Evaluation of micro-level management of older person care in primary health centers in a health region in the Federal District of Brazil

Abstract  Primary health centers (PHCs) should consider the demographic and epidemiological profile of the health region to respond to population aging and structure service delivery around networks based on macro and micro-level management to ensure the provision of comprehensive services. A normative evaluation of micro-level management in four PHCs in a health region in the Federal District of Brazil was conducted to inform the development of recommendations for enhancing the delivery of comprehensive and integrated long-term care for older persons. A management evaluation matrix was used where management stages were classified as advanced, intermediate and incipient. The findings show that none of the PHCs were at the advanced stage, three were at the intermediate stage, and one at the incipient stage. The lowest scores were obtained for the subdimensions care model (which was shown to be predominantly traditional) and humanization (fragmentation of care). Lack of infrastructure and staff absenteeism were shown to be constraining factors, while effective communication with local administrators was as facilitating factor. Improvements need to be made in micro-level management to enhance the delivery of comprehensive and timely care to older persons in this health region.

Key words  Elderly Health, Health Services, Health Care Delivery, Health Management, Health Evaluation
Introduction

Rising life expectancy and health improvements are worldwide phenomena. However, these improvements are marred by gross health inequalities. In Brazil, unlike in most developed countries, the speed of population ageing has been particularly fast. Over a period of five years the elderly population grew by 18% and in 2017 there were 30.2 million older persons in Brazil, corresponding to 15.6% of the overall population. As people age, they become more susceptible to complex and costly diseases and functional limitations, creating an economic and social burden associated with the treatment.

The specific health needs of older persons should therefore be taken into account when organizing service delivery and determining a care model that ensures coordinated and integrated care that is appropriate to older people. Health-care networks (Redes de Atenção à Saúde - RAS) are defined as “organizational arrangements of actions and health services with different technological densities integrated via technical, logistical, and administrative support systems to ensure the provision of a comprehensive service”.

To provide a comprehensive service, understood here as the “government’s response to the health needs of a specific group, which should incorporate the possibility of prevention and care”, networks should be organized across macro and micro levels. Micro-level management involves the elaboration of individualized care plans, while macro-level management concentrates on the pathways that are necessary to implement these plans, falling on the administrator to coordinate the components of the network to ensure the provision of a comprehensive service.

There are various initiatives in Brazil aimed at prioritizing and ensuring the provision of comprehensive care for older persons, such as the National Health Policy for Older Persons (PNSI, acronym in Portuguese), designed to promote quality aging. These initiatives are in line with the World Health Organization’s World Report on Aging and Health, which suggests that functional ability is shaped by the choices and interventions made throughout the life course.

In addition to the PNSI, the National Policy for Primary Care (PNAB, acronym in Portuguese) enshrines the Family Health Strategy (FHS) as the key strategy for expanding and consolidating primary care, increasing resolvability, and improving health outcomes, which requires health services to reshape work processes in order to ensure the provision of comprehensive care. Primary care (PC) includes individual and collective health actions at all levels of disease prevention “developed around administrative and health practices carried out through team working and geared towards populations of clearly delimited territories, for which the teams assume responsibility”. In view of the above, in 2017, the Federal District of Brazil established its own PC policy and developed regulations for the conversion of services to the FHS model, considering the district’s demographic and morbidity and mortality profiles and the need to improve the quality of care.

The effective functioning of PC is crucial for the effective functioning of elderly care given the central role it plays in the coordination of RAS, where primary health centers (PHCs), the mainstay of PC, are the point of entry to the health system. The management of care for older persons should be guided by individualized care plans, which should include guidance on self-care, support for family members and caregivers, health education actions, and activities to promote socialization and interaction with other regions across the country to improve the manage-
According to the text, the adoption of appropriate care technologies, thus strengthening PC for older persons is important. In view of this, it is essential to evaluate micro-level management in PHCs to provide an insight into care provision in these facilities and whether they promote the delivery of comprehensive services and timely access to quality primary care for older populations.

A normative evaluation was conducted to evaluate micro-level management in PHCs in the federal district's west health region (Região de Saúde Oeste do Distrito Federal - RSO) in order to gain a broader understanding of how older person care works in practice in PC settings and inform the development of recommendations for enhancing the delivery of comprehensive and integrated long-term care for older persons.

**Methodology**

A cross-sectional normative evaluation was conducted. A cross-sectional research design was chosen because it is particularly useful for gaining insight into the particularities of a situation to inform future interventions. By "making a judgment on an intervention and comparing resources used and its organization (structure), services, or goods produced (process) and results obtained, based on norms and criteria" normative evaluation is useful for producing information, informing decision-making, and empowering the actors involved, in this case administrators.

Emphasis was given to the “process” because by making timely improvements to the process, without the need to wait for “results”, it is possible to harness the potential of PC as the point of entry to the health system and therefore ensure accessibility of health services.

The RSO includes two administrative regions (Regiões Administrativas - RA): Ceilândia (RA IX) and Brasília (RA IV), with a population of around 489,351 and 52,287, respectively. Older persons account for 17% and 14% of the population, respectively. The RSO was chosen because Ceilândia has a considerable proportion of vulnerable older people with an elevated risk of functional decline and death and a higher rate of poor or fair self-perceived health, and therefore a significant demand for older person care services.

The study was conducted between March and September 2018 in four of the 22 PHCs in the RSO, all of which located in Ceilândia. The PHCs were selected using convenience sampling based on the following inclusion criteria: population covered by the PHC has a high proportion of older persons and PHCs whose FHS have been operating for the longest period of time.

A management evaluation framework, subdivided into dimensions, sub-dimensions, and criteria was used to evaluate the use of micro-level management tools by PHC administrators.

The maximum total score for the items in the framework was 100. The subdimensions related to the attributes of the FHS were given the greatest weight, considering that this care model emphasizes the use of micro-level management tools and the legislation provides for the homogenization of the organization and functioning of the federal district's PC system based around the FHS. Micro-level management was classified based on the maximum obtainable score as follows: a) Advanced (> 66.6%), Intermediate (> 33.3% and ≤ 66.6%), and Incipient (≥ 0 and ≤ 33.3%)..

The dimensions that make up the framework were taken from Ministerial Order 4.279/2010, which establishes guidelines for the organization of the RAS within the SUS. This classification is summarized in Chart 2.

Each PHC received the name of different colored species of ipê (trumpet tree), each of which blossom at different times after the dry season. They were named according to the sequence in which each species blossoms as an analogy for the management stage at which each center finds itself: Ipê-Roxo, Ipê-Amarelo, Ipê-Rosa, and Ipê-Branco.

The study was approved by the human research ethics committees of the Foundation for Health Sciences Teaching and Research of the Department of Health of the Federal District and of the Ceilândia Faculty of the University of Brasília (applications 2.269.757 and 2.202.975, respectively). The data was consolidated and tabulated in a spreadsheet (Excel 2014, Microsoft®) and descriptive analysis was performed.

**Study Location**

The population of older people in Brazil is 20,590,599, which corresponds to 10.8% of the country's total population. In the Center-West Region, 8.8% of the population are elderly, while in the Federal District this proportion is 7.7%. The Federal District follows the national trend,
witnessing an increase in the elderly population and elevated rates of morbidity and mortality due to chronic degenerative diseases. The ratio of older persons (≥ 60 years) and young people aged under 15 in the Federal District is expected to be the second highest in Brazil by 2060, reaching 207.1% (around two to one), compared to the current rate of 33.6% and projected national rate of 173.4%. Furthermore, life expectancy at birth of men and women is projected to rise from 74.9 and 81.9 years, respectively, to 79.5 and 85.6 years, respectively.
The Federal District is made up of 31 RAs. Currently, 46.1% of the population of Ceilândia are aged between 25 and 59 years, 20.8% are aged between zero and 14 years, and 17% are over the age of 60. The literacy rate is 3.6% among the overall population (17,510 illiterate people) and 22.5% in older persons. The majority of older persons are originally from the Northeast Region (66.2%) and 50.7% (4th place in the Federal District) of households are headed by older women. The average monthly household income in the region is R$3,076, while per capita income is R$915.81. The proportion of retired older adults is 20.8%.

These sociodemographic characteristics, coupled with the consequences of the demographic and epidemiological transitions, demand timely responses, including the reshaping of the organization of the federal district’s health system, incorporation of appropriate technologies, effective allocation and training of human resources, and organization of work processes to ensure that services deliver comprehensive older person-centred care. In this respect, it is essential that PC administrators have a clear understanding of the specific health needs and priorities of older persons and use strategies that help to bring them closer to their territory and meet the older population’s demands.

**Use of Micro-level Management Tools**

Management practices provide a unique opportunity to introduce change in services, re-model work processes, and expand the provision of quality care. However, health services are complex organizations that, for the most part, are structured according to a pyramidal logic and characterized by hierarchical actions where different types of technology coexist. Micro-level management tools, such as health condition management, case management, clinical audits, and waiting lists, are part of clinical management and are a prerequisite for the effective functioning of healthcare networks. As a soft technology and strategy for the management of health organizations, clinical management can therefore serve as the basis for reshaping health services and dispenses with dialogic relationship in older person care by understanding the cultural, social, economic, historical, and environmental dimensions of care.

The conversion from the traditional care model to the FHS model in the federal district’s PC system began in 2017, reaching its climax in the RSO at the beginning of 2018, by which time all the PHCs’ health teams had been incorporated into the FHS. However, the framework analysis shows that one year after the introduction of the legislation regulating the organization of PC in the Federal District, the management tools were either not being used or administrators were unaware of them, as shown in Graph 1.

The results show that none of the PHCs are at the advanced stage in the use of micro-level management tools, one is at the intermediate stage, and two are at the incipient stage. Given the general lack of effective communication be-

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**Chart 2. Dimensions, subdimensions, and criteria and operational concept used in the management evaluation framework.**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Subdimensions</th>
<th>Maximum Score</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Condition Management</td>
<td>Care model</td>
<td>25</td>
<td>Advanced: &gt; 66.6%</td>
</tr>
<tr>
<td></td>
<td>Comprehensiveness of care</td>
<td>10</td>
<td>Intermediate: &gt; 33.3% and ≤ 66.6%</td>
</tr>
<tr>
<td>Case Management</td>
<td>Humanization</td>
<td>10</td>
<td>Incipient: ≤ 33.3%</td>
</tr>
<tr>
<td></td>
<td>Coordination of care</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Planning, monitoring, and evaluation of actions and services</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Clinical Audit</td>
<td>Implicit auditing</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explicit auditing</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Waiting Lists</td>
<td>Rationalization of access</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Source: authors’ elaboration, 2018.
between patients, health staff, and administrators, health service provision in Brazil in the past has tended to be fragmented and mechanical, with disjointed coordination of care and insufficient professional accountability. In addition to lack of accountability, scarce specialized human resources and insufficient training also hinders the establishment of bonds between patients and health professionals and treatment adherence.

Despite the fact that other evaluations using the same dimensions, subdimensions, scoring, and criteria used by the present study were not identified and that a cross-sectional design was adopted limited to four PHCs in a single health region, thus hampering generalizations, the findings of the present study are in line with the conclusions of other authors. An evaluation of primary care services in the Municipality of São Paulo reported that older person care was ineffective. The findings also showed that the domains that obtained the best scores were those in which recommendations from internal evaluations were implemented, reinforcing the need to develop an evaluation culture that extends beyond the realm of disease.

With regard to the subdimensions, three were at the advanced stage, three at the intermediate stage, and two at the incipient stage. The subdimension “comprehensiveness of care” was classified as advanced in 100% of the PHCs, while “coordination of care” and “implicit auditing” were classified as advanced in 75% of the PHCs, as can be seen in Graph 2.

Although comprehensiveness of care and coordination of care were present in all PHCs, the findings show that the PHCs do not always know when patients referred to higher levels of care have been referred back, thus compromising patient follow-up. A study that analyzed the implementation of integrated health service networks and PC coordination strategies in Chile suggested that noncomputerized referral and back referral forms are weak instruments, showing that in the majority of cases PHCs are informed of back referral by the patients themselves or family members. These subdimensions are particularly important in situations of family violence, when coordination with social services is vital, demonstrating the need for improvements in this sense. Intersectorality creates opportunities to embrace the broader concept of health and supports health promotion, a key component of the FHS. Given the wide variety of care needs of older populations, PC needs to extend beyond...
health and social assistance to yield gains in resolvability and effectively address problems. This requires a new management logic that uses an interdisciplinary approach and shares roles and responsibilities across different areas.

A study that examined the quality of care from the perspective of older persons in the State of Rio Grande do Norte using the primary care assessment tool (PCATool-Brasil) showed barriers to accessibility, the need to extend PHC opening hours, and the importance of stepping up actions to promote more comprehensive care, such as better self-care guidance, social support for older persons and carers, and practices related to nutrition and physical activity.

Implicit auditing, which includes the opinion of specialists on work processes, was also evident in all PHCs, which confirmed that they are monitored by the Primary Care Directorate (DIRPC/RSO, acronym in Portuguese) and have free spaces for communicating, proposing, and assisting in the necessary adjustments to ensure adequate service provision. The clearest evidence of implicit auditing was the use of the PC service portfolio checklist, which includes certain actions and services defined with the PHC administrator and set out in the management agreement and forms the basis of the audit carried out by the DIRPC/RSO. The latter not only monitors metrics, but also plays a “supporting role” by adopting active listening to identify the specific needs and weaknesses of PHCs, mediating conflicts, and facilitating reflection on work processes to identify obstacles and solutions and promote the active engagement of those involved in the process.

The subdimensions classified as “intermediate” were the care model (which was shown to be predominantly traditional), rationalization of access (lack of transparency in the use of waiting lists), and explicit auditing (incipient nature of clinical guideline-based evaluation). The findings show that although clinical guidelines are
used, the majority of procedures are still one-off, curative, and/or rehabilitation-based. Stratification of risk was observed in only one PHC, which hampers understanding of the risk profile of the population, team action planning, and adequate coordination of care. Clinical management should involve the management of collective and environmental risks through the identification of health problems and the determinants of health in a specific population in order to develop effective measures to improve the quality of healthcare.

The findings show that advances have been made on the theoretical and methodological front in the Federal District, pointing to new pathways and presenting different combinations of technologies to promote healthy and active ageing. However, challenges remain, given that technologies are related to “know how” and “doing”, since strategic actions are intervention processes structured around relational technologies, encounters, and subjectivities. This requires “living labor” oriented towards the needs of individuals and built upon trusting relationships between these individuals and professionals/services, as opposed to doctor-centered and procedure producing “dead labor”.

Despite the advances made, it is still necessary to overcome vertical management models, improve the training of health professionals to promote a humanistic approach to care and management, break down the barriers of the fragmentation and mechanicalization of care and production line delivery, and consider the subjectivities that envelop health work processes. In this respect, health management is a multi-faceted field of knowledge and action that requires managers and practitioners to continually “(de) reconstruct” the “way of doing healthcare” in a cyclical movement that involves rethinking work processes to promote continuous improvement.

Final considerations

As in the rest of Brazil, the Federal District has witnessed significant changes in its demographic profile, resulting in the need to tailor PC to promote quality of life in old age. Despite the implementation of the FHS in the federal district’s PHCs in 2017, steps still need to be taken to improve the use of micro-level management tools.
in order to enhance the quality of care delivered to older populations and effect the transition away from the traditional biomedical care model based spontaneous demand and towards the FHS, where care delivery and responsibilities are territorial-based. The findings show that, despite difficulties related to infrastructure and human resources, access to long-term healthcare among older populations has improved, which is likely to increase patient satisfaction and improve clinical outcomes in the long-term. However, current FHS teams need to be better equipped and new staff need to be recruited. Furthermore, mechanisms should be put in place to provide administrators autonomy to hire replacements in cases of staff absence and/or to effectively regulate absenteeism, identified as a major constraint on care delivery and work processes, in order to meet legislative requirements and ensure the provision of comprehensive healthcare to older populations.

Collaborators

RCCS Sacco participated in project conception, data collection, analysis, and interpretation, and drafted and approved the final version of the text to be published. PRR Cardoso participated in results interpretation and drafting the text. PMF Escalda, MG Assis and SMF Guimarães contributed to data interpretation and the critical revision and approval of the version of the text to be published.

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