

Perception of health professionals in relation to Chronic Care Model

Percepção dos profissionais de saúde em relação à implantação do Modelo de Atenção às Condições Crônicas

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Abstract

Introduction: chronic non-communicable conditions represent the major cause of morbidity and mortality in the country. The Chronic Care Model was implemented in the state of Paraná as a strategy to face chronic care. **Objective:** to evaluate the implementation of the Chronic Care Model through the perception of health professionals. **Materials and Methods:** exploratory, descriptive study, with a qualitative approach, carried out in a primary health care service and a specialized outpatient care service in a health care region in the state of Paraná. Seven professionals from specialized care and eleven professionals from primary health care participated in the study. Data were collected through six focus group meetings, whose discussions were guided by the validated instrument for assessing the model of care for chronic conditions (IEMAC ARCHO 36), and were subjected to thematic content analysis proposed by Bardin. **Results:** the professionals' reports made it possible to analyze the implementation strategy according to the six dimensions proposed by the model: health system organization; shared health; care model; self-care; support for decision making; and information systems. It was identified that the implementation of the model has weaknesses in terms of health indicators, map of interprofessional actions, supported self-care plan, and information systems. And advances, related to the organization of the care network, risk stratification and medicalization of the elderly. **Conclusion:** to achieve the effectiveness of the Chronic Care Model, it is necessary to fully develop its dimensions to ensure quality and improve chronic care.

Keywords: Chronic disease. Healthcare models. Unified health system.

Resumo

Introdução: as condições crônicas não transmissíveis representam a maior causa de morbimortalidade no Brasil. O Modelo de Atenção às Condições Crônicas foi implantado no estado do Paraná como estratégia de enfrentamento ao cuidado crônico. **Objetivo:** avaliar a implantação do Modelo de Atenção às Condições Crônicas por meio da percepção dos

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profissionais de saúde. **Materiais e Métodos:** estudo exploratório, descritivo, com abordagem qualitativa, realizado em um serviço de atenção primária à saúde e um serviço de atenção ambulatorial especializada em uma região de saúde do estado do Paraná. Participaram do estudo sete profissionais da atenção especializada e onze profissionais da atenção primária. Os dados foram coletados por meio de seis encontros de grupos focais, cujas discussões foram norteadas pelo instrumento de avaliação do modelo de atenção às condições crônicas (IEMAC ARCHO 36), sendo submetidos à análise de conteúdo temática proposta por Bardin. **Resultados:** os relatos dos profissionais permitiram analisar a estratégia de implantação de acordo com as seis dimensões propostas pelo modelo: organização do sistema de saúde; saúde compartilhada; modelo assistencial; autocuidado; apoio à tomada de decisão; e sistemas de informação. Identificou-se que a implantação do modelo apresenta fragilidades quanto aos indicadores de saúde, mapa de ações interprofissionais, plano de autocuidado apoiado e sistemas de informação. E, também, avanços relacionados à organização da rede de atenção, estratificação de risco e desmedicalização de idosos. **Conclusão:** para atingir a efetividade do Modelo de Atenção às Condições Crônicas, faz-se necessário o completo desenvolvimento de suas dimensões para a garantia da qualidade e a melhoria do cuidado crônico.

Palavras-chave: Doença crônica. Modelos de assistência à saúde. Sistema único de saúde.

Introduction

Non-communicable diseases (NCDs) are complex and multifactorial chronic conditions, characterized by gradual and progressive onset, with a usually indefinite and incurable prognosis. Due to the long course of the disease, the clinical picture may fluctuate over time, with periods of exacerbation, disabilities and early death¹.

The greatest burden of NCDs is represented by cardiovascular, chronic respiratory diseases, cancer and diabetes. The World Health Organization attributes this burden to the negative effects of globalization and accelerated urbanization, as well as to the main associated risk factors, such as: alcohol abuse; smoking; sedentary behavior; and high calorie diet. NCDs constitute the greatest burden of morbidity and mortality in the world, responsible for 70% of global deaths².

This situation affects individuals from all socioeconomic strata. However, deaths from NCDs predominantly affect developing countries, where about a third of deaths occur in people under 60 years old, while in developed countries premature mortality (age range 30 to 69 years old) corresponds to less than 13% of cases³. In Brazil, NCDs accounted for

75.8% of deaths in 2015⁴. Studies show that about 45% of the Brazilian adult population reports having at least one NCD, the equivalent to 54 million people⁵.

In addition to the high number of premature deaths, chronic non-communicable diseases cause loss of quality of life, due to the high degree of limitation and incapacity for daily life activities and to the economic impacts for families, communities and society in general³. Thus, they represent a challenge for many countries in the world, since they are growing at an alarming rate, and also because they are facing the capacity of health systems to meet the demands generated by persistent situations, which require a certain level of permanent care^{3,6}.

Due to the magnitude and need for care for people with chronic diseases, the United Nations launched in 2012 the global plan of actions for the prevention and control of NCDs⁷. Brazil actively participated in the global action and launched the Strategic Action Plan to tackle NCDs in the country (2011-2022), which agreed on targets and indicators for reducing risk factors and complications of NCDs⁸.

Mendes proposed as a coping strategy the implementation of the Care Model for Chronic Conditions (CMCC)⁹,

developed for the scope of the Unified Health System in Brazil, based on concepts of three models: Chronic Care Model¹⁰, Chronic Care Model of Social Determination of Health¹¹ and Risk Pyramid Model¹².

The Chronic Care Model was developed in the United States in the 1990s. It predicts functional clinical results through productive interactions between active, informed users and a proactive and prepared health team. So that both have access to community resources and an organized health care system, that focuses on supported self-care, with managerial support for decision-making, with a clinical information system and a service delivery system design¹⁰.

The Social Determination of Health Model was proposed in the 1990s by Dahlgreen and Whitehead and includes the social determinants of health in different concentric layers, according to the level of coverage, from a more proximal layer to a more distal one. It emphasizes interactions of individual lifestyle, social and community networks, living and working conditions and environmental, cultural and socioeconomic conditions¹¹.

The Risk Pyramid Model was developed and applied by a health insurance company in the United States and relies heavily on stratifying the population's risks. This, in turn, defines intervention strategies in self-care and professional care through clinical management technologies, health conditions and case management¹².

Chronic conditions go beyond the definition of chronic diseases, such as diabetes, cardiovascular diseases and cancers. They include all health conditions characterized as illnesses in which there is suffering, but not diseases that can be included in the biomedical standards of international disease classifications, including conditions related to health maintenance by life cycle, such as child care⁹.

The Care Model for Chronic Conditions is composed of five levels that express spaces for social determination of differentiated social responses and calls for new technological approaches that are effective in the process of changing behavior, both for the individual, and for health professionals and managers. Level 1 is applied to the entire population and provides health promotion interventions focusing on intermediate social determinants, through intersectoral actions aimed at improving housing, employment and income generation, access to basic sanitation, educational improvement and public infrastructure⁹.

Level 2 applies to subgroups with risk factors and provides interventions for the prevention of health conditions focusing on proximal determinants of health, associated with behavior and lifestyle, through actions directed at smoking, inadequate nutrition, physical inactivity, overweight and alcohol abuse. Level 3 is intended for health condition management actions for individuals with simple chronic conditions, with interventions on biopsychological risk factors, such as age, gender, heredity, hypertension, diabetes mellitus, dyslipidemia and depression⁹.

Level 4 encompasses health condition management for individuals with a complex chronic condition. At this level, balanced self-care, support and professional care actions are recommended and, due to the complexity of the chronic condition, it is recommended that the individual be assisted by the Primary Health Care (PHC) team and specialized service. Level 5 provides for case management actions for subpopulations with a very complex chronic condition. Case management is configured by the presence of a health professional that coordinates the health care that will be provided to the individual at different points in the health care network and support systems. At this level, there is a strong influence of professional care and

the presence of the case manager is necessary⁹.

CMCC has been implemented in several health regions through the Health Care Planning project, coordinated by the National Council of Health Secretaries (CONASS)¹³, which encourages the creation of Innovation Laboratories on Chronic Conditions in PHC within the framework of Health Care Networks, aiming at achieving solutions to the universal problem of hegemony of chronic conditions. One of the products of these laboratories would be the production of scientific evidence on CMCC in the context of care networks.

Innovation Laboratories on Chronic Conditions act as experimentation fields and dissemination of innovations for Unified Health System. In this scenario, the state of Paraná, through the Paraná State Department of Health, implemented, in 2014, the Care Model for Chronic Conditions in a health region of the state¹⁴. The region was chosen as a pilot project due to the willingness of local managers for changes in health care model. The implementation started in a Primary Health Care Unit (PHC) in a small city and, in the Specialized Outpatient Care (SOC), in a reference city that serves all the other 30 that comprise the health region. The implementation of CMCC began in 2014 with actions to reorganize the care model, stratify the risk of patients, and organize the flow of care and, in 2017, the Innovation Laboratories on Chronic Conditions took place.

Due to the pilot implementation, the state government aims to know the results of this experience to guide the better decision making of managers, improve the quality of health management and judge the success of the implemented public policy. And, in this way, define whether the model will be implemented statewide. Likewise, Health Care Planning managers, to know the successes and failures for national planning. Thus, this study aims to evaluate the implementation of the Care Model for

Chronic Conditions through the perception of health professionals.

Materials and methods

Sample and study design

Exploratory, descriptive study with a qualitative approach, conducted in two cities of a health region in the northwest of the state of Paraná, where CMCC was implemented. In one city, data collection occurred in a PHC unit with a Family Health Strategy Program. And in the other one, in the SOC, which is a reference center for specialties for all 30 cities in the health region. The choice of both services for the study is justified by the fact that they are the pioneering services in the implementation of the model occurred in 2014.

Seven professionals from the specialized outpatient care service and eleven professionals from the primary health care service participated in the study, including the categories of physician, nurse, community health agent, dentist, oral health assistant and nursing.

Initially, contact was made with the managers of each unit to set the date and time for the focus group. The unit managers were responsible for listing the professionals able to participate, according to the research inclusion criteria. There were no refusals to participate in the study.

Research design

Data collection was carried out through focus groups and discussions were guided by the IEMAC-ARCHO36, a questionnaire for self-assessment of health and social organizations regarding their degree of implementation of a model of excellence in care for people with chronic diseases¹⁵, in a version translated and validated for Brazilian Portuguese language¹⁶. The instrument is designed to be applied to multidisciplinary healthcare teams through focus groups, which provides discussions and reflections about the model. It consists of six dimensions:

health system organization; shared health; care model; self-care; support in clinical decision-making; and information systems¹⁵.

Data were collected from August to November 2018, at the teams' workplace. Before starting the meetings, the participants introduced themselves and one of the researchers presented the issue and the objectives. Afterwards, the study participants signed the Informed Consent Form.

In the Specialized Outpatient Care service, two focus group meetings were held with the multiprofessional team. In Primary Health Care, four focus group meetings were held. The difference in the number of meetings among teams was due to the period of discussion and reflection that each team considered necessary about each of the questions in the IEMAC-ARCHO 36 instrument. When starting the focus group meeting, the researchers presented the IEMAC-ARCHO 36 instrument and oriented the team on how to complete it correctly, so that the team needed to discuss each topic of the instrument and assign a value to the topic in consensus, which ranged from zero to one hundred points. Zero being the item that was not implemented and / or developed and one hundred being the item that was fully implemented and / or developed. The researchers recorded the discussions and the data analysis was conducted through the team's statements and reflections on each dimension of the model.

Inclusion and exclusion criteria

Inclusion criteria were: being a health professional in the Primary Health Care service and / or in the Specialized Outpatient Care service where CMCC was implemented; participating in routine actions that involve the model; and having at least four years of experience in the service. These criteria were established by considering that, having participated in the tutoring and implementation process,

professionals would be able to perceive changes in the work process after the model was implemented. Those on sick leave or any other type of leave during the data collection period were excluded.

Procedures

During the group meetings, the researchers recorded notes with their perceptions. Group meetings were recorded with audio resources. The recordings were transcribed by the researchers and sent by e-mail so that the unit managers could read and validate the information together with the team. After confirmation by the managers, the thematic content analysis, proposed by Bardin¹⁷, was performed. The following steps were followed: a) pre-analysis, where organization and careful reading of all material was carried out; b) exploration of the material, in which the approximation between speeches, thematic analysis and division of the text by approximation and similarity in main themes were sought; and c) treatment of results: inference and interpretation, when the categories that were used as units of analysis were analyzed in the light of the current literature.

The participants were identified as "P", which refers to professional, followed by "PC", if related to Primary Care, or "SC", if connected to Specialized Care. And, subsequently, the Arabic number corresponding to the sequence of speeches, to preserve the identity of participants.

The study complied with the ethical precepts established in Resolution No. 466/2012 and was approved by the Research Ethics Committee of the Pontifical Catholic University of Paraná, under opinion No. 2,424,071 / 2017 and its respective co-participating institutions. The Consolidated Criteria Guidelines for Qualitative Research Reports (COREQ) were followed.

Results

To assess the implementation of the Care Model for Chronic Conditions, the statements of health professionals guided by the IEMAC-ARCHO 36 instrument were considered, composed of six dimensions of the CMCC, namely: health system organization; shared health; assistance model; self-care; support for decision-making; and information system. The analysis categories were structured based on each dimension.

Dimension 1: health system organization

Leadership as the foundation for the CMCC implementation

In this dimension of the model, the importance of regional and state leaders in providing resources and support for the implementation of the model was evidenced. The teams highlighted that the implementation initiative came through the State Health Secretariat, which offered human resources to qualify the team. And there was an effort by the regional leaderships in physical structuring.

I believe that it is only possible to implement CMCC because the secretary is making the resources, the tutorials, the training possible [...] of course, with the help of the Paraná State Department of Health. (PPC1).

There was an entire investment to remodel the C * building to better accommodate the demand of CMCC patients and this was only possible because the municipal managers met and made the transfer for this. (PSC1). [*service identity preserved].

Health indicators as a management tool

Both services identified limitations in the definition of result indicators.

We are recording in spreadsheets what the tutor has requested, but it is not clear how we are going to use the information. (PPC2).

We created several spreadsheets, we are writing down everything we think is important, then we send the reports to the Paraná State Department of Health to see. (PSC2.)

In fact, we created the spreadsheets for the indicators, but we only register them, we do not have meetings to discuss and analyze them. (PSC3).

We spend a lot of time feeding the spreadsheets, because only the nurse can do it. During the period that F* was on vacation, it went unregistered, as I was unable to feed my spreadsheet and hers. (PSC2). [*professional identity preserved].

Dimension 2: shared health

Intersectoriality as a field to be explored

The health service teams demonstrated they were unaware of the community resource map strategy proposed by the instrument and only SOC acknowledged using the available resources.

We don't have this map of community resources, I know there is an outdoor gym, the Family Health Support Center, right? (PPC3).

Resource map we didn't do, but we kind of know the referral flows. (PSC1).

Whenever necessary, we refer to the other network sites, to the hospital and even to the basic unit, but this map does not exist. (PSC3).

Dimension 3: Assistance model

Understanding the Model as a strategy for chronic care

This dimension of the instrument has seventeen questions about CMCC and caused several discussions among the teams. The SOC positively highlighted the implementation of an action plan,

integration for self-care, therapeutic plan and safe and revised medication administration.

We changed several things with the CMCC, now all patients receive a prescription for self-care from all professionals who perform consultations [...] we attach the CMCC record and the health unit can continue to monitor it. (PSC4).

The high-risk CMCC patient comes here and undergoes consultation with all professionals, doctor, nurse, pharmacist, and nutritionist. And everyone registers the care plan. (PSC5).

PHC professionals positively highlighted the pharmacological conciliation, emergency assistance for chronic patients and the relationship between the inter-consultation processes.

Because of the tutoring, we started to review the medication of the elderly and try to demedicalize polypharmacy. (PPC4).

We reorganized it, now there is no longer a hospital, but the unit serves as an emergency service. Whenever we have an emergency here at the unit, the patient is referred there. It has a better structure, receives better assistance. (PPC5).

We always write down on the spreadsheet the date of the next appointment, or also when there is an appointment at the clinic, to monitor the return, right? (PPC6).

The distance from what is said to what is done

PHC professionals were more rigorous in their assessments. And they decided that the activities performed that were not registered in medical records or spreadsheets would not be scored on the instrument as performed or achieved.

We do the monitoring of the care plan, but today we have no way to

prove it, because the Community Health Agent (CHA) does it and we have no record on a spreadsheet. So, if there is no way to prove it, we cannot say we do it. (PPC4).

A major failure is not having these alerts in the medical record to notify you when the patient's control is not adequate. This information is important, maybe we should apply it, right? (PSC3).

Dimension 4: Self-care

From the prescriptive model to the model and support

In the self-care dimension, SOC professionals were very optimistic and convinced of meeting the proposals of the model. The PHC again discussed several actions that they develop, but do not register.

We do all these things [...] we do therapeutic education, we develop self-care skills, we organize groups. (PSC2).

Self-care is like this: the patient goes to the consultation, the professional guides him on what he needs to do and register it in the medical record. Then you have to monitor it, right? To see if he does it right. (PSC1).

After the patient goes through all the professionals here, we print the sheet with the guidelines, the patient takes it home, this is the plan. Then the PHC needs to monitor it, right? (PSC5).

We organize groups, prescribe the care plan, but there are many patients who do not follow it. (PPC1).

The CHA goes to the houses, asks for the care plan, asks if they are doing it, but there are patients who do not take care, do not go on a diet. (PPC5).

Dimension 5: Support for decision-making

Tutoring to support decision making

SOC and PHC professionals identify the CONASS tutoring / consultancy support as an assistance for decision making. However, matrix-based strategies are little explored as a strategy for discussing clinical cases and training specialists for PHC professionals.

Doctor M.A * came here, taught us how to do it, he presented the IVCF-20 instrument. (PSC6). [*professional identity preserved].

Whenever we have any questions, we send an email to the Paraná State Department of Health, they always support [...] there are consultants, right? Professor E. * came himself to teach us. (PSC7). [*professional identity preserved].

I do not see that we use shared clinical protocols, I think that we are not yet well aligned with SOC. We follow what CONASS consultants tell us to do, right? But we talk little with the SOC, that's missing. (PPC10).

Alert algorithms as a challenge to be overcome

PHC professionals identify that this dimension is not well developed, as it lacks clinical protocols with algorithms to support therapeutic intervention based on clinical protocols and guidelines incorporated to the electronic medical record.

We really don't have this algorithm, the electronic medical record doesn't do that. Would it be very good, would it make it much easier? (PPC11).

There are guide lines, but the therapeutic guidelines have to be researched every time you want to ask a question. The system does not

report these things. It would be nice if it showed a different color according to the stratified risk. (PPC1).

Dimension 6: information systems

Information system: the dichotomy of information technology - a system of support or restrictions?

Regarding the dimension of the information system, SOC considers it well developed due to the fact that it has an electronic medical record system. PHC was again more critical and identified system failures.

It's great right? The medical record is electronic. (PSC7).

What we think is very bad is that we are not able to access what the outpatient professionals do, it always depends on the patient bringing back the physical medical record, [...] but we are trying to integrate the systems now. (PPC7).

What bothers is that the system does not generate reports, we spend a lot of time feeding information into spreadsheets. (PPC8).

Another problem we have is this, right? It is not possible to forward everything through the system, there is no electronic referral for reference and counter-reference. (PPC4).

Discussion

The results of the study showed that in the dimension "Health System Organization" the role of leaders is being well developed, in the perception of professionals. A study carried out in Santo Antonio do Monte, which recorded the challenges and lessons learned from the implementation of CMCC in a small city, through Health Care Planning, showed similar results and highlighted the importance of managers in supporting and assisting the implementation of CMCC, as

well as in supervising the actions of the actors involved in direct patient care¹⁸.

However, the findings of this study showed that the result indicators are not well defined and used. The CMCC recommends that the organization of care for chronic conditions be part of the organization's strategic plan, along with the definition of population health outcome indicators. In addition, it is recommended to develop agreements that facilitate the coordination of health care through organizations⁹. A study conducted in Rio Grande do Sul highlights the importance of indicators as a planning and evaluation tool for health services. And it states that health teams and managers should be attentive to the analysis of health indicators, because when properly evaluated, they become allies to qualify health actions, notably by calculating the coverage of these actions¹⁹.

Regarding the “Shared Health” dimension, it was identified that the teams did not understand the role of intersectoriality for the success of the model, nor did they institute the use of the community resources map for networking. This dimension, both in the perception of the PHC team, and the SOC, proved to be poorly developed / implemented, which demonstrates the need to strengthen public policies of intersectoriality, as well as the creation of flowcharts of network actions.

The CMCC suggests encouraging the user to participate in community programs, in addition to partnerships between health care and community organizations to develop programs that help meet the needs of users. Advocacy for policies that improve health care⁹ is also advocated. In this context, the importance of intersectoriality in the health field is reflected upon, understood as an articulated way of working that aims at overcoming the fragmentation of knowledge and social structures, to produce more significant effects on health, thus being more than a concept, but a social practice²⁰.

In the “Assistance Model” dimension, the results showed several positive changes in the care process, such as the process of reducing medicalization in the elderly, risk stratification of patients and referrals and care according to the stratified risk, as well as the restructuring of the care network. A study carried out in the Federal District, which reports the experience of Health Planning for structuring care networks, depicted similar results, with a positive progress towards risk classification for people living with chronic conditions, organization of care flows and the care network¹³.

The “Self-care” dimension showed that health teams consider the advances in relation to the self-care plan to be positive, a measure that was not performed prior to the model. However, their statements demonstrate self-care as a prescriptive model, which should be developed by the health professional and performed by the patient. In the literature, support materials for health professionals with guidance on supported self-care are available. These materials can contribute to the qualification of professionals. The literature clarifies that supported self-care should be collectively built between health professionals and patients, outlining goals, care strategies, empowerment, health literacy and monitoring actions²¹.

The CMCC characterizes self-care as an object for the empowerment of people, so that they can take care of their health, in order to recognize the user's role in managing their health and developing a sense of self-responsibility⁹. Strategies, such as goals setting, care planning, problem-solving technologies and management and use of support programs, can contribute to achieving the dimension.

In the dimension “Support for clinical decision-making”, the results demonstrated the presence of Guidelines for Chronic Care, but not routinely used by professionals. The importance of continuous education actions for health professionals is emphasized so that they

are always up to date with new evidences, which requires educational methods that allow changing the behaviors of professionals²². Clinical decisions should be made based on clinical guidelines built from scientific evidence. These clinical guidelines should be discussed in a conversation with users, so that they can better understand the health care provided²³.

It is observed that the professionals are still “dependent tutors”, not assuming the role of case managers and relying on the definition and contribution of the professional tutors from CONASS. The CMCC recommends that the definition of roles and distribution of tasks among members of the multiprofessional health team should be clear, in addition to the introduction of new forms of care, such as shared group care, remote care and continuous care. It also recommends regular monitoring of people living with chronic conditions by the health team, so that users are not left unattended⁹. Thus, it is proposed the definition of “Case managers”, professionals who coordinate this transition process between levels of care, maintaining contact so that there is no user abandonment and loss of care continuity.

The dimension “Information systems” was dichotomous in the opinion of PHC professionals in relation to SOC professionals. It is possible that the misinterpretation of the functionalities of the information system could mask the understanding of instructions or features of the model and that some teams may not have a complete understanding of the improvement process until they are in it²⁴. It is noted that there are necessary advances for better applicability and communication by means of health systems, such as, for example, the integration of electronic medical records. The study carried out in Santo Antonio do Monte also demonstrated the limitation of information systems, as well as of access to internet resources¹⁸.

The CMCC calls for the routine use of computerized medical records, with provision of alerts, reminders and timely feedbacks for health professionals and users. Concomitantly, there should be identification of relevant subpopulations, depending on the risks and the development of an individual care plan for each user and monitoring of the performance of the health team and the health care system⁹.

As weaknesses, the literature states that the lack of training and qualification for the use of Information Systems, the slowness in incorporating new technologies and the use of multiple information systems can make it difficult to filter the desired knowledge, filling in and using it due to the large volume of data to be entered²⁴. And it affirms that the basic premise of a health information system is to subsidize necessary information so that health professionals can efficiently and effectively perform their duties, in order to contribute to improving the quality health of the population¹⁹.

Conclusion

The perception of health professionals regarding the implementation of the Care Model for Chronic Conditions allowed to identify and understand the six dimensions of CMCC and showed that despite presenting advances and changes in the chronic care process, it demonstrated limitations and a slow pace to achieve transformational change, especially, linked to health indicators, map of interprofessional actions, supported self-care plan and information systems.

The self-assessment process through IEMAC-ARCHO 36 by health teams offers the opportunity to identify strengths and areas for improvement to move forward in changing the model of care for chronic conditions, in addition to providing a reflection among the team of professionals on the care of their chronic patients and to share information,

experiences and perspectives. It can also be used as a roadmap by decision makers, managers and leaders. It is suggested that the application of the instrument, by means of team meetings, becomes a routine management tool with semi-annual or annual evaluations to monitor the evolution of the implementation of the model.

As limitations of the study, it should be taken into consideration that the IEMAC-ARCHO 36 instrument helps the reflection and perception of health professionals about the model and the care provided to the chronic patient. As with

other self-assessment instruments, these perceptions may be influenced by motivations, expectations and the respondents' own understanding and interpretation of interventions.

The unprecedented use of the instrument to know the perception of health professionals in Brazil regarding the implementation of CMCC brings as benefits the innovation of new tools for evaluation. And it contributes to the managers' decision making and to identify the aspects that can be optimized for the full functioning of the model.

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