# Evaluation of Primary Health Care: validation of an instrument to analyze the performance of services

## *Avaliação da Atenção Primária à Saúde: validação de instrumento para análise de desempenho dos serviços*

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**ABSTRACT** This article has been originated in a research that aimed to identify and validate the relevance of the indicators present in an instrument of evaluation of Primary Health Care. Sixty experts evaluated 23 indicators of the dimensions 'user as the center of the process', 'organization of processes focused on users', 'link, competencies, skills and professional attitudes' and 'organizational ambience'. Four indicators obtained a maximum Content Validity Index (CVI): 'research with users of health services', 'expansion of the service portfolio', 'professional training, competencies and participation in professional education processes' and 'ambience and communication with the community'. The overall CVI was 0.91.

**KEYWORDS** Primary Health Care. Validation studies. Health evaluation.

**RESUMO** *Este artigo teve origem em pesquisa que objetivou identificar e validar a relevância dos indicadores presentes em um instrumento de avaliação da Atenção Primária à Saúde. Sessenta especialistas avaliaram 23 indicadores das dimensões 'usuário como centro do processo', 'organização dos processos focados nos usuários', 'vínculo, competências, habilidades e atitudes profissionais' e 'ambiência organizacional'. Quatro indicadores obtiveram Índice de Validade de Conteúdo (IVC) máximo: 'pesquisa com usuários dos serviços de saúde', 'ampliação da carteira de serviços', 'formação profissional, competências e participação nos processos de educação profissional' e 'ambiência e comunicação com a comunidade'. O IVC geral foi de 0,91.*

**PALAVRAS-CHAVE** *Atenção Primária à Saúde. Estudos de validação. Avaliação em saúde.*

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## Introduction

Primary Health Care (PHC) is characterized by a set of actions aimed at developing comprehensive care that impacts the autonomy of people and their health situation. Developed with a high degree of capillarity, PHC must be operationalized in defined territories, considering the specific characteristics of its population, through the exercise of care practices and management, in the form of teamwork (STARFIELD, 2004).

The PHC has essential attributes and derivatives. Starfield (2004) states that the essential attributes are recognized as structuring axes of the health care process, being associated with the quality of services, effectiveness and efficiency of their interventions. They are access, longitudinality, completeness and coordination of attention. In turn, derived attributes qualify PHC actions in family-centered orientation, community orientation, and cultural competence.

Considered the gateway to a network of universal access services, PHC must coordinate care in the health care network and implement integrality in the various dimensions (SUMAR; FAUSTO, 2014). In Brazil, the National Primary Care Policy (PNAB), agreed between federal managers and representatives of the state and municipal spheres, defines the responsibilities of each government body, reviews policy guidelines and reaffirms the Family Health Strategy (FHS) as a priority for organization of the PHC (BRASIL, 2012). The PNAB establishes that, among other competences, the municipal manager must define strategies so that the practice of service evaluation is institutionalized and integrated to the work process of the team. One of the forms of evaluation is through the adhesion to the National Program for the Improvement of Access and Quality of Primary Care (PMAQ), which constitutes one of the requirements for the transfer of part of the federal funding from PHC to the municipality.

Evaluating the performance of services and their impact on the health of the population allows managers to guide the implementation, consolidation and reformulation of PHC practices (BRASIL, 2012). A study by Cavalcanti, Oliveira Neto and Sousa (2015) about the identification of the challenges for PMAQ adherence concludes that municipal managers considered important, among other aspects, the improvement of monitoring and evaluation activities, as well as the process of management of the people (BRASIL, 2012). It should be highlighted that, due to its complexity, the process of evaluation in basic care requires managerial competence, articulation and production of information for the definition of intervention strategies (FELISBERTO, 2004).

In the municipality of Curitiba, capital of the state of Paraná, in the southern region of Brazil, the PHC network has been built since the implementation of Municipal Health Units (MHU) close to the population served, since the 1970s. In 2014, the service network of the municipality was composed of 109 MHU, all of them with dental care, of which 65 were in the FHS modality. Such a network can offer territorial coverage of PHC services to the total population estimated for the municipality, which is 1.800.000 inhabitants.

Massuda, Poli Neto and Drehmer (2014) affirm that the strengthening of PHC was established as one of the main goals of the managers of the Municipal Health Secretariat (MHS) of Curitiba. Among the strategies listed for such strengthening is the restructuring of the process of variable remuneration of the servers.

The variable remuneration process was instituted in Curitiba in 1990 as a way of encouraging the qualification of health care teams. At the end of the 1990s, there was a discontinuity of the process, justified, empirically, by the reduction of solidarity and collaborative processes among the teams. In 2002, MHU teams were encouraged to establish management contracts in basic care

– annual pledge of responsibilities between MHU teams, Local Health Council and the district health manager with respect to the work processes and results achieved. Such contract served as the basis, in 2013, for the restructuring of the MHS variable remuneration model under the name of Quality Development Incentive (IDQ). The IDQ is composed of four evaluation processes: individual evaluation, self-assessment, community assessment and MHU evaluation; and results in variable remuneration of 20 to 40% of the basic salary of the server (AZEVEDO *ET AL.*, 2013).

After 10 years of existence, the municipal management of Curitiba resumed the process of variable remuneration to base it on the attributes of the PHC. A preliminary evaluative model was constructed by a technical team of the central level, which used already consolidated instruments and included elements not yet contemplated in the instruments. The methodological approach used by the team included the phases of construction of a preliminary assessment instrument of dimensions and performance indicators, based on the attributes of the PHC; validation of the instrument; conducting pilot test in two MHU; and operationalization of the evaluation proposal.

The model included four dimensions for evaluation: i. user as the center of the process; ii. organization of processes focused on users; iii. competencies and professional skills; iv. organizational ambience. From its proposition, the question arose of the reliability and relevance of the instrument to qualify the attention given with regard to the attributes of PHC.

Since the result of the PHC evaluation in the municipality will be used to determine the variable remuneration, it is essential that its precursor criteria be explicit, avoiding values determined by personal or political criteria.

The research that originated this article is inserted in the second phase of the instrument construction process, validation. The instrument validation process is, among other requirements, associated to its internal validity and reproducibility, which demands validation of face, content and construct. The face validity verifies if the instrument is understandable to the participants, so as not to compromise the objectives; content validity analyzes the internal validity of the dimension of an instrument; and the one of construct verifies the validity of the singular characteristic that is being measured in relation to the dimension of the instrument (LUIS; ASSUNÇÃO; LUIS, 2012). The research reported here was limited to the validity of face and content and aimed to identify and validate the relevance of the indicators present in the PHC Assessment Tool.

## Material and methods

Evaluative study, of instrument validation. 60 people participated in the study, whose recruitment process used two approaches. The first, by non-probabilistic intentional sampling, using the 'snowball' technique, in which 20 specialists from the PHC area were selected, called External Specialists (Es). The second, by intentional sampling, through which 29 health professionals from the MHS of Curitiba were selected, called Internal Specialists (Is); nine district managers (M); and two Health Advisors (HA) users. Due to the characteristics of the selection, there was no exclusion criterion.

To constitute the initial group of Es, nationally recognized professionals were selected for their expertise in PHC in research conducted or formulation of public policies, with training and minimum experience of five years in the PHC. 19 invitations were sent electronically. Of these, thirteen experts accepted to participate in the study (86%) and indicated another 22 people, of whom seven responded to the questionnaire.

The Is were personally invited by one of the researchers. In each of the nine health

districts in the MHS at the time of data collection, three professionals were selected by category, among dentists, nurses and physicians. The criterion for the selection was the minimum experience of ten years in the FHS of the city of Curitiba. To guarantee the minimum number of participants, 30 professionals were invited. Of these, 29 responded to the instrument in the time foreseen for collection.

The nine health district managers with experience in monitoring and evaluation were included. Finally, for the selection of the two HAs, participation in the board of directors of the Municipal Health Council was used as a criterion, justified by the fact that HAs follow the monitoring of health indicators of the Municipality through institutional documents, such as the Municipal Plan of Health, the Annual Health Plan and the quarterly management reports.

Data collection was carried out in the period from May 4 to June 27, 2015. To compose the instrument, the indicators included in the preliminary evaluation instrument, constructed in 2013 by the technical team of the PHC board of MHS of Curitiba. The selection of dimensions and indicators had as reference the attributes and values of the PHC (STARFIELD, 2004) applied by the FHS.

The 'user as the center of the process' dimension aims to evaluate in a more structured way the quality of the attributes of PHC in the view of the user, making it possible to identify the most difficult points that need to be strengthened. Due to its complexity, this dimension uses an instrument already validated, PCATool-Brazil (Primary Care Assessment Tool), reduced version (HARZHEIM *ET AL.*, 2006). The PCATool-Brazil evaluates the attributes of PHC, of which four are exclusive – access, longitudinality, integrality and coordination – and two are derived – family orientation and community orientation.

The 'organization of processes focused on users' dimension was built from three different attributes of the PHC: service portfolio, which measures the integrality and the polyvalence of the teams from the services offered to the users linked to its list; access and link, which relates the availability and coverage of services; and indicators of care process. Each attribute is composed of one or more factors that, together, make up the final score of the dimension.

The 'link, competencies, skills and professional attitudes' dimension is based on a set of knowledges: knowing (knowing), knowing how to do (skills), knowing how to be (attitudes), wanting to do (motivation) and being able to do (professional attitudes and means). The set is of individual character and consists of factors related to training, productivity, resolution capacity and length of stay in the same MHU.

The 'organizational ambience' dimension comprises the physical, social, professional and interpersonal space, being evaluated collectively by the team, enabling the inclusion of items directly related to the MHU organization.

The components and indicators of the instrument built by the MHS of Curitiba team are available in *chart 1*.

Chart 1. Dimensions of the Primary Health Care Assessment Tool, its components and number of indicators. Curitiba, 2015

| DIMENSION | COMPONENTS | INDICATORS |
|---|---|---|
| User as the center of the process | Research for the analysis of the perception of the user about the care process: Primary Care Assessment Tool (PCA-Tool-Brazil adults) | 1. Research with users of health services. |
| Organization of processes focused on users | Portfolio of services, Access and link and Care Process | 2. Expansion of the Service Portfolio.<br>3. Number of people linked to the team.<br>4. Hours of continued attention by the health team.<br>5. Expansion of forms of access.<br>6. Percentage of users linked to the health team and attended at the ECU.<br>7. Proportion of women aged 25 to 64 years who did not screen for cervical cancer.<br>8. Vaccine coverage of the linked population.<br>9. Appropriate treatment of syphilis of the linked patients, including the partner in the case of pregnant women.<br>10. Coverage of supervised tuberculosis treatment of linked patients.<br>11. Proportion of hospitalizations due to asthma in the linked population.<br>12. Coverage of supervised brushing in the schoolchildren of the School Health Program in schools linked to the team.<br>13. Coverage of examination to detect oral lesions in users over 40 years old, in the population linked to the team.<br>14. Coverage of first dental consultation in children under five years, in total in the linked population. |
| Link, competencies, skills and professional attitudes | Training, competencies and participation in the processes of professional and community education, productivity, effectiveness of primary health care and length of stay in the same team. | 115. Professional training, competencies and participation in professional education processes.<br>16. Productivity evaluation based on previously established goals, by professional category.<br>17. Effectiveness of Primary Health Care as a percentage of referrals from users to specialists.<br>18. Length of stay in the same Basic Health Unit and team |
| Organizational Ambience | 360º evaluation by the team and organization of the spaces of the Basic Health Units. | 19. Organization of inputs of the Basic Health Units<br>20. Organization of equipment.<br>21. Cleaning of the Basic Health Unit. 22. Ambience and communication with the community.<br>23. Peer assessment of professional attitudes, considering shift work. |

Source: Preliminary instrument for the evaluation of Primary Health Care, Curitiba, 2013.

Participants responded to a two-part online questionnaire. The first one related to the sociodemographic and training profile and the second one on the relevance of the indicators present in the evaluation instrument.

The questionnaire was built on SurveyMonkey software (available at: <https://en.surveymonkey.com/>), which makes it possible to organize the data collected in an Excel® spreadsheet.

Individually, the participants attributed a degree of relevance to each of the indicators through structured responses, following the Likert-type scale: certainly relevant =4; probably relevant=3; probably not relevant=2 and certainly not relevant=1. In cases of attribution 'certainly not relevant', a justification was requested for response in the open field.

Data relating to the sociodemographic and training profile of the participants were presented in a descriptive way, with a mean and a simple percentage distribution, only with the purpose of characterizing them. To measure the proportion of participants who agreed on the relevance of the indicators present in the instrument, the Content Validity Index (CVI)

was used, which allows analyzing each item individually and, afterwards, the instrument as a whole. The index score related to the item is calculated by the sum of the agreement of each item marked '3' or '4', divided by the total number of responses. For the instrument as a whole, the total number of items considered relevant (3 or 4) was divided by the total number of items. To be considered valid, both the item and the instrument should obtain the score $\geq 0.80$ (ALEXANDRE; COLUCI, 2006).

The justifications of the participants were grouped by similarity and relevance to the four dimensions of the instrument, as a basis to potentiate the discussion and anchor face validity. No qualitative analysis of the justifications was performed.

The research was approved by the Committees of Ethics in Research of the Pontifical Catholic University of Paraná and the MHS of Curitiba (opinions nº 1.008.015 and nº 1.033.282).

# Results

## Characterization of specialists

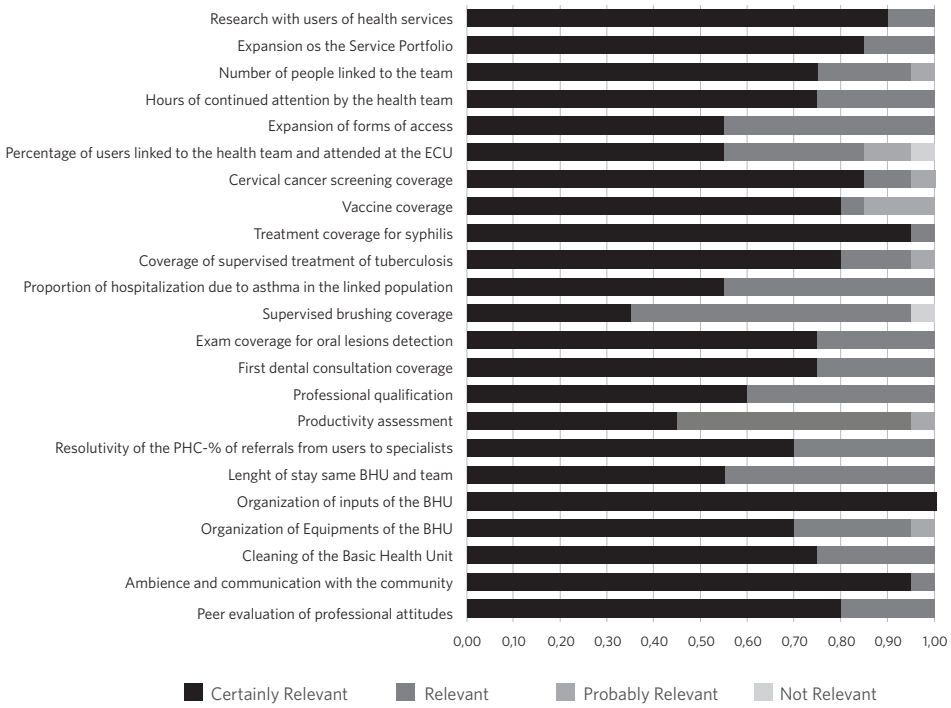
The average age of the specialists was 47.8 years old; 55% are female; 38%, doctors; 30%, nurses; 18%, dental surgeons; 5%, physiotherapists; and 2% were distributed among other health professionals. The participants had an average of 2.12 specializations, of which 42% were in the collective health area; 55% in family health; 22% in health management; and 87% in other health-related specialties. Of the specialists, 37% were masters and 18% were doctors. Two participants were doctoral students.

Regarding the area of action, 48% were in the care; 32% in district or federal management; 17% in teaching; and less than 3% were retired. Of the total, 63% had a link with the MHS of Curitiba. The duration of the PHC ranged from six years to more than 30 years, with 43% of participants working from 11 to 20 years in the area.

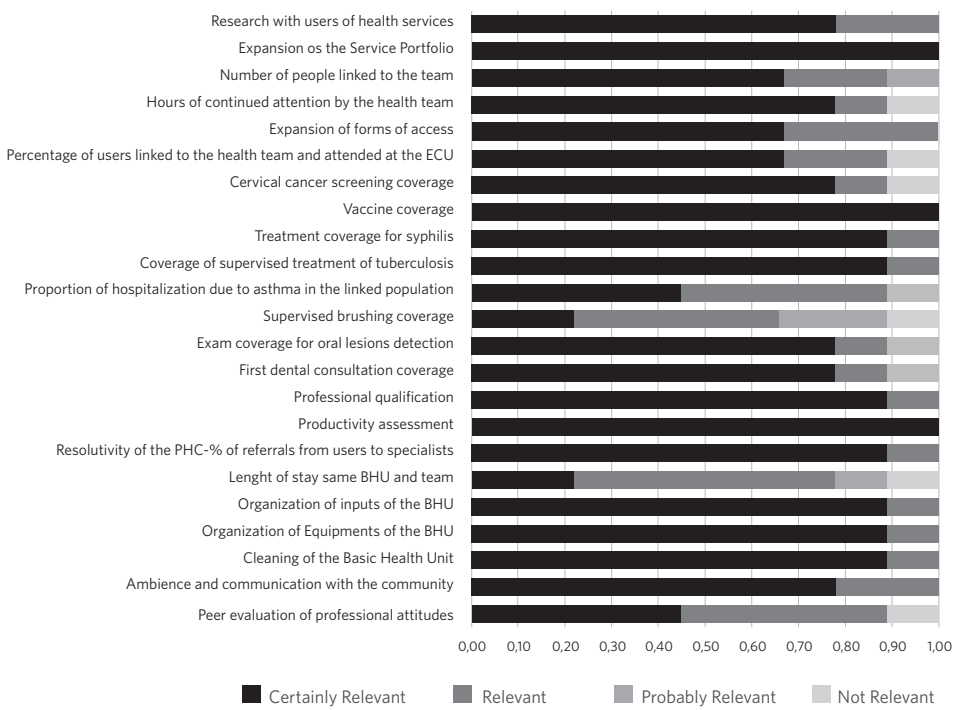
## Relevance of indicators

In *graphs 1* to *3,* the proportions of agreement for each indicator are presented, by group of participants (Es, M and Is). For the HA group, because it consisted of only two participants, the textual description of the results was chosen.

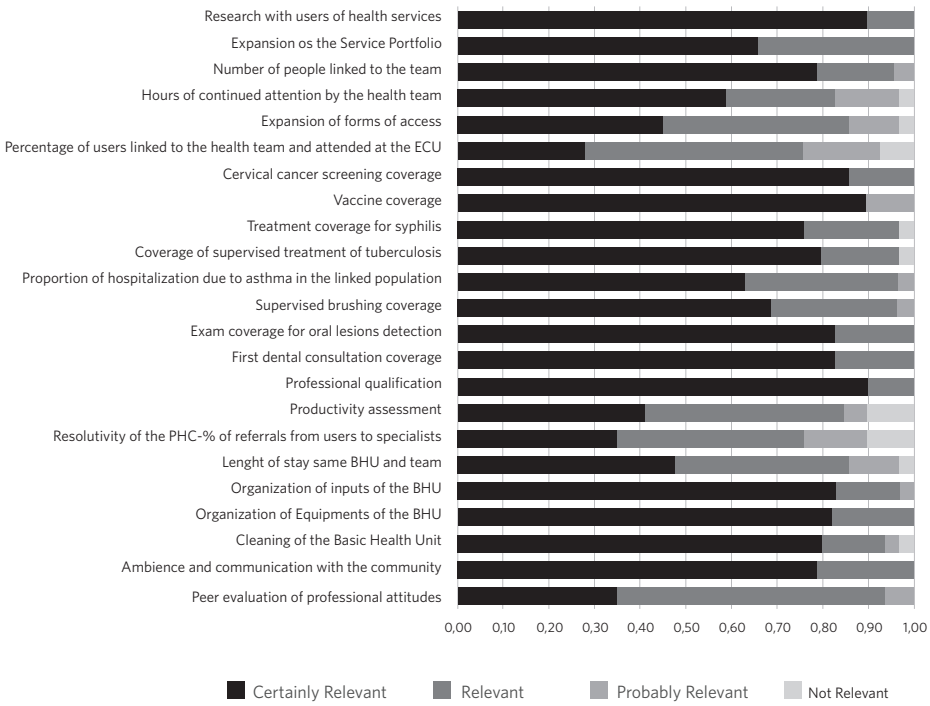
Graph 1. Agreement between the External Specialists (Es) for the relevance of the indicators that make up the instrument of evaluation of Primary Health Care (N=20) according to the Content Validity Index (CVI), Curitiba, 2015




Graph 2. Agreement, according to the Content Validity Index (CVI), among Managers (M) for relevance of the indicators that make up the instrument for the evaluation of Primary Health Care (N=9). Curitiba, 2015



Graph 3 . Agreement, according to the Content Validity Index (CVI), among the Internal Specialists (Is) for the relevance of the indicators that make up the Primary Health Care assessment instrument (N=29). Curitiba, 2015




The two HAs considered all indicators relevant for PHC assessment. Among the indicators, seven were evaluated as certainly relevant: Research with users of health services; Expansion of service portfolio; Number of people linked to the team; Schedule of care continued by the health team; Expansion of forms of access; Percentage of users linked to the health team and attended at the Emergency Care Unit; and Vaccine coverage of the related population. One of the advisors, a retired one, included a commentary on the importance of the indicator related to the user satisfaction survey, noting that *"it is very important to widely disseminate the results of research conducted [...]"* (HA2). In relation to the organization of processes focused on users, the same counselor reinforced that the goals of the instrument should be the same as agreed with the Ministry of Health.

Although there is agreement about the relevance of the indicators by the Es, no item has been evaluated as certainly relevant by all external specialists *(graph 1)*. The non-relevance justifications related to the indicators of attachment and attendance of the Emergency Care Unit (ECU) and supervised brushing are highlighted. The first was criticized for the understanding that such an indicator *"[...] does not necessarily assess the user's link with the team, as accessibility issues may interfere"*. (Es14, doctor). In turn, the supervised brushing indicator *"[...] need not be attributed to the Family Health/Primary Health Care Strategy"* (Es20, doctor).

The group of managers (M) evaluated three items as certainly relevant *(graph 2)*. In the same way as the Es group, some managers also answered for the lack of relevance of the linkage and attendance indicators of ECU and supervised brushing. One of the justifications for the ECU is that:

> *[...] the PHC is not scaled to serve the population that seeks the ECU during the period of operation*

*of the MHU; access to the ECU service is also relevant in cases of emergency.* (M3, nurse, free translation).

Another indicator considered by managers as not relevant is that related to the hours of continuous care, whose justification was that *"[...] the availability of the service is fundamental for accessibility, but it does not guarantee it"* (M3, nurse, free translation).

Although the set of indicators reached the relevance score, in the group of Is the highest number of non-relevance records for some indicators was detected, and none of the items had total agreement in the evaluation of 'certainly relevant' *(graph 3)*. Again, the indicator related to the linkage and attendance of ECU was more criticized. Two Is justify the lack of relevance due to the difficulty of evaluating this indicator, since

*[...] culturally, the population searches for ECU for several reasons, that access has always been allowed, a shortage of professionals in the MHU, a queue at dawn for consultation.* (Is12, nurse, free translation),

and that the indicator *"[...] does not assess the adherence of the user or team, numerous factors can lead the user to seek the ECU"* (Is19, doctor).

In relation to the indicator that measures the resolution through the percentage of referrals for specialty, two Is justified the non-relevance by noting that:

*[...] referral to specialist absolutely does not evaluate the resoluteness, because there are multiple factors that influence the number and causes of referrals.* (Is12, doctor, free translation),

and that *"the percentage of referrals may reflect specificities of demand and not low resolution"* (Is27, doctor, free translation).

## Validity of content of indicators

In the overall evaluation, the 23 indicators had a CVI score ≥ 0.80 (table 1). The CVI of the instrument was 0,91. This result characterizes the validation of its content.

Table 1. Content Validation Index (CVI) of the Primary Health Care Assessment Tool, distributed by indicators, dimensions and number of specialists who attributed the concepts 'certainly relevant' or 'probably relevant'. Curitiba, 2015

| Dimension | Indicators | CVI | Specialists who attributed the concepts certainly relevant or probably relevant (N=60) |
|---|---|---|---|
| User as the center of the process | Research with users of health services | 1,00 | 60 |
| Organization of processes focused on users | Expansion of the Service Portfolio | 1,00 | 60 |
| | Number of people linked to the team | 0,95 | 57 |
| | Hours of continued attention by the health team | 0,90 | 54 |
| | Expansion of forms of access | 0,93 | 56 |
| | Percentage of users linked to the health team and attended at the Emergency Care Unit | 0,82 | 49 |

Table 1. (cont.)

| | | | |
|---|---|---|---|
| | Proportion of women aged 25 to 64 years who did not screen for cervical cancer | 0,97 | 58 |
| | Vaccine coverage of the linked population | 0,98 | 54 |
| | Appropriate treatment of syphilis of the linked patients, including the partner in the case of pregnant women | 0,97 | 58 |
| | Coverage of supervised tuberculosis treatment of linked patients | 0,97 | 58 |
| | Proportion of hospitalizations due to asthma in the linked population | 0,97 | 58 |
| | Coverage of supervised brushing in the schoolchildren of the School Health Program in schools linked to the team | 0,92 | 55 |
| | Coverage of examination to detect oral lesions in users over 40 years old, in the population linked to the team | 0,98 | 59 |
| | Coverage of first dental consultation in children under five years, in total in the linked population | 0,98 | 59 |
| Link, competencies, skills and professional attitudes | Professional training, competencies and participation in professional education processes | 1,00 | 60 |
| | Productivity evaluation based on previously established goals, by professional category | 0,92 | 55 |
| | Effectiveness of Primary Health Care as a percentage of referrals from users to specialists | 0,88 | 53 |
| | Length of stay in the same Basic Health Unit and team | 0,90 | 54 |
| Organizational Ambience | Organization of inputs | 0,97 | 58 |
| | Organization of equipment | 0,98 | 59 |
| | Cleaning of the Basic Health Unit | 0,96 | 58 |
| | Ambience and communication with the community | 1 | 60 |
| | Peer assessment of professional attitudes, considering shift work | 0,95 | 57 |
| Total CVI | | 0,91 | |

The indicators that obtained lower CVI were the 'Percentage of users linked to the health team and attended at the Emergency Care Unit' and 'PHC effectiveness measured by the percentage of referrals from users to specialists'.

Four indicators obtained a maximum CVI: 'Research with users of health services', 'Expansion of the service portfolio', 'Professional training, competences and participation in professional education processes' and 'Ambience and communication with the community'.

# Discussion

In the 'User as the center of the process' dimension, the performance of opinion surveys on user satisfaction with the offered service was one of the indicators with a total consensus of relevance among the participants.

The satisfaction of the user, besides being an indicator of quality, provides a performance evaluation from the perspective of such indicator, orienting strategic or operational decisions to improve the services provided in the health system (ZILS *ET AL.*, 2009).

The integrative review of the literature developed by Rocha, Bocchi and Godoy (2016) reveals that timely access to health services is still a problem in several countries around the world, with some surveys evaluating user satisfaction using items such as scheduling and extended hours for the attendance. The authors argue that the research was designed with the purpose of subsidizing changes and anchoring government projects.

There seems to be consensus among researchers and health professionals about the importance of assessing the quality of services from the perspective of the people who use them and who depend on them. In addition to enabling strategies to improve the health system (ZILS *ET AL.*, 2009), the results of this type of research may be used by the teams evaluated to rethink their performance in the PHC space.

Among the instruments that include the user satisfaction item to evaluate the PHC is the PCATool. Research authors who have studied PCATool have concluded that the instrument is the most appropriate to the proposals included in the PNAB (GARUZI *ET AL.*, 2014; HARZHEIM *ET AL.*, 2013; SHI; STARFIELD; XÚ, 2001). Therefore, the choice of PCATool-Brazil, a reduced version, for the PHC evaluation process in Curitiba seems to be adequate, reflecting the pertinence of the use of globally recognized instruments.

The expansion of the service portfolio is the only indicator that makes up the dimension of the 'Organization of processes focused on users' to obtain total consensus of relevance. Such scaling up requires that the PHC team, adequately, recognize the most frequent health needs and provide the resources to address them, toward completeness.

The range of services available should respect the incidence or prevalence of the health needs of the population (STARFIELD, 2004). However, when addressing knowledge about the concept of health needs from the user's perspective, Moraes, Bertolozzi and Hino (2011) concluded that there are still tensions involving the conflict between what users present as demands and the recognition of health needs by the professionals.

From this perspective, it is argued that the decisions about the expansion of the service portfolio of the PHC depend not only on the availability of equipment by managers but also on a team capable of recognizing the health needs of the community.

It is expected that the teams, in addition to recognizing the needs, know the life histories of users and families, making listening a priority to overcome the fragmented way of watching them (FRACOLLI *ET AL.*, 2014, MORAES; BERTOLOZZI; HINO, 2011). Despite this premise, it is still evident that, in everyday practices and in the same situation, different forms of care occur even among professionals of the same category (FRACOLLI *ET AL.*, 2014). This fact can be overcome, among other possibilities, with the inclusion of the theme in the training processes and in the evaluation processes of health professionals.

In the dimension 'organization of processes focused on the users', it is highlighted an item among those who received lower CVI – 'percentage of users linked to the team and attended in ECU'. Although the ECU presents itself as an observatory of the attention network, it can delimit problems in the PHS such as difficulties of access and of link of the users with the team, the item related to the attendance by the unit should not be analyzed in a limited way and out of the context organization of services.

A perceived reality in ECUs throughout the Country is a result of the delay in attending the MHU. This delay is determined by the search for agile service and the opportunity to solve problems, even if they are not urgent or emergency, generating, consequently, a flow of users that exceeds the service capacity (OLIVEIRA *ET AL.*, 2015; RANDOW *ET AL.*, 2011).

In the 'link, competencies, skills and professional attitudes' dimension, the participants recognize the importance of

professional qualification as an indicator of the quality of PHC. However, despite the recognition of the importance of the training of health professionals as essential for changes in the practice of health care (SCHERER, 2016; VENDRUSCOLO; PRADO; KLEBA, 2014) and that qualified professionals can present technical competence for the transformation of the model of attention, there is a need to know the impact of training and professional qualification on the development of PHC attributes (LEÃO; CALDEIRA, 2011).

It should also be considered that, when analyzing the need for qualification of the middle level nursing for FHS, Ximenes Neto *et al.* (2016) state that despite the change of work spaces from the hospital area to extra-hospital workplaces, the premise of training is still centered in the hospital clinic. A similar situation was identified in the training of higher level professionals, which determines a disconnection between work in PHC and training, which could be overcome, in part, by the offer of specializations in Family Health (SCHERER, 2016).

In the presented view, the professional formation, whether of the medium or superior level, determines the emergence of a partnership of the service for the qualification of the team that works in the PHC.

One of the indicators with the lowest CVI in this study is found in the link, competencies, skills and professional attitudes dimension: the effectiveness of PHC. In this area, in 2008, the MH instituted the creation of the Family Health Support Centers (Nasfs) to support the insertion of the FHS in the service network and to increase, among other aspects, the efficiency of actions (BRASIL, 2008). Nasf is an initiative that can help in the operation of the PHC. It is reinforced that brazilian initiatives to strengthen and expand the FHS as coordinator of the health system are aligned with the european reforms that, by consolidating the role of the PHC gateway, extend the service's resolution and strengthen the coordination role of the health system. Health services (ALMEIDA; FAUST; GIOVANELLA, 2011).

The effectiveness of the PHC services refers to the ability to identify risks, offering from the initial consultation and other procedures, including qualified referral to specialized care, when necessary, until the solution of the health problems of the patient. This includes increasing individual and collective care technologies, through the clinical skills of health teams.

Longitudinality, rather than continuity of care for the user by the PHC team, is a therapeutic relationship built over time, both in cases of illness and in preventive care. As results, more accurate diagnoses and treatments, as well as reduced referrals to specialists (STARFIELD, 2004).

In the 'organizational ambience' dimension, the consensus regarding the 'ambience and communication with community' indicator may have been interfered with by proposals for improving the work environments of municipal management in Curitiba (2013/2016).

It is known that the adequacy of the physical structure and the improvement in the availability and maintenance of equipment and inputs can contribute to a quality assistance to the health of the population (PEDROSA; CORRÊA; MANDÚ, 2011). On the other hand, a study that focused on the area of mental health reveals that a team with different professional backgrounds should prioritize the integrality of care actions with the objective of constituting a suitable environment for the therapeutic process (KANTORSKI *ET AL.*, 2011). Thus, it is concluded that the ambience is influenced by the structure and interaction established among health professionals.

In relation to the different groups of evaluators, it is verified that the group of Is and Es did not validate as certainly relevant any of the items. However, the Es group had a better perception of the indicators in relation to the others. Such fact can be justified by the selection profile of these indicators

and by not directly involving one of the purposes of the instrument, which is the variable remuneration of Is and M.

## Conclusions

The proposed instrument for PHC evaluation was validated in the city of Curitiba (PR). This process enables credibility and transparency in its implementation, as well as allowing other municipalities, with a similar organization, to use the indicators to adapt them to their reality.

The indicators 'user perception', 'service portfolio expansion', 'training and professional education' and 'ambience and communication with the community' were considered the most relevant. These indicators reflect, without disregarding others, important attributes of PHC, such as access, longitudinality, family-centered orientation and coordination of care.

Although validated, the indicator Percentage of users linked to the health team and attended at the Emergency Care Unit, was the one that received the lowest validity index, being the object of criticism justified by the interference offered by the context of the services organization. It is suggested that the indicator be considered as a sentinel event, making it possible to analyze the reasons for attendance in the ECUs of users linked to the MHU.

It should be emphasized that the instrument must become dynamic from the monitoring and evaluation of the results obtained and the need for the service. Therefore, future studies should investigate the characteristics that, intrinsically, permeate the work process in PHC to compose other indicators for the evaluation process such as the need for knowledge about ethics, rights of the users, interpersonal communication skills and teamwork.

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