces without training compared the experience of using the PACK before and after training, and reported that training was essential to understand how to use the PACK because *“people are lost without training”* (Y, doctor), and *“PACK is difficult to understand, how to find information without training”* (Z, doctor).

The importance of training was also linked to the motivation to use the protocol, as some participants realized that they used the PACK more during the training period.

According to the interviewees, the local and central support for the implementation of the the PACK was considered adequate, due to the organizational aspect of the material distribution, the fact that the professionals' work schedule was suspended to give them adequate time to do the training, and incentive for the use of the material; the latter being observed in places where the coordinator took on the role of the PACK trainer.

All respondents reported that they have access to the PACK, either in the paper form or online, and the layout of the material was praised for facilitating rapid searches made by professionals during clinical care. The option of making the PACK available in both paper form and online served health professionals in different ways, because while some prefer the online version for reasons of practicality, others may have more difficulty in dealing with technology, according to the interviewees themselves.

Some suggestions were made for improving the protocol and making the search for information faster, such as the inclusion of an index, and a section covering emergencies. Other suggestions were related to the inclusion in the protocol of conditions and/or situations that are commonly encountered in health centres, such as some content on pregnancy and a version of the PACK for children.

3.2 THEME 2: OBSTACLES TO THE IMPLEMENTATION OF PACK

The obstacles that may be interfering with the use of the PACK are generally factors related to health professionals and to organization.

With regard to health professionals, the use of the PACK seems to be affected by some factors that in turn impacted the non-use or low use of the protocol. For example, although the respondents appreciated and welcomed the PACK, most reported that their practices did not change much after training in the protocol, as they already had well-established and trusted procedures used to carry out many of the protocol recommendations in their professional routines.

“In respiratory diseases I use it more for monitoring, but it hasn’t changed my practices that much.” (Doctor, Z)

The use of the PACK also seems to challenge the individual preferences of health professionals with regard to other materials and protocols. The medical category reported using several other reference materials in their professional routines. The British Medical Journal and medical societies' recommendation protocols, mainly in the area of chronic non-communicable diseases, were the supporting materials employed out of preference.

“I am in the habit of reading larger protocols to support my practice.” (O, doctor)

“I think this part of the PACK about chronic diseases is succinct.” (T, doctor)

Nurses were unanimous in saying that they favour use the nursing protocol. This was considered preferable by some interviewees as the material is updated more frequently than the PACK. In addition, it was reported that the preference for the nursing protocol is bolstered by the legal support that the document provides, ensuring more security in nursing decisions. However, nurses revealed that they use the PACK when the nursing protocol does not meet some conditions in which they need help, such as clinical situations related to asthma and the section on warning and emergency signs. One of the interviewees pointed out that in services where there are no nursing protocols as well structured as in Florianópolis, *“The PACK saves the life of nursing”* (K, nurse).

The types of drugs available in the PACK, which are in line with what is offered free by SUS, according to the interviewees impose limitations in situations that could recommend other treatments that they consider more effective.

“Patients with better financial conditions use other materials so that the patient has a wider choice of treatment options...” (W, doctor)

Doctors and nurses reported that the reality they face, the demands made by the high number of users, is an obstacle to the use of the protocol.

“Time! We have little time for care ... yesterday I saw 24 patients in the morning ... this impedes the search for information even if it is done quickly” (T, doctor).

4 DISCUSSION

The main results of the analysis of the interviews revealed facilitators for the implementation of PACK related to the high level of acceptance of the protocol among the health professionals, to training methodology and to the structure of the protocol. The obstacles highlighted were related to issues involving health professionals and to organizational factors.

The facilitators for using the PACK demonstrated in this study are related to the characteristics of the intervention itself, in other words, the process of implementing the PACK. The PACK implementation activities involved the location of the protocol and its training by a team from Brazil in partnership with their South African counterparts. The process started in 2014 and culminated in 2018 with the e-book version of the PACK¹⁴. The PACK was developed taking into account the previous experiences in other countries and the prerequisites listed in the scientific literature on the implementation of protocols^{15,16,22,23}, such as: adaptation of the material to the epidemiological scenario of the implementation; making the material easy to use; varied forms of access; and support from local and central management. From the interviews, it can be seen that the efforts made during the process of locating the PACK was reflected in the high level of acceptance of the protocol and training by health professionals. The PACK was considered by the interviewees to be simple to use (after training) and easy to access. The positive acceptance among the health professionals interviewed also confirmed the findings in the previous training study carried out with the PACK tutors²⁴.

For the PACK training, the results of this research showed its importance for understanding and using the protocol. The methodology used during the PACK training was highly praised by the interviewees, which confirms what the literature has found²² regarding the use of active and interactive strategies as facilitators in the implementation of interventions in primary care, when compared to the simple distribution of materials. In addition, our findings corroborate the article published by Bachmann et al. (2018)²⁵, which demonstrated that health professionals who received the PACK training increased treatment based on guidelines in spirometry for asthma, compared to those who only received the protocol without training. The interviews also pointed to the transferability of the training, as no cultural barriers related to the Brazilian context were reported about a methodology that was originally created in another country.

As for the obstacles to the implementation of the PACK, three situations related to health professionals were cited. Firstly, as shown in the scientific literature^{16,26}, the confidence of the interviewed professionals in their own clinical experiences represented an obstacle to the use of the PACK. Secondly, the individual preferences of health professionals regarding other materials and protocols were demonstrated in this study, as well as in similar studies^{26,27}. According to Jun et al. (2016)²⁷, materials from reputable professional institutions or organizations can be more valued and preferred over materials from other less recognized sources. An example of this found by our study was the greater appreciation of the nursing protocol at the expense of the PACK. And thirdly, an obstacle was revealed, which according to the study by Correa et al., 2020)¹⁶ occurs when health professionals realize that the protocol has limitations related to their choices of therapy and in their autonomy to prescribe treatments. According to the interviews conducted for this study, an example of this situation was linked to the restricted list of drugs presented in the PACK.

The implementation of the PACK took place at a time when austerity measures were being imposed by the Brazilian Federal government in the area of health¹, which may have had a direct or indirect influence on the obstacles related to organizational factors found in this research. As previously reported, the implementation of the PACK took place with international and local support, in order to identify the best conditions for the use of the protocol by health professionals. However, the demanding workload faced by the interviewees was reported as being an obstacle to the use of the protocol. This seems to be a frequent problem described in the literature during the implementation of protocols^{15,16,26-27}. Overcoming this obstacle is a common challenge for public health systems, which in turn are vulnerable to neoliberal policies. Organizational factors must be taken into account during the planning and implementation of programs in primary care, as they affect the work schedule of health professionals whether in their search for, or access to evidence, consultation of

5 LESSONS LEARNED

The form of active learning provided by the PACK training was positively received by the interviewees. This suggests that adopting the PACK methodology to other areas of ongoing education in primary care could be rewarding.

Ongoing training can be thought of as a way to increase the motivation to use the protocol, since some interviewees reported using the PACK more at the time of training.

Primary care in the city where the protocol was implemented is considered a benchmark for the rest of Brazil; it is therefore possible to say that it has qualified health professionals. Such professionals would in turn be more critical and proactive in the search for different scientific evidence to support their practices. In this case, the PACK would be considered just one among many protocols available. Different results regarding the use of PACK can be found in other more remote cities in Brazil that may have difficulty attracting professionals and accessing information and/or internet networks.

Another characteristic of the context in which the PACK is implemented is related to the existence of a nursing protocol that is widely recognised and used by nurses in the pilot city (Florianopolis), and that in turn competes with the use of other protocols. In places where nursing protocols are non-existent, the PACK can be used more.

The suggestions raised as a result of the interviews show that there is an interest in improving the PACK, especially in making it an even faster search tool and in including more situations focused on the epidemiological profile of the basic health centres. Certainly, there will not be a single protocol capable of covering all the demands found by health professionals, but if the intention is to implement the PACK in other cities in Brazil, it may be necessary to review the location of the material again, as well as to reevaluate the facilitators and obstacles to using the material.

6 FINAL CONSIDERATIONS

The implementation of protocols in primary care can be a challenge, especially when it is intended to adapt materials from different socio-cultural environments. This study showed that the efforts made by the PACK Brazil implementation team were reflected in the interviewees' positive acceptance of the protocol. However, individual and organizational aspects of the context studied proved to be obstacles to the use of the PACK Brazil. It is hoped that the findings of this study may be useful for improving the implementation of the PACK Brazil, as well as contributing to research in the area of health assessment. For future studies, the main recommendation is to interview patients at primary healthcare centres about their perceptions of the PACK Brazil, thus including another important actor in the process of evaluating the implementation of the protocol.

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