

EVALUATION OF CARE FOR PEOPLE WITH CHRONIC KIDNEY DISEASE IN PRIMARY HEALTH CARE

AValiação do Cuidado a Pessoa com Doença Renal Crônica na Atenção Primária à Saúde

Evaluación del Cuidado a Personas con Enfermedad Renal Crónica en la Atención Primaria de Salud

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ABSTRACT

Objective to analyze how care for chronic kidney disease (CKD) is structured within Primary Health Care from the perspective of health professionals, comparing it with the care provided for other noncommunicable chronic diseases (NCDs). **Methods:** a cross-sectional study carried out with physicians, nurses from family health teams, and managers of a Primary Health Center in Belo Horizonte, Brazil. It was used the Assessment of Chronic Illness Care instrument and data analysis was performed in R software using the Wilcoxon, Kruskal–Wallis, and Mann–Whitney tests, as well as Spearman's correlation. **Results:** care for individuals with NCDs was rated more favorably than care for CKD. “Clinical decision support” showed the greatest discrepancy between NCD and CKD assessments, receiving the lowest score. “Self-management support,” related to the work of the Family Health Support Center, psychosocial support, and user support groups, as well as “Delivery system design,” referring to care pathway organization, team leadership, scheduling, and patient monitoring, received higher evaluations compared to other dimensions of the instrument. **Conclusions:** strengthening strategies to integrate CKD into the chronic care model is essential to ensure more equitable and higher-quality care.

Keywords Primary Health Care; Renal Insufficiency, Chronic; Chronic Disease; Health Personnel; Cross-Sectional Studies

RESUMO

Objetivo: analisar como se estrutura a atenção à doença renal crônica (DRC) no âmbito da Atenção Primária à Saúde, sob a ótica dos profissionais de saúde, comparando-a à assistência voltada às demais doenças crônicas não transmissíveis (DCNT). **Métodos:** trata-se de um estudo transversal realizado com médicos, enfermeiros das equipes de saúde da família e gerentes do Centro de Saúde de Belo Horizonte. Utilizou-se o instrumento Assessment of Chronic Illness Care, e a análise foi conduzida no software R, empregando os testes de Wilcoxon, Kruskal–Wallis, Mann–Whitney e correlação de Spearman. **Resultados:** a atenção às pessoas com (DCNT) foi melhor avaliada em comparação à DRC. O “Suporte para as decisões clínicas” apresentou a maior diferença entre as avaliações de DCNT e DRC, obtendo o menor escore. O “Apoio para o autocuidado”, relacionado à atuação do Núcleo de Apoio à Saúde da Família, ao suporte psicossocial e aos grupos de apoio aos usuários, assim como o “Desenho do sistema de prestação de serviços”, relativo ao desenho da linha de cuidado, liderança das equipes, agendamento e monitoramento dos usuários, receberam avaliações superiores em relação às demais dimensões do instrumento. **Conclusões:** é necessário fortalecer as estratégias para integrar a DRC ao modelo de atenção crônica, visando garantir uma assistência mais equitativa e qualificada. **Palavras-chave:** Atenção Primária à Saúde; Insuficiência Renal Crônica; Doença Crônica; Pessoal de Saúde; Estudos Transversais.

RESUMEN

Objetivo: analizar cómo se estructura la atención a la enfermedad renal crónica (ERC) en el ámbito de la Atención Primaria de Salud, desde la perspectiva de los profesionales de salud, comparándola con la asistencia dirigida a otras enfermedades crónicas no transmisibles (ECNT). **Métodos:** se realizó un estudio transversal con médicos, enfermeros de los equipos de salud de la familia y gerentes del Centro de Salud de Belo Horizonte. Se utilizó el instrumento Assessment of Chronic Illness Care, y el análisis se llevó a cabo en el software R mediante las pruebas de Wilcoxon, Kruskal–Wallis, Mann–Whitney y correlación de Spearman. **Resultados:** el cuidado a las personas (ECNT) fue mejor evaluado en comparación con la ERC. El “Soporte para las decisiones clínicas” mostró la mayor diferencia entre las evaluaciones de ECNT y ERC, obteniendo el menor puntaje. El “Apoio para el autocuidado” relacionado con la actuación del Núcleo de Apoio a la Salud de la Familia, el soporte psicossocial y los grupos de apoyo a los usuarios, así como el “Diseño del sistema de prestación de servicios” referente al diseño de la línea de cuidado, liderazgo de los equipos, programación y monitoreo del usuario, recibieron mejores evaluaciones en comparación con las otras dimensiones del instrumento. **Conclusiones:** as estratégias para integrar la ERC al modelo de atención crônica necesitan ser fortalecidas para garantizar una asistencia más equitativa y de calidad. **Palabras clave:** Atención Primaria de Salud; Insuficiencia Renal Crónica; Enfermedad Crónica; Personal de Salud; Estudios Transversales.

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INTRODUCTION

Chronic kidney disease (CKD) constitutes a major global public health challenge and ranks among the leading causes of mortality worldwide. Approximately 10–20% of the adult population is affected by CKD⁽¹⁾. In Brazil, however, its prevalence remains incompletely characterized, with estimates ranging from 1.4% to 4.6% among adults⁽²⁾. Data from the Brazilian National Health Survey indicate a prevalence of 1.4% (95% CI: 1.3–1.6), corresponding to nearly two million individuals living with CKD in the country⁽³⁾.

The development of CKD implicates several factors. Systemic arterial hypertension (SAH) and diabetes mellitus (DM) are the leading causes, followed by urinary tract obstruction, glomerular diseases, pyelonephritis, polycystic kidney disease, autoimmune disorders, congenital malformations, and hereditary conditions⁽⁴⁾. The risk of progression to kidney function loss is particularly elevated among individuals with hypertension, advanced age, or a family history of kidney disease⁽⁵⁾. Furthermore, dyslipidemia, obesity, and tobacco use are recognized as important factors contributing to disease progression⁽⁶⁾.

CKD is generally asymptomatic during its early stages and often remains undetected until advanced stages of renal impairment. This silent clinical course hinders timely interventions and compromises therapeutic outcomes. In this context, the early identification of associated risk factors and the implementation of appropriate management strategies are essential to reducing morbidity, mortality, and the economic burden associated with long-term treatment⁽²⁾.

In Brazil, the Ministry of Health recommends that CKD management be conducted primarily by multidisciplinary teams within Primary Health Care (PHC), with support from specialized services within the chronic care network according to the stage and complexity of the disease⁽⁵⁾. PHC plays a pivotal role in monitoring modifiable risk factors and screening high-risk populations, aiming to promote the early detection of kidney dysfunction and prevent disease progression⁽⁵⁾.

Despite the existence of national guidelines, significant challenges remain regarding the early detection of CKD, surveillance of risk factors, and integration between primary and specialized levels of care. Similar weaknesses have been reported in international settings, highlighting the neglect of early-stage disease and the fragmentation of healthcare delivery^(7,8). PHC services often demonstrate limited effectiveness in CKD management and face difficulties in coordinating care with specialized services,

thereby compromising the comprehensiveness and continuity of care⁽⁷⁾. In 2011, almost 50% of patients began dialysis without seeing a nephrologist beforehand, according to the United States Renal Data System⁽⁸⁾.

Within the Brazilian context, important gaps persist in the provision of comprehensive CKD care, reflecting both in healthcare professionals' limited knowledge of diagnostic criteria and in barriers to accessing specialized services^(9,10). Given this scenario, the present study aimed to analyze how CKD care is organized within Primary Health Care from the perspective of healthcare professionals and to compare it with the care provided for other chronic noncommunicable diseases (NCDs).

METHOD

This cross-sectional study included physicians and nurses from Family Health Strategy (FHS) teams, as well as managers of Primary Health Care Centers (PHCCs). The study was carried out in the municipality of Belo Horizonte, Minas Gerais, Brazil, which is organized into nine health districts, comprising a total of 162 PHCCs and 588 FHS teams. Sample size calculation was performed using cluster sampling, considering a 5% absolute error. The sampling weight for each health district was determined according to the number of existing PHCCs. The final sample consisted of 30 PHCCs randomly selected.

Data collection was carried out directly at the PHCCs, where healthcare professionals were invited to participate during in-person visits conducted by the researcher. Three visits were made to each unit at different times of the day in order to accommodate service operations and team availability. Prior scheduling was arranged with managers and healthcare professionals, and fieldwork took place between December 2017 and April 2018.

Only professionals who had been working in their respective positions at the study site for at least six months were considered eligible. Of the 30 managers employed at the selected PHCCs, one did not meet this criterion and five declined participation, resulting in a total of 24 managers interviewed.

For patients with Chronic Kidney Disease (CKD), the exclusion criteria were: being younger than 18 years of age; inability to complete the questionnaire or interview; presence of a mental disorder that prevented participation; or absence from the healthcare unit at the time of the researcher's visit. For healthcare professionals working in Specialized Referral Units (SRUs) and Renal Replacement Therapy (RRT) facilities, excluding those with less than

six months of experience in their current position or function. In RRT facilities, a convenience sample was collected during a single work shift to prevent duplicate participation among professionals who work at multiple sites.

During the study period, 180 physicians and nurses were working in the FHS teams of the selected PHCCs. Of these, 37 declined participation, six did not meet the inclusion criteria, and 11 were on vacation, leave, or scheduled days off. Consequently, 150 professionals were included in the study: 24 managers, 56 physicians, and 70 nurses, all of whom were present during the researchers' visits.

Data were collected using the Assessment of Chronic Illness Care (ACIC) instrument, whose purpose is to evaluate the extent to which managers and healthcare professionals implement actions aimed at the prevention and management of chronic conditions, including CKD. The questionnaire has been translated and validated for Portuguese and is structured into seven domains. Six of these domains correspond to the components of the Chronic Care Model (CCM), while the seventh assesses the degree of integration among them.

The variables were grouped according to this organizational framework: healthcare system organization, community resource utilization, self-management support, delivery system design, decision support, clinical information systems, and, finally, integration of the care model (Figure 1).

Each item of the instrument is scored on a scale ranging from 0 to 11 points, distributed across four categories (D, C, B, and A). Level D corresponds to scores between 0 and 2 and indicates a very low level of implementation of the evaluated action. At the opposite end of the scale, Level A corresponds to scores between 9 and 11, indicating that the described action has been fully incorporated into routine practice.

For analytical purposes, the scores assigned to each item were summed, and the arithmetic mean was subsequently calculated for each dimension. Score interpretation followed the following classification: 0–2, very limited capacity for chronic care; 3–5, basic capacity; 6–8, reasonably good capacity; and 9–11, optimal capacity.

Therefore, higher scores indicate better resources and organizational structures available for chronic disease care, whereas lower scores reveal important weaknesses in care organization.

The collected data were organized and coded in an electronic spreadsheet (Microsoft Excel 2013) and subsequently analyzed using R software (version 3.4.4). Descriptive analyses included absolute and relative

frequencies, means, standard deviations, and 95% confidence intervals.

The Wilcoxon signed-rank test was used to compare the overall assessments of care directed toward chronic noncommunicable diseases (NCDs) and chronic kidney disease (CKD), as well as the scores of the different dimensions analyzed. Statistical significance was set at $p < 0.05$. The magnitude of differences was assessed using Cohen's d effect size and interpreted according to the following criteria: values < 0.20 were considered negligible; 0.20 – 0.50 , small; 0.50 – 0.80 , moderate; and > 0.80 , large effect sizes⁽¹²⁾.

To examine the association between each dimension and the overall assessment score, as well as the relationships among dimensions and their comparisons according to participants' characteristics, the Kruskal–Wallis and Mann–Whitney tests, Spearman's correlation coefficient, and the Nemenyi post hoc test for multiple comparisons were applied.

Ethical Considerations

This study was approved by the Research Ethics Committee of the Federal University of Minas Gerais (approval number 2,322,149; CAAE No. 90219117.6.0000.5149). All ethical procedures were conducted in accordance with current regulations governing research involving human participants.

RESULTS

Among the healthcare professionals interviewed, the majority were female (75.3%). Nurses accounted for 46.7% of the sample, and most participants held permanent positions within the public health system (78.7%). Among the managers, nursing professionals also constituted the largest group (54.2%). The mean age of participants was 43.7 years, ranging from 29 to 69 years. The average time since professional graduation was 17.4 years (standard deviation = 11.1), whereas the mean length of employment in the public sector was 13.5 years. Regarding their current position at the time of data collection, participants had been in their respective roles for an average of 10.3 years.

In the overall assessment, primary health care (PHC) provided to individuals with noncommunicable chronic diseases (NCDs) achieved a mean score of 6.26, corresponding to a reasonably good level of care capacity (range: 6–8). In contrast, care specifically directed toward chronic kidney disease (CKD) yielded a mean score of

Figure 1. Variables Associated with Each Dimension of the Assessment of Chronic Illness Care (ACIC)

Dimensions		Variables / Components
1. Health Care Organization		1.1 Organizational leadership of the health system; 1.2 Organizational goals; 1.3 Strategies for improving care; 1.4 Policies and incentives for care delivery; 1.5 Institutional authority; 1.6 Benefits.
2. Community Linkages / Collaboration with the Community		2.1 Linking patients to community resources; 2.2 Partnerships with community organizations; 2.3 Regional and local health plans.
3. Health Care Unit	3.a Self-Management Support	3a.1 Assessment and documentation of self-management needs and activities performed; 3a.2 Self-management support; 3a.3 Psychosocial support for patients and families; 3a.4 Effective behavioral change interventions and support groups.
	3.b Decision Support	3b.1 Evidence-based guidelines; 3b.2 Involvement of specialists in improving primary care; 3b.3 Team education on chronic disease management; 3b.4 Patient information regarding clinical guidelines.
	3.c Delivery System Design	3c.1 Care pathways for service delivery; 3c.2 Leadership within healthcare teams; 3c.3 Appointment scheduling system; 3c.4 Patient follow-up and monitoring; 3c.5 Planned visits; 3c.6 Referral to specialists, diagnostic support services, and counter-referral processes.
	3.d Clinical Information System	3d.1 Registries: lists of patients with specific conditions; 3d.2 Reminders and alerts for healthcare professionals; 3d.3 Feedback: performance assessment; 3d.4 Relevant information on patient subgroups requiring specialized services; 3d.5 Patient care plans.
4. Integration of Chronic Care Model Components		4.1 Providing patients with information about care protocols; 4.2 Information derived from registries or information systems; 4.3 Feedback from community programs to healthcare units; 4.4 Population-based approach within the organizational chronic disease care plan; 4.5 Monitoring of appointments, patient assessment, and goal setting; 4.6 Guidelines for chronic disease care.

Source: Costa KC da, Cazola LH de O, Tamaki EM, 2016.

4.53, classified as basic capacity (range: 3–5). This difference was statistically significant ($p < 0.001$), with a large effect size (Cohen's $d = 1.257$), indicating greater consistency and organizational capacity in the delivery of care for NCDs compared with CKD (Table 1).

Regarding the dimensions analyzed, most achieved mean scores were classified as Level C. The exceptions were the Self-Management Support and Delivery System Design dimensions, which stood out with mean scores

classified as Level B and exhibited statistically significant differences, as evidenced by the absence of overlap between their confidence intervals. Notably, the Clinical Decision Support dimension yielded the lowest scores, showing a statistically significant difference compared with the other dimensions (Table 2).

The evaluation of care differed between managers and healthcare professionals (physicians and nurses). Managers consistently reported higher scores across all

dimensions for both noncommunicable diseases (NCDs) and chronic kidney disease (CKD) care. The overall score for NCD care was significantly higher among managers than among healthcare professionals ($p = 0.01$). Similar findings were observed for the Clinical Decision Support, Clinical Information Systems, and Integration of Chronic Care Model Components dimensions of NCD care. In relation to CKD care, a statistically significant difference was identified only for the Clinical Decision Support dimension, with higher scores reported by managers. Additionally, a marginally significant difference was observed for the Health Care Organization dimension ($p = 0.058$) (Table 3).

The analysis of the relationship between the evaluated dimensions and professionals' characteristics revealed no significant correlations between dimension scores and age, years since graduation, or length of service within the Brazilian Unified Health System (Sistema Único de Saúde – SUS). The only exception was observed for the Integration of Care Components dimension in relation to NCD care, which showed a weak but statistically significant negative correlation with tenure in the current position ($r = -0.17$; $p = 0.034$). This finding suggests that professionals with longer experience in their current role tend to assign lower ratings to this dimension.

DISCUSSION

This study highlights the importance of evaluating the care provided to individuals with noncommunicable diseases (NCDs), particularly those living with chronic kidney disease (CKD), within the context of Primary Health Care (PHC). The findings demonstrated that care

for individuals with NCDs received more favorable evaluations than that for patients with CKD. Among the dimensions assessed, Clinical Decision Support showed the greatest disparity between NCD and CKD care and was the lowest-rated dimension overall.

In contrast, the dimensions of Self-Management Support—which encompasses the activities of the Family Health Support Center (NASF), psychosocial support, and support groups—and Delivery System Design—which includes care pathway planning, team leadership, appointment scheduling, and patient follow-up—received the highest ratings among all dimensions evaluated. These findings suggest that PHC services have been more successful in implementing organizational and patient-centered care strategies than in strengthening the clinical and decision-making processes required for the comprehensive management of CKD.

Insufficient follow-up of individuals with NCDs, which may lead to clinical deterioration and delayed referral to specialized care, becomes even more concerning in the context of CKD. Previous studies have identified important gaps in the monitoring of populations at risk for CKD, including shortcomings in the early detection of kidney damage and in the management of patients during the initial stages of the disease. Such deficiencies contribute to delayed referrals to nephrology services and reduce opportunities for interventions aimed at slowing disease progression^(7,13).

A study examining the challenges of CKD care within PHC reported that, in Belo Horizonte, approximately 80% of patients with end-stage kidney disease were referred to renal replacement therapy services through urgent and emergency care pathways. The authors highlighted

Table 1 — Assessment of Primary Care for Noncommunicable Chronic Diseases (NCDs) and Chronic Kidney Disease (CKD) by Dimension, Belo Horizonte, Minas Gerais, Brazil.

Dimensions	Chronic Diseases			Kidney Disease			
	Mean Score	SD	95% CI	Mean Score	SD	95% CI	Cohen's d
Total ¹	6.26	1,24	[6,07; 6,45]	4,53	1,50	[4,28; 4,77]	1,257
Health Care Organization	7.15	1,85	[6,83; 7,44]	4,87	2,14	[4,52; 5,21]	1,141
Community Linkages	4.62	2,10	[4,31; 4,95]	3,43	2,15	[3,07; 3,78]	0,560
Self-Management Support	7.82	1,51	[7,56; 8,06]	6,67	1,86	[6,37; 6,96]	0,673
Clinic Decision Support	4.99	1,62	[4,72; 5,24]	2,54	1,62	[2,28; 2,80]	1,523
Delivery System Design	7.83	1,51	[7,60; 8,07]	6,13	1,89	[5,83; 6,46]	0,990
Clinical Information Systems	6.03	1,68	[5,75; 6,30]	4,49	1,85	[4,20; 4,76]	0,877
Integration of Components	5.38	1,51	[5,15; 5,62]	3,59	1,79	[3,32; 3,89]	1,078

¹ $p = 0,000$ (Teste de Wilcoxon).

Source: Prepared by the authors.

Table 2 – Assessment of ACIC Dimensions for Noncommunicable Diseases (NCDs) and Chronic Kidney Disease (CKD), According to the Participants' Professional Role in Primary Health Care Centers in Belo Horizonte, 2018.

Indicadores/função		Manager		Nurse		Physician		p-value ¹
		Mean	SD	Mean	SD	Mean	SD	
Chronic Diseases	Health Care Organization	7,80	1,20	7,09	1,68	7,02	2,16	0,317
	Community Linkages	5,01	2,28	4,43	1,92	4,73	2,25	0,658
	Self-Management Support	8,24	1,39	7,77	1,24	7,79	1,69	0,121
	Clinic Decision Support	6,19	1,73	4,66	1,32	4,91	1,69	0,001
	Delivery System Design	8,17	1,51	7,91	1,13	7,68	1,68	0,312
	Clinical Information Systems	6,77	1,52	5,92	1,45	5,94	1,85	0,033
	Integration of Components	5,96	1,73	5,20	1,19	5,42	1,67	0,032
Chronic Kidney Chronic	Health Care Organization	5,79	1,56	4,72	2,09	4,72	2,33	0,058
	Community Linkages	3,97	2,21	3,22	2,03	3,49	2,28	0,362
	Self-Management Support	7,12	1,82	6,69	1,81	6,56	1,84	0,306
	Self-Management Support	3,31	1,85	2,29	1,55	2,52	1,52	0,038
	Delivery System Design	6,76	2,04	6,03	1,73	6,09	1,92	0,242
	Clinical Information Systems	5,16	2,08	4,19	1,65	4,64	1,90	0,154
Chronic	Integration of Components	4,19	2,00	3,29	1,52	3,76	1,95	0,171

1 Kruskal Wallis

Source: Prepared by the authors.

persistent difficulties in the early diagnosis and management of CKD, emphasizing the need for greater investment in strengthening the quality of services provided by Primary Health Care Centers. Such efforts should focus on identifying high-risk groups and effectively managing factors associated with disease progression, thereby promoting more timely and coordinated care⁽¹⁴⁾.

In the present study, the Community Linkages and Clinical Decision Support dimensions received the lowest scores for both NCD and CKD care.

Concerning Community Linkages, systematic reviews of international health promotion and primary prevention programs have highlighted the pivotal role of the active involvement of local leaders and community organizations in addressing NCDs. Since the 1970s, several initiatives across different countries have sought to reduce the morbidity and mortality associated with these conditions. One notable example is the North Karelia Project in Finland, which achieved a 57% reduction in cardiovascular disease mortality among men aged 35–64 years, largely attributed to the engagement of multiple community sectors⁽¹⁵⁾. Although family-centered care and community orientation are recognized as core attributes of PHC, studies have consistently reported lower ratings for these dimensions across settings, revealing persistent gaps in community engagement and intersectoral collaboration^(16–19). These findings underscore the importance of creating opportunities for social participation, both

through formal mechanisms, such as Health Councils and Health Conferences, and through the routine activities of Family Health Strategy teams.

Further evaluation of care provided to individuals with NCDs and those with CKD, Clinical Decision Support was the dimension that exhibited the greatest disparity between the two groups, receiving the lowest overall score. This dimension assessed aspects such as the availability of evidence-based guidelines, the involvement of specialists in PHC, the frequency of training and continuing education activities offered to healthcare professionals, and the ways information is communicated to patients. Previous research has emphasized that continuous professional development is essential in PHC and that the effective management of chronic conditions depends not only on access to clinical protocols and guidelines but also on effective collaboration with specialized professionals⁽¹¹⁾.

Most physicians and nurses interviewed reported that communication with specialists occurred primarily through formal referrals and information provided by patients following specialist consultations. Opportunities for clinical discussions or the exchange of information that could contribute to comprehensive and coordinated care were largely absent. Evaluations of the integration of PHC within the Health Care Network have shown that, although designated referral professionals are often available, opportunities for meaningful clinical case

discussions, adaptation of clinical protocols to local contexts, and the development of shared care plans remain uncommon⁽²⁰⁾. It has been argued that closer collaboration between PHC professionals and specialists promotes information sharing and strengthens care coordination, thereby enhancing the continuity and comprehensiveness of care⁽²¹⁾.

An investigation examining the profile and clinical outcomes of patients on the kidney transplant waiting list in Belo Horizonte revealed a limited provision of health promotion and NCD prevention activities, particularly those targeting CKD. The study highlighted the need to expand training and continuing education opportunities for healthcare professionals⁽¹⁴⁾. Strengthening the education and professional development of the health workforce is widely recognized as a key strategy for enhancing PHC, increasing its problem-solving capacity, and improving care management^(22,23).

Previous studies have shown that PHC professionals frequently demonstrate gaps in their knowledge of CKD diagnostic criteria, encounter difficulties in referring patients to nephrology services, and often face challenges in the appropriate management of individuals with the disease^(9,10). These studies also report shortcomings in care management related to insufficient staffing levels, an inadequate professional profile for PHC practice, and suboptimal working conditions, as well as the limited use of management tools designed to support the care of individuals with chronic conditions.

The primary goal of care management is to ensure comprehensive health care delivery, recognizing the need to strengthen PHC in its coordinating role within the health system⁽²²⁾.

To achieve this goal, health managers must understand the health needs of the communities they serve, continuously assessing the quality of care provided, and promoting more efficient organization of Primary Health Care Centers. This includes investing in the training and development of healthcare professionals to ensure an appropriate response to the diverse health needs of the population⁽²¹⁾.

One of the noteworthy findings of this study was that managers of Primary Health Care Centers assigned more favorable ratings to the care provided within PHC than did other healthcare professionals. Similar findings have been reported in studies conducted in other settings. For example, a study carried out in Piracicaba using the Primary Care Assessment Tool also identified differences in perceptions between managers and healthcare teams. While managers primarily emphasized the

need for additional staff training, healthcare professionals expressed concerns about service organization, infrastructure, and the overall performance of health services⁽²¹⁾.

This discrepancy may be explained by managers' broader perspective, whose responsibilities primarily focus on ensuring the continuity and organization of care delivery. In this context, the dimension related to the care pathway received more favorable evaluations. PHC represents the entry point and coordinating level of this pathway, guiding the subsequent care to be delivered across more specialized levels of the health system. Nevertheless, the present study did not identify specific goals and strategies for monitoring patients with CKD, as well as shortcomings in the surveillance of risk factors associated with disease development and progression.

The Brazilian Ministry of Health recommends that the clinical management of CKD be conducted primarily by a multidisciplinary team within PHC, with support from specialized services in the Health Care Network for People with Chronic Diseases, according to the stage of the disease, thereby ensuring comprehensive care⁽⁵⁾. The Assessment of Chronic Illness Care (ACIC) instrument also enables the evaluation of the patient's care pathway, with particular emphasis on the performance of the multidisciplinary team in PHC. It assesses aspects such as the frequency of team meetings, clear role definition, resource coordination, promotion of self-management, and other elements related to the provision of comprehensive care for individuals with NCDs or CKD⁽²⁴⁾.

The instrument further examines team leadership, appointment scheduling systems, the frequency and methods used for patient monitoring, planned consultations focused on prevention, self-management support, and regular clinical assessments, as well as referral and counter-referral processes involving specialty services and support care providers. Within this framework, the multidisciplinary team emerges as the cornerstone of high-quality care for individuals with CKD⁽²⁴⁾.

Primary Health Care (PHC) teams are expected to monitor modifiable risk factors that contribute to CKD progression. Individuals belonging to high-risk groups, as well as those presenting such risk factors, should receive continuous follow-up aimed at the early identification of declining kidney function⁽⁵⁾. The findings of the present study reinforce the existence of fragmentation within the health care network. Although PHC teams demonstrated commitment to achieving established performance targets, they continue to face structural and systemic constraints⁽¹⁵⁾. Considerable efforts were directed toward meeting goals related to maternal, child, and older adult

health, as well as the prevention and management of hypertension and diabetes mellitus, with comparatively less attention given to other chronic comorbidities affecting the population. These findings suggest that PHC remains limited in its capacity to provide comprehensive and resolute care, with persistent gaps that contribute to fragmented service delivery and compromise the continuity and comprehensiveness of care⁽⁷⁾.

The literature contains relatively few studies focusing on the organizational performance of PHC services or offering a critical examination of institutional monitoring and evaluation mechanisms⁽²⁵⁾. It was within this context that the present study was developed, aiming to evaluate the care provided to individuals with CKD in PHC from the perspective of healthcare professionals and to compare it with the care delivered for other non-communicable diseases.

This study has both strengths and limitations. Among its limitations, it is noticed that the research was conducted in a single municipality, included only urban PHC teams, and relied exclusively on healthcare professionals' perceptions without incorporating a direct technical assessment of the services provided. Evaluating the quality of care is a complex undertaking that requires consideration of multiple perspectives on health care delivery. Furthermore, the cross-sectional design precludes the establishment of causal relationships.

Among the strengths of this study is the use of an internationally validated instrument specifically designed to assess chronic illness care and encompassing multiple dimensions of health care delivery.

The simultaneous evaluation of care provided for NCDs and CKD offered a more comprehensive understanding of the services delivered. The reliability of the findings was supported by Cronbach's alpha coefficients, which demonstrated satisfactory internal consistency. Furthermore, the methodological approach included interviews with different groups of healthcare professionals, enabling comparisons across perspectives, particularly between Primary Health Care Center managers and physicians and nurses working in Family Health Strategy teams. Finally, although health care evaluation is a topic of global relevance, the available literature remains limited, revealing important knowledge gaps that warrant further investigation.

CONCLUSION

Care for individuals with CKD within primary health care demonstrated significant gaps when compared to

the management of the disease itself and to other chronic conditions, particularly regarding support for clinical decision-making. Despite advances in self-care support and in the organization of service delivery systems, strategies to integrate CKD into the chronic care model must be strengthened to ensure more equitable and higher-quality care.

The study presented aligns with regional initiatives aimed at strengthening primary care in the management of chronic noncommunicable diseases. By highlighting gaps in the early identification and follow-up of patients with CKD—especially when contrasted with other chronic conditions—the work underscores the need to enhance integration between primary care services and specialized levels of care. Emphasis on the qualification of multidisciplinary teams, on clinical decision support, and on community engagement reflects ongoing efforts to promote more coordinated and patient-centered care.

Thus, this research contributes to a deeper understanding of the challenges faced in primary care and provides valuable insights for the development of strategies aimed at improving the quality and equity of care for chronic noncommunicable diseases.

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