RCMOS – Multidisciplinary Scientific Journal The Knowledge.
ISSN: 2675-9128. São Paulo-SP.

Year V, v.2 2025. | Submission: 08/11/2025 | Accepted: 10/11/2025 | Publication: 12/11/2025

Technologies Applied to Institutional Support in Primary Health Care: A Review Systematic Approach to Strategic Contributions to Service Quality

Technologies Applied to Institutional Support in Primary Health Care: A Systematic Review of Strategic Contributions to Service Quality

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Summary

This study aimed to map the literature published in the last decade on technologies applied to institutional support in Primary Health Care (PHC), identifying their functionalities and implications for improving the quality of care. It is a systematic literature review, with searches conducted in the journal database of the Coordination for the Improvement of Higher Education Personnel (CAPES). Complete studies published between 2014 and 2024, written in Portuguese, Spanish, or English, were included.

Letters to the editor, partial results, duplicates, and articles that did not address the research objective were excluded. In the end, 19 articles comprised the corpus of the analysis, which addressed aspects such as year of publication, type of technology, functionalities, and impacts on primary health care management. The results reveal a dynamic and multifaceted scenario that demands attention to local specificities and the inclusion of health professionals in decision-making processes. The technologies analyzed demonstrate potential to promote more collaborative and horizontal management, contributing to improved quality of care and the strengthening of public policies that are more responsive to the needs of the population. Thus, the importance of managers and policymakers recognizing the strategic value of technologies in institutional support, ensuring their contextualized and effective implementation, is highlighted.

Keywords: Primary Health Care. Institutional support. Information Technology. Health Management.

Abstract

The study aimed to map the literature published in the last 10 years to identify the technologies used in institutional support in Primary Health Care (PHC). A systematic mapping of the published literature on the subject was conducted, with data collected from the journal database of the Coordination for the Improvement of Higher Education Personnel (CAPES). The inclusion criteria were defined as follows: being published in full text, within the time frame of 2014 to 2024, and written in Portuguese, Spanish, or English. The exclusion criteria included letters to the editor, partial results, duplicates in the databases, and articles that did not address the research question. From the research execution phase, 19 articles were selected for this study, which were analyzed concerning the year of publication, technology functionalities, and implications of the technology in PHC. At the end of this study, it was possible to observe a dynamic and multifaceted scenario surrounding the use of technologies in institutional support in PHC, which demands attention to local specificities and the inclusion of health professionals in decisions and practices. The capacity for adaptation and innovation, combined with the promotion of a more collaborative and horizontal management style, can lead to significant advances in the quality of health care and the promotion of more effective public policies that are sensitive to the needs of the population. Therefore, it is crucial for managers and policymakers to recognize and value the transformative potential of technologies, ensuring that their implementation effectively meets local demands and the realities of professionals working on the front lines of health care.

Keywords: Primary Health Care. Institutional support. Information Technology. Health Management.

Introduction

Managing information in healthcare is crucial for achieving positive outcomes. And technologies play an important role in this process. Wilches Flórez and Wilches Flórez (2017) define information and communication technologies as technological resources. essential for information management and communication, ranging from Storage, access, and processing. The *American Health Information Management The Association* (AHIMA, 2018) highlights that health information management involves... The acquisition, analysis, and protection of this information is vital for providing care. Quality, combining business, science and technology.

Marín (2010) states that Health Information Systems generate information on in an agile and secure way, facilitating decision-making and the exchange of information between professionals. However, Raviolli, Soarez and Scheffer (2018) observe that planning and Health management faces significant challenges, with few academic publications focused on it. in the overall planning of the health system, and further studies focused on aspects specific and regional.

The use of indicators has emerged as a crucial tool in planning. of public health. Albuquerque and Martins (2017) point out that, although the indicators are Widely used in the Brazilian Unified Health System (SUS), there are still flaws, such as the prioritization of indicators. intermediaries instead of focusing on care outcomes. Furthermore, they emphasize that... Indicators are useless if managers don't use the information to solve problems. concrete. Lima, Antunes and Silva (2015) corroborate this view, identifying obstacles. significant factors in the use of indicators by health managers in Brazil, such as the slowness of The problems include the systems, the lack of qualified professionals, and the poor integration between systems.

Institutional support (IS) in health management is a fundamental strategy for democratizing management and consolidating the Unified Health System (SUS) as a policy. public. Inspired by the Paideia Method, proposed by Campos, AI aims to promote co-management. and to set up cooperative networks, allowing workers and managers to expand their analytical and intervention capabilities within institutions. This approach seeks to address Power conflicts, going beyond the simple standardization of work and promoting management. more democratic and participatory (Brito et al., 2022).

The use of technology by institutional supporters has the potential to transform the co-management and coordination of health services, promoting more efficient administration. participatory and efficient. Given that information technologies are essential to improve the

communication, data analysis and decision-making, understanding which technologies have been
How well they are implemented and how effectively they are implemented is fundamental to identifying good practices and areas that...
They require development. Therefore, this research aims to contribute to the
Strengthening Primary Health Care (PHC), with information on the technologies that
They have been used in this context.

Given the above, this study aims to map the literature published in
The last 10 years were used to identify the technologies employed in institutional support in healthcare.
Primary Health Care (PHC).

Methodology

A systematic review of the published literature on the subject was carried out, with a view to
to identify the technologies used in institutional support in primary health care. This type of research
It allows you to obtain information about how a particular topic is being addressed by others.
researchers and their main findings (PETERSEN *et al.,* 2008).

During the research planning phase, research gaps were identified and, from then on...
From this, questions were raised about the subject matter and the objective to be achieved was defined.
during the study. The study was guided by the following questions: what technologies
Have these tools been used by institutional supporters within the scope of primary health care? What is the purpose of their use?
What technologies are used in institutional support? And what are the implications of using technologies?
Regarding institutional support in primary health care?

The planning phase also includes keywords, search *strings ,* and...
databases, as well as the methods for conducting the research. For the development of
The following keywords were defined for the mapping: Primary Health Care *(Primary*
Health Care; Institutional Support ; Information Technology
(Information Technology); and Health Management . The search *terms*
They were considered in both Portuguese and English, using the operator
Boolean AND.

The research was conducted using the periodicals database of the Coordination of
Improvement of Higher Education Personnel (CAPES). The inclusion criteria were...
defined: to be published in full format; within the time frame of 2014 to 2024; to be
written in Portuguese, Spanish, or English. It should be noted that the time frame was
defined as representing the last 10 years, considering the rapid pace of technological evolution,
Previous research would be obsolete. Exclusion criteria: being a letter to the editor;

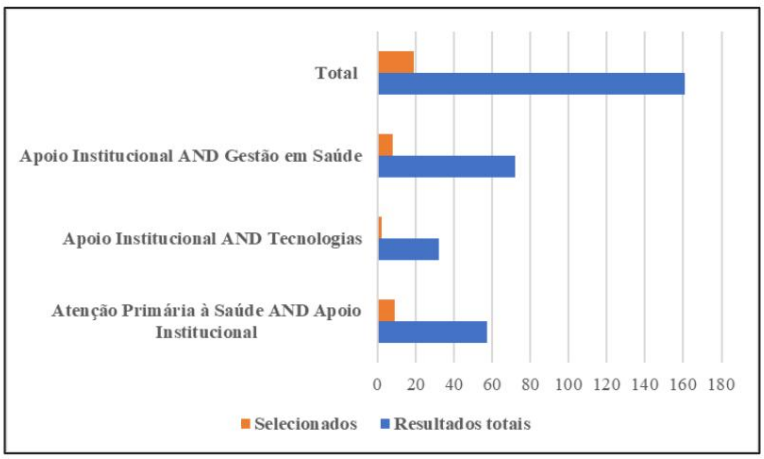
presenting partial results; being repeated in databases; and not responding to research question.

From the research execution phase, 19 articles were selected to compose the study. This study, those that were analyzed in relation to the year of publication, technology Functionalities and implications of technology in primary health care. The results found by the authors. They were also analyzed from a qualitative approach, considering the results. that they found from their study.

Results

A total of 161 results were identified that address the adoption of technologies in institutional support for primary health care, with 19 publications selected for this research that They responded to the research questions raised for this study (Graph 1).

Figure 1. Total results and selected articles by search strategy.



Source: Prepared by the author (2024).

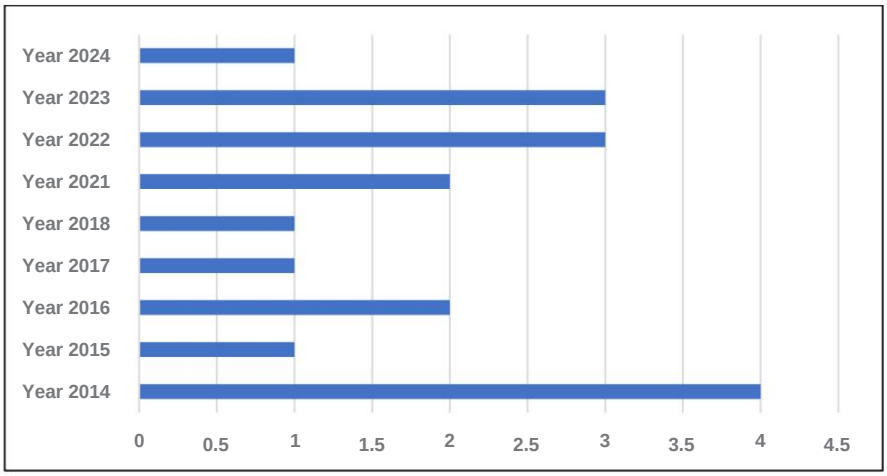
As can be seen, the combination "Institutional Support AND Management in "Health" had the highest article selection rate (11.1%), with 8 articles selected. In total, approximately 11.8% of the articles initially found were considered. relevant to the study.

It is important to mention that the CAPES (Coordination for the Improvement of Higher Education Personnel) platform (Higher Education Personnel) offers access to a vast number of academic databases. and scientific, fundamental for research in various fields of knowledge. Among the The main indexed databases include Web of Science, Scopus, PubMed, Medline, and SciELO.

and IEEE Xplore, which includes peer-reviewed journals, books, dissertations and theses, in addition to of patents and other technical materials. These databases are essential for researchers who They seek up-to-date, high-quality references in their fields, promoting Access to a diverse body of scientific research, both national and international.

The distribution of selected articles by year of publication shows a The concentration was relatively uniform throughout the analyzed period, with some variations. The year 2014 stands out as the most productive, with 4 selected articles, representing the the largest number of publications relevant to the study. Already in the years 2015, 2017, 2018 and 2024, There was only 1 article selected each year, suggesting a lower output of publications. relevant or a more restricted focus on selection criteria for these periods (Chart 2).

Figure 2. Distribution of selected articles by year of publication.



Source: Prepared by the author (2024).

From 2021 onwards, a slight recovery in the number of articles can be observed, with 2 articles. selected that year and 3 articles in each of the years 2022 and 2023, which may indicate a renewed interest or increased scientific output on the topic of technologies and support Institutional changes in Primary Health Care in recent years. This distribution reveals a a cycle of publications that fluctuates over time, but which seems to gain more momentum from of 2021.

The distribution of articles by research location revealed that the states The states of Bahia and Amapá lead with the highest number of studies, accounting for 4 and 3 publications, respectively. respectively. This emphasis suggests a concentration of research efforts in these areas. regions, possibly indicating greater attention to the particularities of Primary Care. Health and Institutional Support in these geographic contexts (Graph 3).

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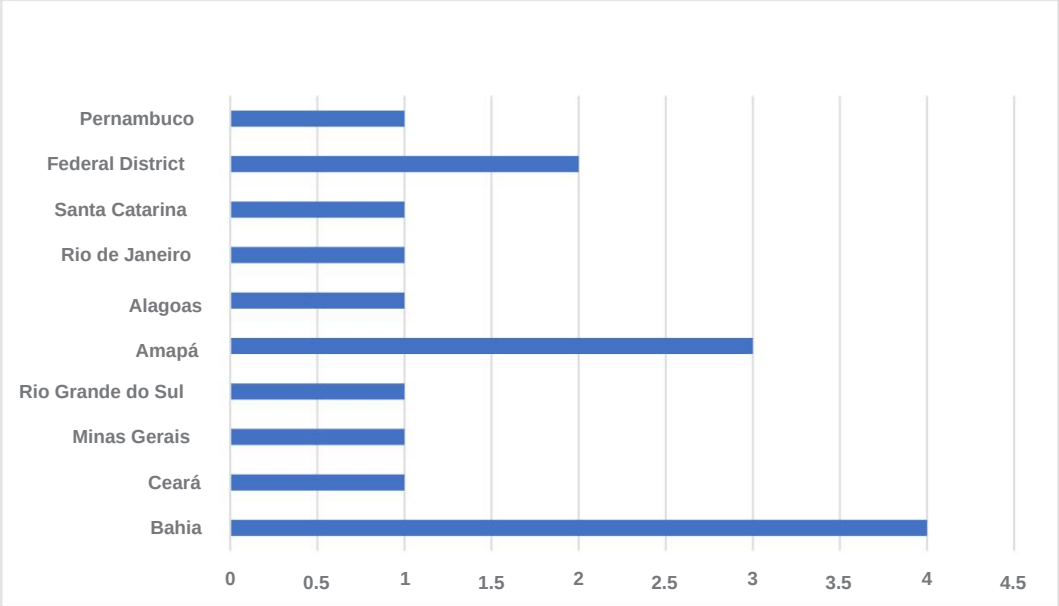
Figure 3. Distribution of selected articles by research location.



Source: Prepared by the author (2024).

Other states, such as the Federal District, also stand out with 2 articles. selected. The states of Ceará, Minas Gerais, Rio Grande do Sul, Alagoas, Rio de Janeiro... Janeiro, Santa Catarina, and Pernambuco each have only one study, which may suggest that The topic is being addressed in a more focused way in these regions. When analyzing the distribution Regionally, regarding publications, a greater concentration of studies is observed in the North and Northeastern Brazil, highlighting a strong presence of research on Institutional Support. in Primary Health Care in these areas.

The Northeast region is the most represented, with 8 articles in total, 4 of which are from Bahia, 1 from Ceará, 1 from Alagoas, 1 from Pernambuco, and 1 from Rio Grande do Norte. This may indicate that the This topic is highly relevant to the development of public health in this region, which Historically, it has faced structural challenges in the health sector.

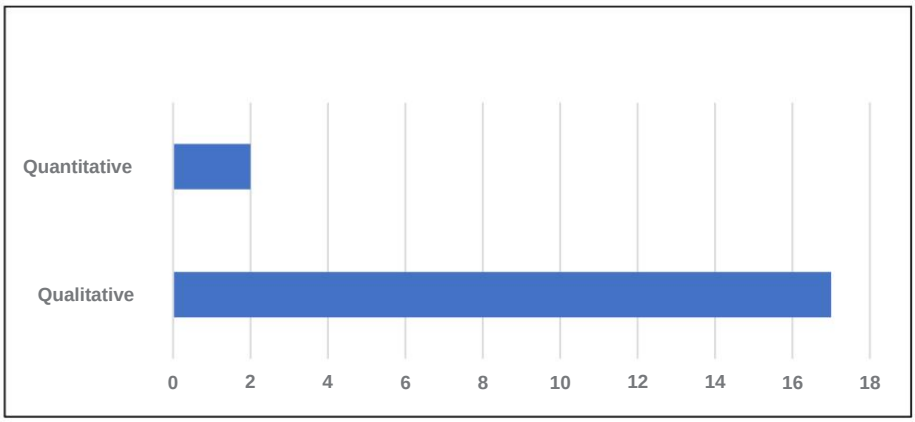
The Northern region, in turn, appears in second place with 3 studies from Amapá. predominance of studies in this region, despite a smaller quantity compared to Northeast Brazil may reflect the growing attention to specific health and support needs. institutional in states with characteristic logistical and socioeconomic challenges of Amazon.

In the South and Southeast, production is much more dispersed, with only 1 item from Minas Gerais. General, 1 from Rio Grande do Sul and 1 from Santa Catarina. The low number of publications in these regions may indicate that the topic is addressed less intensely, possibly because the

Infrastructure and health management mechanisms are already more consolidated, with less...
need for significant institutional support interventions. As for the Central-West region,
Represented by the Federal District, it has 2 studies, which suggests some degree of interest.
on the subject in the country's capital, which also acts as a national point of reference in terms
Formulation and implementation of public health policies.

Regarding the distribution of articles by research type, it was found that...
There is a marked predominance of qualitative studies, with 17 publications adopting this approach.
This approach, compared to only 2 quantitative studies (Graph 4). This prevalence of
Qualitative research suggests that the authors are focused on understanding in a more...
contextualized experiences, practices, and perceptions related to Institutional Support in
Primary Health Care.

Figure 4. Distribution of selected articles by research type.



Source: Prepared by the author (2024).

It is worth noting that qualitative research is frequently used to explore
subjective aspects, such as the perceptions of healthcare professionals, institutional challenges and
management practices, which may explain their predominance in this context. It is important to mention
Two of the selected articles were theoretically based, one being an integrative review and the other a review.
systematic review of the literature.

On the other hand, the low representation of quantitative studies (only 2 articles)
This indicates that there is still little research focused on the measurement and statistical analysis of data.
related to the impact and results of Institutional Support. This could be an area to be explored.
developed, since quantitative approaches could contribute to a more developed evaluation.
The objective is to achieve results and define performance and effectiveness indicators for policies and
assistive technologies.

Analysis of the sample of participants in the selected studies reveals a
The predominance of healthcare professionals, totaling 29,756 individuals, is due to...
primarily to the quantitative studies included. This large sample reflects the focus on
to capture the perceptions and practices of these workers on the front lines of Primary Care
Health (Table 1).

Table 1. Research participants/sample

Research participants	Sample
Technical staff and management	72
Institutional supporters	5
Publications	48
Managers	52
Healthcare professionals	29,756

Source: Prepared by the author (2024).

In contrast, the sample of managers (52) and members of the technical team and
leaders (72) is more modest, although relevant to understanding the role of management and
Coordination in Institutional Support. It is worth noting that the researchers did not specify
who these professionals on the technical team would be, which leads one to believe that some supporters
Institutional organizations may be included in this group.

On the other hand, the number of institutional supporters (5) is significantly smaller,
indicating a gap in research that focuses directly on these essential professionals.
for the mediation of institutional practices. It is observed that the qualitative approach is more
predominant in investigations involving institutional supporters, which suggests a
A more detailed and in-depth exploration of their practices and challenges. In addition, the publications
(48) were analyzed as part of the samples, showing the use of documentary reviews that
They complement the understanding of institutional support and its dynamics in healthcare.
Primary Health Care.

The analysis of the actions carried out by institutional supporters (IS) as described
The articles reveal a varied focus of activity, with emphasis on the micromanagement of services.
health, which was reported in 14 studies (Table 2). This highlights the central role of AI in
organization and management of health services at the local level, ensuring that the actions
occur efficiently and are integrated into public policies.

Table 2. Description of actions carried out by institutional supporters.

Actions performed by AI	N
Production of information on the installed capacity of basic units.	1
Monitoring of actions performed at the local level.	5
Support for the More Doctors Program	1
Micromanagement of health services	14
Communication and integration between teams	9
Participation in collective processes for improving institutional actions.	8
Home visits	1

Source: Prepared by the author (2024).

Communication and integration between teams also appear as one of the actions. One of the most recurring themes, being mentioned in 9 articles. This reinforces the importance of AI as a mediator who promotes the exchange of information and coordinates collective work, crucial for the Cohesion of healthcare teams.

Participation in collective processes for improving institutional actions was observed in 8 studies, indicating the involvement of AI in capabilities and improvements. Continuous aspects of work processes. Monitoring of actions performed at the local level. It was mentioned in 5 articles, highlighting the role of AI in monitoring the implementing policies and ensuring their proper execution.

Other actions, such as producing information on the installed capacity of Basic health units and support for the More Doctors Program were less frequent, appearing in just one study each, but they demonstrate the diversity of responsibilities that can be assumed by the AI. Finally, the carrying out of home visits was mentioned only once. This, in turn, may indicate a more localized and specific action.

An analysis of the technologies used by institutional supporters revealed a a diverse landscape that combines both light and hard technologies, reflecting the needs and practices adopted in actions to support health (Table 3).

Table 3. Description of the technologies used by institutional supporters.

Lightweight Technologies	
COVID Monitoring App	1
WhatsApp	3
Social media	2
Virtual telehealth platforms	13
Analytical technologies	5
Electronic medical record	2
Meet/Zoom	2
Technologies to support management	7
Educational technologies	2
Hard technologies	
Tablet	5
Smartphone	8
Notebook	3
Computer	1

Source: Prepared by the author (2024).

Among the soft technologies, virtual telehealth platforms stand out as...
most frequently used, appearing in 13 articles, which suggests a growing focus on telemedicine and on
The use of digital resources to expand access to and improve the quality of healthcare services.
WhatsApp and social media, with 3 and 2 mentions respectively, indicate that AI uses
These methods are designed to facilitate quick and efficient communication between teams and with the community.
Analytical technologies, with 5 articles, demonstrate the importance of data analysis in
health management, enabling more informed decision-making. Other tools,
such as electronic medical records (2), Meet/Zoom (2) and educational technologies (2), are also
present, highlighting a varied use of digital resources for training and
information sharing.

In terms of hard technologies, the smartphone appears as the most...
Used, mentioned in 8 articles, reflecting its practical functionality for AI in the field.
Tablets (5) and notebooks (3) are also mentioned, pointing to the need for tools
that allow mobility and access to data in real time. The use of computers (1) is more
limited, which may suggest a greater reliance on mobile devices for activities.
daily use. This combination of lightweight and hard technologies highlights flexibility and adaptability.
of institutional supporters in the use of tools that enhance their actions and facilitate the
Communication and information management in the context of public health.

Discussion

Based on the mapping carried out, it was possible to verify the growing importance of
technological integration in health management processes, especially in a context where
Efficiency and effectiveness in service delivery are increasingly required.
The predominant focus on qualitative studies suggests an approach that values experience.
and the perspective of healthcare professionals, allowing for a richer understanding and
contextualized understanding of the dynamics occurring in primary health care. This approach is crucial for the
Identifying practices that work and implementing improvements that truly make a difference.
meet the needs of users and professionals involved.

The significant presence of research in the Northeast region, especially in the states of
Bahia and Amapá indicate a greater appreciation for local specificities in public health practices.
This is particularly relevant considering the structural challenges faced by these
regions that demand solutions adapted to their reality. The concentration of publications
In these places, it can be seen as an indication that there is an effort to understand and address...

the complexities and particularities of health in these contexts, which can contribute to the Formulating more effective public policies.

The study by Aleluia et al. (2023) analyzes the management of Primary Health Care (PHC). in Bahia during the COVID-19 pandemic, highlighting the role of institutional support and the use of technologies. The authors demonstrated that institutional support from the state to municipalities was fundamental in the development of contingency plans, team training, and dissemination of technical standards. However, municipal autonomy and regional structure have impacted the Management capacity, with differences in technical support and regional monitoring. The study notes that the centralization of regional management and the lack of coordination with the federal government and Social controls limited a more coordinated response. The accumulated experience of Bahia The use of information and communication technologies (ICTs) for telehealth was a key point. positive, highlighting its ability to expand cooperation with municipalities and Reconfiguring the use of these tools, in addition to training primary health care teams.

In this study, understanding the experiences of healthcare professionals is a step forward. critical to ensuring that primary health care policies and interventions are relevant and effective. Active engagement of these professionals in research can not only enrich knowledge existing, but also promoting a sense of belonging and responsibility in the initiatives improving health is fundamental to the long-term success of health policies. public.

Institutional support is seen as a tool that reshapes traditional management. in healthcare, integrating technologies and promoting organizational change. It enables a A new approach between institutional actors, improving not only services, but also labor relations, promoting the mobilization of workers around everyday issues and strengthening their capacity for intervention. The use of technologies, Especially in information and communication, it is highlighted as a mediator of standardization. work in health (Santos Filho, 2014).

Furthermore, the micromanagement of health services verified during the mapping was evident. The work carried out reflects the need for closer management, adapted to the reality of... Primary health care services. This emphasizes the relevance of collaborative and integrated actions, promoting the communication between healthcare teams and institutional supporters. This communication is fundamental not only for the exchange of information, but also for the construction of a A work environment that fosters cooperation and mutual learning.

The diversity in the use of technologies, both soft and hard, points to the flexibility of institutional supporters in their practices, suggesting that adaptation to

Local needs and innovation are essential for the effectiveness of health interventions.
Flexibility is an important asset, as it allows healthcare teams to respond
Quickly respond to emerging challenges and seize opportunities for continuous improvement.

Almeida et al. (2015) mention the use of technologies in the context of Support
Institutional to the More Doctors Program, especially with regard to monitoring.
and to the supervision of activities. They emphasize that, in order to support academic supervision and the
development of evaluation mechanisms, both in the actions of Ceará and Bahia,
In Minas Gerais and Rio Grande do Sul, a digital communication platform was used for
To facilitate communication between supervisors, tutors, and physicians. This technological tool
helped organize meetings, share information, and generate reports, contributing to
More efficient supervision and continuous monitoring of the program. These technologies
They also allowed for more agile coordination between the different actors involved.
enabling the sharing of experiences and the dissemination of best practices, in addition to
To improve data collection for evaluating the program's impact in the regions served.

According to Barros et al. (2014), institutional support enables the analysis of
Management methods, promoting work in co-management spaces and generating transformations.
Organizational changes. One of the changes described in the study is the reorganization of the entrance.
of health services, which resulted in greater access and resolution for users. In addition
Furthermore, the study emphasizes that support is a strategic tool for creating new strategies.
within the SUS (Brazilian Public Health System), expanding institutional democracy. Supporters utilize technologies.
analytics to promote new modes of operation, considering the interdependence between
clinical and political, care and management, as well as the transversality of practices and knowledge in
institutions.

Brito et al. (2021) addressed the use of technologies by AI and highlighted the importance of
Methodological tools for the co-management of collectives in the context of primary health care. Technologies,
In the context of AI, they are seen as facilitators of the implementation of collaborative practices between
Managers, workers, and users of the healthcare system. These technologies support integration.
of information and processes, promoting horizontality in power relations and strengthening
Co-management and autonomy in healthcare practices. The definitions and practices of AI discussed in
Studies include the Paideia methodology, which encourages co-management through the use of technologies.
to support clinical decisions and interventions. The study also emphasizes the importance of the Project
Individualized Therapeutic Approach (PTS) and the Transdisciplinary Reference Team (ETR), which utilize
technologies to facilitate information sharing and joint planning of
interventions. In this way, the use of technologies by AI aims to transform relationships.

Traditional management methods allow for a more inclusive and collaborative approach that integrates... different actors and promotes organizational and clinical changes in the health system.

Carmo et al. (2022) explored the implementation of the Previne Brasil Program as A new model for financing primary health care in Brazil, especially in the state of Amapá. With With a focus on strengthening municipal management and primary health care teams, actions were carried out to technical support, training, and reorganization of services, aiming to improve indicators and Previne Brasil's work processes. These initiatives resulted in progress in registration. user base, weighted acquisition, and performance, with emphasis on significant growth. in the number of registrations of municipalities such as Porto Grande and Macapá. Communication between the Teams were facilitated by the use of lightweight technologies, such as WhatsApp®, which improved the communication in remote regions. In addition, training was provided on the use of digital tools, such as the E-SUS Território app and ACS LITE®, facilitate the Registration and monitoring of users, especially by Community Health Agents. (ACS).

Cassella and Machado (2018) analyzed the role of institutional supporters in a Public maternity hospital in Alagoas during the implementation of the National Humanization Policy (PNH). The authors found that technologies to promote PNH, especially those Focused on supporting workers and managers, they played a key role in transformation of work practices. The research highlighted that assistive technologies, such as Applications and communication tools have facilitated interaction between managers and workers. and users, fostering a collaborative environment. However, the authors also They identified a disconnect between the rigidly established protocols and the practices. daily allowances. This situation highlighted that, despite attempts at standardization, the essence of Human relations and the dynamics of work in the healthcare sector demanded flexibility and adaptation.

In the study by Ferreira et al. (2023), the authors examined the use of technologies in institutional support in the municipality of Rio de Janeiro, especially in relation to the treatment of People living with HIV (PLHIV). The research identified difficulties in assessing medical records due to incomplete records and lack of clarity in the information. The authors They also highlighted the importance of implementing electronic health record systems in health units, which improved the quality and accessibility of information from patients, in addition to providing support for clinical decision-making.

Garcia Júnior, Rivorêdo and Flumian (2016) reported a critical experience in development of technologies and devices for institutional support applied to health indigenous people, especially those in the Special Indigenous Health Districts of the Southern Interior of

Santa Catarina. The developed cartography mapped the technologies and devices used, as well as the actions taken. The authors found that institutional support promoted the autonomy and strengthened positive relationships between the different levels of the SUS, especially in Social Control in Indigenous Health. During the process, a close relationship was noted between the concepts of Differentiated Care and Expanded Clinical Practice, which contributed to the development of health practices more suited to indigenous populations. The study also highlighted that The implementation of these initiatives depends on the ethical, political, and aesthetic decisions of... institutions, and therefore their continuity may be limited. Furthermore, institutional support It was understood as a management practice that challenges traditional models of Coordination, planning, supervision, and evaluation in healthcare.

The study by Guizardi et al. (2019) highlighted the use of technologies as a key element. in the role of AI to democratize the management of health policies in the PNAB between 2011 and 2015. Virtual technologies have been widely used to facilitate the creation of networks. socio-technical, promoting cooperation and shared decision-making among supporters and local managers. These networks were essential to expand access to resources and to Implementation of strategic programs, such as e-SUS AB and Telehealth. The use of these Technology has enabled communication and interaction between different actors, even at a distance. enabling the implementation of priority agendas of the federal government, such as PMAQ-AB and The requalification of primary health care units. However, although AI has enhanced the use of tools Technological solutions for management, it was still considered a complementary strategy, without being... to consolidate as an autonomous management model.

Despite the diversity of global nomenclatures for telehealth, it is defined as a set of interactive remote services offered through digital technologies Information and communication technologies (ICTs) are integrated into healthcare care pathways. The program It includes teleconsultation, tele-education, and telediagnosis services, and covers most of the... Primary health care in Brazil, with centers linked to federal universities. Although There is evidence that telehealth contributes to increasing the effectiveness of care, By reducing referrals and costs, the program's efficiency and effectiveness assessments... still limited. The greatest use of telehealth occurs in the South and Southeast regions and in smaller municipalities, highlighting regional inequalities that require intervention from governments to improve the quality of services and strengthen health teams (Sarti and Almeida, 2022).

Lima, Albuquerque and Wenceslau (2014) analyzed the perceptions of managers of Health in Recife regarding continuing education processes in health, highlighting the application

This strategy is used as a tool to transform work in primary care. The research,
Based on interviews with seven managers, it was revealed that some sectors of the Health Department
Some have properly embraced lifelong learning, while others have confused it with education.
continued. Continuing education initiatives arose from needs identified in
work, focusing on the professional development of individuals, highlighting devices as support.
matrix structure, institutional support, and the individualized therapeutic plan. However, the study pointed out
Challenges include the fragmentation of actions and the lack of priority given to continuing education.
on the part of some managers.

Pantoja et al. (2022) highlight the use of active technologies and methodologies as
central tools in institutional support for the organization of Health Care Networks
in the state of Amapá. In institutional support, technologies were used for training.
realistic in-service, with the aim of optimizing clinical management and care, as well as improving
health indicators and strengthening healthcare networks. Among the active methodologies were
employed gamification (through the Kahoot® platform), problem trees and maps.
conceptual. To support the training, audio, video and other equipment were used.
Information technology as an additional tool, in addition to the delivery of printed and formatted materials.
Digital access for healthcare professionals. These initiatives encompassed multidisciplinary professionals,
including doctors, nurses, nursing technicians, community health workers,
physiotherapists, psychologists, nutritionists, dentists, and managers, with the aim of promoting a
Greater integration and improvement of health services in the different regions of the state.

Melo et al. (2016) investigated the limitations and potential of the general guidelines of
Management of Primary Care in Brazilian capitals in relation to institutional support.
In the context of institutional support, the authors highlighted the importance of an environment.
democratic organizational structure, where co-management and the use of technologies could facilitate the
Negotiation, conflict mediation, and project coordination. The use of these technologies in support.
The institutional aspect involved not only the organization of work, but also the promotion of a
Expanded and ongoing training for professionals, helping them to cope with the demands.
daily tasks in Primary Care.

Mori and Oliveira (2014) discuss the use of technologies and practices of institutional support.
in the context of the Federal District (DF), focusing on the work of the consultants of the National Policy
Humanization Program (PNH). The support was implemented between 2008 and 2013, initially at the Hospital
from Base (HBDF) and later expanded to the Secretariat of Health Care (SAS), with the objective
to promote changes in care and management models, strengthening the SUS Network. Technologies

and mechanisms such as co-management, welcoming, and ambiance were implemented, in addition to Tools such as open visitation, the right to a companion, management councils, and boards of directors.

One highlight noted by Mori and Oliveira (2014) was the implementation of management. shared through management boards, seeking to include workers in the management of their work, strengthen user participation, prioritize services based on vulnerability and risk, and promoting deinstitutionalization. Institutional support also promoted the analysis of work processes, encouraging the search for collective solutions and overcoming challenges. dehumanizing practices.

Melo et al. (2017) conducted a descriptive quantitative study to analyze the Institutional support for teams that joined the Access Improvement Program and Quality of Primary Care (PMAQ-AB). The institutional supporter was evaluated in a way Positive, but it was found that he is overwhelmed, with many teams under his supervision. responsibility, indicating the need to redefine the role of the supporter. In relation Regarding the use of ICTs, the study found that, although face-to-face contact is the predominant form... Among supporters and teams, contact via telephone is still very frequent, and contact by Internet access is low. This has been cited as an obstacle to effective support, since the use Virtual platforms could facilitate communication and the sharing of knowledge and practices, in addition to providing guidance in virtual classrooms, improving the qualification of care and management.

The lack of internet contact was associated with the limited infrastructure of the units. health in many Brazilian municipalities. The authors highlight that investment in infrastructure of Basic Health Units (UBSs), considering the recommended environment Through HumanizaSUS, it would be essential to promote more welcoming and effective care. Furthermore, the inclusion of ICTs in the units is directly related to the conditions of available infrastructure, which is often inadequate and hinders the work of health teams (Melo et al., 2017).

Pantoja et al. (2024) present an analysis of the advances and challenges of Implementation of digital technologies in Primary Health Care (PHC) in the State of Amapá, focusing on the institutional support from the State Health Secretariat. The report highlights the... need for expansion of digital infrastructure, connectivity, monitoring systems, and Qualification of health indicators for fundraising. The technical advisory focused on Installation of electronic medical records in primary health care units and training of professionals in their use. Technologies such as the e-SUS APS system and mobile applications. The results They pointed to positive impacts, such as data quality improvement, management support, and enhancement of...

Health indicators and greater user satisfaction. However, challenges still exist.
related to geographical, political and connectivity difficulties, as well as the need
of changes in work processes and the development of technological skills
of healthcare professionals. The study highlights that, although significant progress has been made
Despite the achievements, the complete computerization of primary health care in the state of Amapá still faces obstacles.
especially in municipalities with poor digital infrastructure.

The study by Prata, Araújo and Arce (2023) analyzed the work of ApIs in the management of
Primary care in Bahia, highlighting the use of "relational technologies". These technologies,
Focused on interpersonal relationships, they allow ApIs to promote technical guidance and reflection.
and shared responsibility with those being supported. The authors highlighted the central role of "technologies
"relational" in the activities of the ApIs, being through interpersonal relationships that the
Supporters are able to provide technical guidance, address local realities, and stimulate...
The active participation of the individuals and groups involved. The study revealed that the structuring of
The work often depends on the individual characteristics of the APIs, rather than on documentation.
planning. Relational technologies are fundamental to strengthening management and
To promote collaborative practices between the state and municipal levels.

Rocha and Silva (2021) discuss the role of institutional support in strengthening
healthcare, especially through home visits, is a vital tool for
Connecting the Family Health Units (USF) with the surrounding area. Institutional support qualifies and operationalizes these visits.
promoting user-centered care, facilitating interaction between staff and family, and
strengthening the intersectoral relationship between health and social development. The study also
It addresses challenges, such as the need to reorganize the work process during the pandemic.
Integrate more points in the Health Care Network and promote shared responsibility in care.
Although institutional support is valuable, it faces difficulties due to the overload of
Support staff, who serve multiple teams and balance administrative and technological demands.
Research indicates that the focus often falls on hard technologies, moving away from the use of...
Lightweight technologies, essential for collaborative and participatory work in daily life.
USFs.

The study by Sarti and Almeida (2022) analyzes the use of the National Program
Telehealth Brazil Networks in primary health care, focusing on factors that influence its
Implementation and use. The researchers used data from the second cycle of the Program.
National Program for Improving Access and Quality in Primary Care (PMAQ-AB), involving
A sample of 29,756 health teams that voluntarily joined the program. The analysis
reveals that the prevalence of telehealth use was 32.7% in the overall sample, and 73.3% among

The teams with the program implemented, with distance education being the most frequent modality.
Results indicate that institutional support had a positive impact of 40% on prevalence.
Use of telehealth. Structural factors, such as internet access and different rooms.
The objectives proved to be less significant compared to institutional support and...
The implementation of telehealth in the unit, which were the most decisive factors for adherence to...
program.

From this, it is possible to say that the technologies employed by the supporters
Institutional tools within the scope of primary health care include communication and information tools, such as
Digital platforms, applications, telehealth, and electronic health record systems. These
These devices not only facilitate the management of services, but also promote collaboration.
among healthcare professionals, managers, and users. For example, the use of platforms
digital tools for supervision and monitoring, as indicated by the studies analyzed,
This contributes to the organization and exchange of information, resulting in more effective supervision.
Efficient healthcare actions. Telehealth, in turn, emerges as a solution that expands
Access to services, especially in remote regions, by offering teleconsultations and
Telediagnostics that minimize the need for users to travel.

The purpose of using these technologies goes beyond mere operational efficiency; it's about...
It is also part of an effort to democratize access to healthcare and promote lifelong learning.
of professionals and foster a more collaborative work environment. The experience of
Bahia, during the pandemic, for example, demonstrated how institutional support and training...
Teams using ICTs can generate faster and more coordinated responses in difficult times.
crisis.

The implications of using technology in institutional support are vast. Firstly,
The adoption of technological solutions represents a paradigm shift in the way...
Healthcare is managed with an emphasis on collaborative practices that integrate different actors within the system.
health. This approach favors a more horizontal management structure, in which co-management and
The autonomy of healthcare workers is promoted, as highlighted by Brito et al.
(2021). The implementation of methodologies such as Paideia, which seeks to encourage co-management.
Through the use of technologies, it reflects an attempt to redefine power relations and promote
a more inclusive management approach adapted to local realities (Brito et al., 2021; Brito et al., 2022).

However, this transition to a more technological and collaborative model also
This presents challenges. The disharmony between rigid protocols and the need for flexibility in daily life...
The day of health practices is a clear example of how human relationships and the dynamics of
Work requires constant adaptation. The study by Cassella and Machado (2018) illustrates this.

tension, where, despite attempts at standardization, the essence of health practices requires a
An approach that values the uniqueness of workers' experiences.

Furthermore, the diversity in the use of technologies — both soft and hard — suggests that institutional supporters need to be flexible and innovative in their practices, continuously adapting to local needs and emerging challenges. This implies not not only in training professionals to use these technologies, but also in a Critical reflection on the efficacy and effectiveness of these tools in promoting change. significant in the health of the population.

Communication between healthcare teams and institutional supporters is a crucial factor. for the success of interventions in primary health care. The mapping carried out highlights that actions Collaborative and integrated approaches are fundamental to building a positive work environment. favorable to the exchange of information and mutual learning. The presence of communication Efficiency not only enhances the quality of interventions, but also strengthens the... The responsiveness of health services to the demands of the population.

Therefore, the integration of technologies into healthcare management processes should not be viewed not only as a tool to improve efficiency, but as a means of Transforming the relationships between the different actors involved in primary health care. Promoting practices collaborative, supported by technologies that facilitate communication and the exchange of knowledge, is essential for facing the complex challenges that permeate public health in Brazil.

Conclusion

At the end of this study, it was possible to verify a dynamic and multifaceted scenario in The use of technologies in institutional support in primary health care demands attention to... local specificities and the inclusion of health professionals in decisions and practices. A Adaptability and innovation, combined with the promotion of more collaborative management and Horizontalization can result in significant advances in the quality of healthcare and in... Promoting more effective public policies that are sensitive to the needs of the population. Therefore, it is crucial that managers and policymakers recognize and value the The transformative potential of technologies, ensuring that their implementation is done in a way that... to effectively meet local demands and the realities of the professionals working in front line of healthcare.

The limitations of this research include the predominance of qualitative studies, which, while offering an understanding of the experiences of healthcare professionals, may

It does not capture the breadth and generalizability of the findings in broader contexts. Furthermore...
Furthermore, the concentration of research in specific regions, such as Bahia and Amapá, may
to limit the representativeness of the data and practices in other parts of Brazil. For future reference.
Based on research, longitudinal studies investigating the effect of [various factors] are recommended.
Technologies have impacted the effectiveness and efficiency of healthcare services over time, as well as...
conducting comparisons between different regions of Brazil to identify successful practices.
that can be replicated in other contexts.

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