



Profile of elderly people with polypharmacy who accessed a chronic conditions outpatient clinic

Perfil de pessoas idosas com polifarmácia que acessaram um ambulatório de condições crônicas

Perfil de personas mayores con polifarmacia que acudieron a un ambulatorio de enfermedades crónicas

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ABSTRACT

Objectives: to describe the profile of elderly people with polypharmacy who accessed a Chronic Conditions Outpatient Clinic for Adults and Elderly People, and to investigate the quality of the information system records. **Method:** descriptive cross-sectional study, carried out from a database of the regulation of access to the Chronic Conditions Outpatient Clinic for Adults and Elderly People, from September 2019 to September 2022. **Results:** of the 1,308 elderly people who accessed the outpatient clinic, 75.5% presented polypharmacy, and among these, there was a predominance of females, aged between 60 and 69 years, with white skin color, and regular use of five to nine medications. Most had sufficient self-care, the presence of target organ damage, and did not use alcohol, other drugs, or tobacco. There was a high degree of incomplete information in five variables analyzed. **Conclusion and implications for practice:** polypharmacy was high among those referred. This highlights the need for shared care between specialized care and primary care, considering comprehensive care.

Keywords: Ambulatory Care; Chronic Disease; Elderly People; Polypharmacy.

RESUMO

Objetivos: descrever o perfil de pessoas idosas com presença de polifarmácia que acessaram um Ambulatório de Condições Crônicas para Adultos e Pessoas Idosas e investigar a qualidade dos registros do sistema de informação. **Método:** estudo transversal descritivo, realizado a partir de um banco de dados da regulação de acesso ao Ambulatório de Condições Crônicas para Adultos e Pessoas Idosas, no período de setembro de 2019 a setembro de 2022. **Resultados:** das 1.308 pessoas idosas que acessaram o ambulatório, 75,5% apresentaram polifarmácia, e entre estas, houve predomínio do sexo feminino, faixa etária entre 60 e 69 anos, cor da pele branca e uso regular de cinco a nove medicamentos. Grande parte possuía autocuidado suficiente, apresentava lesão de órgão-alvo e não fazia uso de álcool, outras drogas ou tabaco. Houve alta incompletude de informações em cinco variáveis analisadas. **Conclusão e implicações para a prática:** a polifarmácia apresentou-se elevada entre os encaminhados. Tal aspecto evidencia a necessidade do cuidado compartilhado entre a atenção especializada e a atenção primária, considerando a integralidade do cuidado.

Palavras-chave: Assistência Ambulatorial; Doença Crônica; Pessoa Idosa; Polimedicação.

RESUMEN

Objetivos: describir el perfil de los ancianos con polifarmacia que acceden a un Ambulatorio de Enfermedades Crónicas para Adultos y Ancianos e investigar la calidad de los registros del sistema de información. **Método:** estudio descriptivo transversal, realizado a partir de una base de datos que regula el acceso al Ambulatorio de Enfermedades Crónicas para Adultos y Adultos Mayores, de septiembre de 2019 a septiembre de 2022. **Resultados:** de los 1308 ancianos que accedieron al ambulatorio, el 75,5% contaba con polifarmacia, y de estos, predominó el sexo femenino, con edades entre 60 y 69 años, color de piel blanca y uso regular de cinco a nueve medicamentos. La mayoría tenía suficiente autocuidado, presencia de daño en órganos diana y no consumía alcohol, otras drogas ni tabaco. Hubo alta incompletitud de la información en cinco variables analizadas. **Conclusión e implicaciones para la práctica:** la polifarmacia fue alta entre los remitidos. Esto aspecto apunta a la necesidad de una atención compartida entre la atención especializada y la atención primaria, con vistas a una atención integral.

Palabras clave: Atención Ambulatoria; Enfermedad Crónica; Anciano; Polifarmacia.

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INTRODUCTION

The aging process, also known as senescence, is a natural process in humans and occurs uniquely for each individual, with possible functional changes that do not interfere with personal, executive, and managerial relationships and activities in everyday life. Senility, on the other hand, consists of diseases associated with the aging process, such as those that compromise functional capacity when not properly controlled.¹

Although most elderly people today are healthier as a result of technological advances and improvements in the healthcare system, having one or more chronic diseases can be part of aging.² Given this, there is a need to use several medications simultaneously, and sometimes a drug used to treat one disease alters the effect of a medication used for another condition. Furthermore, taking several medications at the same time, known as polypharmacy, increases the chance of adverse effects.¹

The literature provides various definitions of the concept of polypharmacy. In general, it is understood as a numerical count, associated or isolated with the improvement of the user's clinical situation or treatment duration.³ The term most frequently mentioned in the literature is described as "the continuous and simultaneous use of five or more medications" every day by a single person.³⁻⁵

Elderly people taking multiple medications are at high risk of using Potentially Inappropriate Medications (PIM), which is the main warning sign for functional decline, death, and hospitalization. These elderly individuals commonly have multiple pathologies or a history of hospitalization in the last six months, in addition to being at greater risk of having chronic health conditions that have proven drug treatment. However, many do not have an appropriate prescription.⁴ Moreover, polypharmacy can lead to death, permanent injury, geriatric syndromes, falls, episodes of mental confusion, and therapeutic failure. Although some drug interactions do not cause visible harm in older adults, their impact can be silent, delayed, and even irreversible.⁶

Given this, these cases are more complex and require a specialized team to determine the appropriate medications according to the clinical and functional status of the elderly patient, guide the best plan for deprescribing MPI, and prescribe the correct medications.⁴ To respond to demands that exceed the capacity of Primary Health Care (PHC), there is Specialized Outpatient Care (SOC), which is the main provider of care for health conditions in the population that require specialized professionals and greater technological resources.⁷

Classified as medium complexity, SOC is organized to address chronic non-acute conditions. In addition, it is defined as clinical care that encompasses diagnosis, observation, treatment, and rehabilitation, which can be coordinated between primary and secondary health care, and acts as a reference and advisory support for PHC.⁷

Given the concentration of epidemiological surveys in capital cities and the scarcity of literature on the profile of elderly people with polypharmacy in specialized care, it is important to understand

the profile of this population that accesses this specialized service for chronic conditions. The knowledge generated from this study will serve as a basis for planning and improving healthcare and health surveillance actions, especially concerning the rational use of medications and coordination between different levels of care.

Additionally, the results can guide the development of regional protocols, contribute to improving information recording in the regulatory system, and equip the health professionals and services involved to strengthen the management and comprehensiveness of care for elderly people.

This study aimed to describe the profile of elderly people with polypharmacy who accessed a Chronic Conditions Outpatient Clinic for Adults and Elderly People and to investigate the quality of the information system records.

METHOD

This is an epidemiological study, with a cross-sectional design and descriptive character, based on secondary data from a database regulating access to an Outpatient Clinic for Chronic Conditions for Adults and Elderly People, located in the central region of the state of Rio Grande do Sul (RS), Brazil, over a three-year period, between September 2019 and September 2022, an interval defined to coincide with the start of use of the Regulation System (SISREG) by the 4th Regional Health Coordination (4th RHC). The database was constructed from two sources: a referral form to the outpatient clinic and a SISREG form, duly regulated by the 4th RHC, organized and maintained in Microsoft Excel® spreadsheets. For the systematic construction of the study, the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidance tool was used.⁸

The Chronic Conditions Clinic for Adults and Elderly People has been a specialized care component since 2018, and its target audience is people with high and very high risk Systemic Arterial Hypertension (SAH) and/or Diabetes Mellitus (DM), who have been stratified by the 4th RHC PHC. This clinic provides multidisciplinary care, guided by the Secondary Outpatient Care Model (PASA), which is based on the coordination of care between SOC and PHC, with the Health Care Network (HCN) being fully coordinated by PHC.⁷ Access is currently regulated by the 4th RHC, based on the criteria defined in Technical Notes No. 05/2023⁹ and No. 06/2023¹⁰ of the Rio Grande do Sul State Health Department.

The study included individuals aged 60 years or older who had their first regulated access to the Outpatient Clinic for Chronic Conditions for Adults and Elderly People, as verified by the information in the 4th RHC database, and who met the criteria for outpatient care (residing in the 4th Health Region of RS and having high or very high risk SAH and/or DM). People who did not use five or more medications simultaneously were excluded.

Information regarding polypharmacy was obtained from the referral form to the outpatient clinic, in which the professional recorded the quantity of medications used by the person at the time of referral.

The variables were analyzed according to their completion in Microsoft Excel® spreadsheets and included the following sociodemographic data: date of birth, which is grouped by age group (60 to 69 years, 70 to 79 years, 80 to 89 years, and 90 years or older); gender (female or male); skin color recorded as race/color (white, black, brown, yellow, indigenous, and unknown); and municipality of residence. The specific variables were behavioral factors and comorbidities (alcohol and other drugs, tobacco, and NR - no response), self-care capacity (sufficient or insufficient), Target Organ Damage (TOD) (yes, no, and NR), and presence of International Classification of Diseases (ICD-10) for SAH and/or DM. In this version of the ICD, the name for high blood pressure was still "SAH." In addition, the quality of the information system was assessed based on an analysis of missing data.

The data were obtained from a Microsoft Excel® database, built from the 4th RHC regulation system, and converted to the Epi Info™ program for data preparation and statistical analysis. Qualitative variables were analyzed by proportions, and quantitative variables were categorized and analyzed in the same way.

This study was submitted to and approved by the Research Ethics Committee (REC) on December 26, 2023, under opinion no. 6,601,654 and CAAE 65762422.0.0000.5346.

RESULTS

From September 2019 to September 2022, 1,308 elderly people were referred to the Chronic Conditions Outpatient Clinic. Of these, 987 (75.5%) were taking multiple medications. In terms of sociodemographic characteristics, this group was predominantly female (56.2%), aged between 60 and 95 years, with a predominance in the 60-69 age group (57.4%). Most were registered as white (82.4%) and resided in the Verdes Campos Health Region (81.5%) (Table 1).

Table 2 shows the municipalities of origin of the elderly referred and those with polypharmacy. All municipalities in the 4th RHC health regions referred at least one elderly person with polypharmacy, except for the municipality of Silveira Martins, which had no referrals. A large part of the sample was referred by Santa Maria (40.8%), which is the largest municipality and the headquarters of the 4th RHC, followed by São Pedro do Sul (5.5%), Santiago (5.0%), Agudo (4.7%), and Júlio de Castilhos (4.6%). The municipalities' distribution based on polypharmacy is similar to the distribution of referrals. In the Verdes Campos Health Region, the municipality of Santa Maria stood out, and in the Entre Rios Region, referrals were predominantly from the municipality of Santiago.

Table 3 shows the behavioral factors and comorbidities of elderly people with polypharmacy. The available data show that a large part of the sample had sufficient self-care (58.3%) and did not use alcohol and other drugs (65.8%) or tobacco (62.9%). However, there is a high amount of missing information, above 25%, in the three variables.

Regarding the prevalence of comorbidities, referrals to the ROC were higher for the combination of ICD SAH and DM (74%). Elderly patients were predominant with TOD, $n=506$ (89.9%), among those who had been registered ($n=563$). In eight cases (1.6%), the TOD was specified, with three cases of retinopathy and one case of each of the following pathologies: Cerebrovascular accident (CVA) with Chronic Kidney Disease (CKD), heart disease, Coronary Artery Disease (CAD), kidney disease, and previous Acute Myocardial Infarction (AMI). However, in the remaining records, $n=498$ (98.4%), the presence of TOD was recorded without specifying it.

The number of medications used by elderly patients with polypharmacy ranged from five to twenty. The group taking five to nine different medications per day stood out with a prevalence of 80.2% ($n=792$), as shown in Table 4.

It was not possible to obtain information in the following situations: when the option "NR" was selected, when the option "ignored" was selected, or when the variable was absent (not filled in). Table 5 shows this lack of information, since the variables TOD (42.9%), self-care (25.5%), alcohol and other drugs (31.9%), and tobacco (26.5%) were mostly filled in as "no response." In addition, for skin color, ignored responses were predominant (3.9%).

Table 1. Sociodemographic characteristics of elderly patients with polypharmacy treated at the Chronic Conditions Outpatient Clinic of the 4th RHC ($n=987$). Santa Maria (RS), Brazil, 2022.

Variables	Frequency	Percentage
Gender		
Female	555	56.2
Male	432	43.8
Age group (years)		
60-69	567	57.4
70-79	348	35.3
80-89	68	6.9
≥ 90	4	0.4
Skin color		
White	813	82.4
Black	71	7.2
Yellow	36	3.6
Brown	25	2.5
N/R	42	4.3
Health region		
Verdes Campos	804	81.5
Entre Rios	183	18.5

Note: RHC – Regional Health Coordination. N/R – Not Reported.

Table 2. Municipalities of origin of the total number of elderly people and those on polypharmacy referred to the Chronic Conditions Outpatient Clinic, according to region of the 4th RHC. Santa Maria (RS), Brazil, 2022.

Variables	Total referred (N=1,308)		Polypharmacy (N=987)	
	n	%	n	%
Entre Rios				
Cacequi	23	1.8	13	1.3
Capão do Cipó	3	0.2	3	0.3
Itacurubi	4	0.3	3	0.3
Jaguari	20	1.5	14	1.4
Jari	14	1.1	14	1.4
Mata	13	1.0	11	1.1
Nova Esperança do Sul	12	0.9	3	0.3
Santiago	66	5.0	42	4.3
São Francisco de Assis	57	4.4	35	3.6
São Vicente do Sul	54	4.1	41	4.2
Unistalda	8	0.6	4	0.4
Verdes Campos				
Agudo	62	4.7	46	4.7
Dilermando de Aguiar	2	0.2	1	0.1
Dona Francisca	12	0.9	9	0.9
Faxinal do Soturno	41	3.1	26	2.6
Formigueiro	57	4.4	32	3.2
Itaara	7	0.5	5	0.5
Ivorá	11	0.8	7	0.7
Júlio de Castilhos	60	4.6	42	4.3
Nova Palma	7	0.5	3	0.3
Paraíso do Sul	22	1.7	13	1.3
Pinhal Grande	4	0.3	1	0.1
Quevedos	2	0.2	1	0.1
Restinga Seca	38	2.9	33	3.3
Santa Maria	533	40.8	460	46.6
São João do Polêsine	12	0.9	9	0.9
São Martinho da Serra	4	0.3	3	0.3
São Pedro do Sul	72	5.5	51	5.2
São Sepé	53	4.1	36	3.7
Silveira Martins	0	0	0	0
Toropi	6	0.5	5	0.5
Tupanciretã	1	0.1	1	0.1
Vila Nova do Sul	28	2.1	20	2.0

Note: RHC – Regional Health Coordination.

Table 3. Behavioral factors and comorbidities of elderly patients with polypharmacy treated at the Chronic Conditions Outpatient Clinic of the 4th RHC (n=987). Santa Maria (RS), Brazil, 2022.

Variables	Frequency	Percentage
Self-care		
Enough	575	58.3
Insufficient	159	16.1
N/R	253	25.6
Alcohol and other drugs		
No	649	65.8
Yes	16	1.6
N/R	322	32.6
Tobacco		
No	621	62.9
Yes	97	9.8
N/R	269	27.3
ICD		
SAH and DM	730	74.0
SAH	185	18.7
DM	72	7.3
Target organ damage		
No	57	5.8
Yes	506	51.3
N/R	424	42.9

Note: RHC – Regional Health Coordination; ICD – International Classification of Diseases; SAH – Systemic Arterial Hypertension; DM – Diabetes Mellitus. N/R – Not Reported.

DISCUSSION

In Brazil, there has been rapid population aging and an increase in comorbidities, resulting in excessive use of medications.^{11,12} In this study, a high prevalence of polypharmacy was observed among elderly patients referred to the Chronic Conditions Outpatient Clinic, which constituted a significant portion of the sample. This result is similar to a study conducted at the SOC in the Midwest region of the country¹³ and another conducted at the SOC in the Southeast region,¹⁴ in which the prevalence of polypharmacy was 62% and 74%, respectively.

However, few studies using SOC as a setting for analyzing the prevalence of polypharmacy and characterizing the respective elderly population were found in the literature. Most of the studies found, which showed similar results, were conducted in a different setting, with elderly people monitored only in PHC, where the presence of polypharmacy was also significant.^{15,16}

Although data in this study indicate that some individuals used up to 20 medications, most used between five and nine different medications daily, which corroborates a study conducted

Table 4. Prevalence of the number of medications used by elderly patients with polypharmacy treated at the Chronic Conditions Outpatient Clinic of the 4th RHC (n=987). Santa Maria (RS), Brazil, 2022.

Variables	Frequency	Percentage
Quantity of medications		
5-9	792	80.2
10-14	183	18.6
15-20	12	1.2

Note: RHC – Regional Health Coordination.

Table 5. Variables with missing information in the database regulating access to the Chronic Conditions Outpatient Clinic of the 4th RHC (n=987). Santa Maria (RS), Brazil, 2022.

Variables	Frequency	Percentage
Skin color		
Ignored ^a	38	3.9
Absent ^b	4	0.4
Target organ damage		
No response ^a	424	42.9
Absent ^b	0	0
Self-care		
No response ^a	252	25.5
Absent ^b	1	0.1
Alcohol and other drugs		
No response ^a	315	31.9
Absent ^b	7	0.7
Tobacco		
No response ^a	262	26.5
Absent ^b	7	0.7

Note: RHC – Regional Health Coordination. ^athe existing option to select; ^bblank field in the database.

in the southeast of the country with the elderly population, which showed the same medication profile.¹⁵

Polypharmacy is a consequence of multimorbidity, and in this study, it was observed that the ICD-10 code most frequently associated with referrals to the Chronic Conditions Outpatient Clinic was concomitant SAH and DM. The simultaneous presence of SAH and DM is a high cardiovascular risk factor and is one of the criteria for referral to the outpatient clinic where this study was conducted.^{9,10} A population-based survey conducted with polymedicated elderly individuals demonstrated that there is an association between polypharmacy and SAH and DM pathologies.¹⁷ Moreover, another study conducted at an outpatient clinic in the southeast of the country also showed similar results.¹⁸

The most prevalent and common cardiovascular disease among elderly people is SAH, which affects around 65% of the population over 65, according to data from the Surveillance System for Risk and Protective Factors for Chronic Diseases by Telephone Survey (VIGITEL).¹⁹ It is also an important risk factor for complications in the cardiovascular system and can contribute to the onset of heart failure, CKD, CAD, peripheral arterial disease, and cerebrovascular diseases.²⁰ DM, on the other hand, is seen worldwide as a public health problem, especially among the elderly population. The prevalence of DM in individuals aged 65 and over in Brazil increased from 19.9% in 2014 to 24.3% in 2024, and this growth can be attributed to a combination of epidemiological, demographic, and behavioral factors.²¹

The presence of TOD was evident in more than half of the elderly patients receiving polypharmacy. To date, no studies have been found that describe the presence of TOD in elderly patients receiving multiple medications. However, research highlights that polypharmacy increases morbidity and mortality rates worldwide and affects the quality of life of the elderly population.^{22,23}

Only eight cases of TOD were specified in this study, but this data is not relevant, since it is absent from most records. In this sense, it is important to know which specific TOD the polypharmacy user has, as the use of several medications may have been a result of this, and based on this study, it was not possible to verify this information. Therefore, it is suggested to add, in the instructions for filling out the referral form to the Chronic Conditions Clinic, the specification of TOD when the option marked is “yes”.

Of the users in the sample, it was observed that most were referred by the PHC of the Verdes Campos Health Region (81.5%), which is similar to a cross-sectional study conducted with users of PHC services in the 4th RHC/RS,²⁴ which showed that 76.9% resided in the same health region. The fact that the number of referrals is higher in the Verdes Campos Health Region can be explained by its territorial composition: it is the region with the largest number of municipalities (22) and the largest population, with only Santa Maria being medium-sized. The Entre Rios Region, on the other hand, is composed of 11 municipalities, all of which are small.

In the Verdes Campos Health Region, the municipality of Santa Maria stood out in the referral of elderly people with polypharmacy. According to the 2022 Demographic Census, the total population of Santa Maria is 271,735 inhabitants, of whom 53,287 (19.6%) are over 60 years old. As for the Entre Rios Region, the municipality of Santiago had the highest proportion of polymedicated elderly people referred. The municipality has a population of 48,938, of whom 11,237 (23.0%) are elderly.

The population studied had a high proportion of women, as did most recent studies.^{16,18} The literature provides explanations for the higher prevalence of polypharmacy among women, such as the fact that women have a longer life expectancy than men, which leads them to deal with chronic conditions for longer periods of time. Moreover, the female population is more affected by non-fatal health problems.²⁵

It was found that polypharmacy was predominant among younger elderly people, in the 60-69 age group (57.4%), as also found in Brazilian studies conducted with polymedicated elderly people in the community.^{15,16}

The most common skin color in referrals to the SOC was white. A retrospective observational study conducted in secondary care with elderly patients also demonstrated this finding.¹⁴

Regarding behavioral factors, a higher prevalence of self-care classified as sufficient was observed. This result contrasts with a study conducted in the Northeast Region of Brazil, which identified a deficit in self-care among older adults with polypharmacy.²⁶ In addition, there is a higher prevalence of self-care deficits in elderly people with multiple pathologies,²⁷ and it is known that polypharmacy increases with the number of diseases. This inconsistency between the data may be related to the high percentage of missing information on self-care.

Self-care is defined as the ability to take actions that seek to preserve one's own health, development, and well-being. It is an action taken by the individual for themselves or to regulate the factors that influence their individual development. Self-care in people with chronic conditions results in lifestyle changes to reduce health complications and improve symptoms.²⁸

Regarding alcohol, other drug, and tobacco use among the study population, most reported not using these substances. A study conducted with polymedicated elderly patients assisted by PHC showed similar results.²⁹ Furthermore, a survey conducted with elderly people served by SOC in Paraíba showed that 72.7% did not drink alcohol and 65.7% did not smoke.³⁰

The variables TOD, self-care, alcohol, other drugs, and tobacco showed a significant lack of information (> 25%). However, it was not possible to elucidate the behavioral situation of the elderly with greater precision, which may have generated a biased view of the situation in relation to TOD, self-care, alcohol and other drugs, and tobacco, with a tendency to underestimate behaviors harmful to health.

Incompleteness was observed in the database regulating access to the Chronic Conditions Outpatient Clinic in five variables. A study that analyzed the incompleteness of data on individuals with SAH and/or DM, based on a registration form,³¹ presented similar results, especially in the variables smoking and presence of complications (TOD), which also presented a deficit in completion.

Although most of the variables in this study are not mandatory, state technical notes encourage a minimum amount of information to be filled in at the time of referral,^{9,10} which is not complied with. Failure to fill in the variables on the referral forms affects the quality of the information needed to support decision-making at all levels of health system management. Thus, PHC professionals must recognize the impact of missing data and become aware of the need to fill in all variables on the referral form, the initial stage of this point in the SAH.

As a contribution to improving these data, we suggest restructuring the document to meet these demands. For example, for the TOD variable, we suggest that the information be collected

as “Yes, which one?” and “No,” so that all responses can be specified. For smoking and alcohol consumption, current use is currently collected, but it is important to investigate past use, as it also influences health conditions. Moreover, value-judgment questions, such as alcohol and other drugs, are not very accurate if answered with “yes” or “no,” so it is suggested that a more detailed question be structured. These behavioral factors increase the risk for several chronic diseases, which can lead to the use of various medications. Since the focus of this research is polypharmacy, it is useful to detail such harmful behaviors.

Finally, it should be noted that, to control polypharmacy, it is essential that care be shared between SOC and PHC. However, care should be managed by the latter, which treats the health of the elderly in its entirety, as medications may be prescribed for diseases other than those regulated for the service under study.

CONCLUSION AND IMPLICATIONS FOR PRACTICE

This study allowed us to describe the profile of elderly people with polypharmacy who accessed a Chronic Conditions Outpatient Clinic and to identify weaknesses in the completion of information in the regulatory system. A high prevalence of polypharmacy was observed among referred elderly individuals, especially among women aged 60 to 69 years, predominantly white, and taking five to nine medications daily. Most presented sufficient self-care and the presence of TOD, and the most frequent referral was for SAH associated with DM.

The high proportion of incomplete variables highlights the need to improve records in information systems and referral forms to outpatient clinics. Incomplete data limits health planning and decision-making, which impacts the continuity and comprehensiveness of care.

The study has an inherent limitation of cross-sectional designs, which is the low power to infer causality. The use of secondary data can be considered a weakness, since the information is not always complete and of high quality, as demonstrated in this study. These limitations affect the accuracy of the results on the elderly population in the respective region, in addition to not allowing for more complex analyses.

The importance of shared care between SOC and PHC is highlighted, with the strengthening of care coordination by PHC. It is recommended to raise awareness about polypharmacy in the elderly population and the importance of accurately filling in information in the information systems, as well as developing regional protocols to guide shared care within the SAH, aimed at both secondary care and PHC professionals.

To expand knowledge on the subject, it is suggested that future studies evaluate the frailty of polymedicated elderly individuals and the pharmacological classes used.

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DATA AVAILABILITY RESEARCH

The contents underlying the research text are included in the article.

CONFLICT OF INTEREST

No conflict of interest.

REFERENCES

1. Ministério da Saúde (BR). Guia de cuidados para a pessoa idosa. 1. ed. Brasília: Ministério da Saúde; 2023. 164 p.
2. Gusmão MSF, Cunha PO, Santos BG, Costa FM, Caldeira AP, Carneiro JA. Multimorbidity in community-dwelling older adults: prevalence and associated factors. *Rev Bras Geriatr Gerontol.* 2022;25(1):e220115.
3. Colaço VACMA, Ribeiro CAF. Polifarmácia e desprescrição na população geriátrica [dissertation]. Coimbra: Faculdade de Medicina, Universidade de Coimbra; 2023 [cited 2025 June 11]. 63 p. Available from: <https://hdl.handle.net/10316/113538>
4. Moraes EN. A arte da (des)prescrição no idoso: a dualidade terapêutica. Belo Horizonte: Folium Editora; 2018. 406 p.
5. Tiguman GMB, Biase TMMA, Silva MT, Galvão TF. Prevalence and factors associated with polypharmacy and potential drug interactions in adults in Manaus, Amazonas state, Brazil: a cross-sectional population-based study, 2019. *Epidemiol Serv Saude.* 2022;31(2):e2021653. <https://doi.org/10.1590/s2237-96222022000200003>. PMID:35730815.
6. Pio GP, Alexandre PRF, Toledo LFS. Polifarmácia e riscos na população idosa. *Braz J Health Rev.* 2021;4(2):8924-39. <https://doi.org/10.34119/bjhrv4n2-403>.
7. Mendes EV. Desafios do SUS. 1. ed. Brasília : CONASS; 2019. 869 p.
8. Malta M, Cardoso LO, Bastos FI, Magnanini MMF, Silva CMFP. STROBE initiative: guidelines on reporting observational studies. *Rev Saude Publica.* 2010;44(3):559-65. <https://doi.org/10.1590/S0034-89102010000300021>. PMID:20549022.
9. Nota Técnica Conjunta nº 05/2023 (SES/RS). Atenção ao indivíduo com hipertensão arterial sistêmica na atenção primária à saúde [Internet]. Secretaria Estadual de Saúde, Porto Alegre (RS), 2023 [cited 5 Jan 2025]. Available from: <https://atencaoprimaria.rs.gov.br/upload/arquivos/202307/18150540-nt-has-2023.pdf>.
10. Nota Técnica Conjunta nº 06/2023 (SES/RS). Atenção ao indivíduo com diabetes tipo II na atenção primária à saúde [Internet]. Secretaria Estadual de Saúde, Porto Alegre (RS), 2023 [cited 5 Jan 2025]. Available from: <https://atencaoprimaria.rs.gov.br/upload/arquivos/202307/18150801-nt-dm-2023.pdf>.
11. Instituto Brasileiro de Geografia e Estatística. Panorama do Censo 2022 [Internet]. Rio de Janeiro: IBGE; 2022 [cited 2024 Feb 15]. Available from: <https://censo2022.ibge.gov.br/panorama/>
12. Paulino RA, Paulino RA, Sousa MNA, Torres CRV. Fatores relacionados à polimedicação e o impacto na qualidade de vida dos idosos: uma revisão integrativa da literatura. *Rev Psicologia.* 2021;15(54):183-96. <https://doi.org/10.14295/online.v15i54.2914>.
13. Pagotto V, Dias DM, Pezarini LO, Sousa JM, Oliveira MDS, Lima JOR. Polifarmácia e potenciais interações medicamentosas em adultos e idosos com diabetes mellitus: estudo transversal. *Rev. Recien.* 2023;13(41):540-50. <https://doi.org/10.24276/recien2023.13.41.540-550>.
14. Oliveira BR. Prevalência de polifarmácia e marcadores antropométricos em idosos atendidos no Centro de Referência em Atenção à Saúde do Idosos (CRASI) em Niterói-RJ [dissertation]. Niterói: Faculdade de Nutrição, Universidade Federal Fluminense; 2022 [cited 5 Jan 2025]. 38 p. Available from: <http://app.uff.br/riuff/handle/1/29263>

15. Oliveira PC, Silveira MR, Ceccato MGB, Reis AMM, Pinto IVL, Reis EA. Prevalência e fatores associados à polifarmácia em idosos atendidos na atenção primária à saúde em Belo Horizonte-MG, Brasil. *Cien Saude Colet*. 2021;26(4):1553-64. <https://doi.org/10.1590/1413-81232021264.08472019>.
16. Rosa EA, Gehrke ES, Simonetti AB, Glusczak L, Biffi M, Acrani GO et al. Fatores associados à polifarmácia em idosos atendidos na atenção primária em saúde. *Estud Interdiscipl Envelhec*. 2024;29(1):e137311. <https://doi.org/10.22456/2316-2171.137311>.
17. Rezende GR, Amaral TLM, Amaral CA, Vasconcellos MTL, Monteiro GTR. Prevalence of polypharmacy and associated factors in older adults living in Rio Branco, Acre, Brazil: a cross-sectional population-based study, 2014. *Epidemiol Serv Saude*. 2021;30(2):e2020386. <https://doi.org/10.1590/s1679-49742021000200013>. PMID:34076227.
18. Vieiro MM, Persequino MG, Rastelli VMF, Vismari L. Análise do perfil sociodemográfico e de utilização de medicamentos de idosos atendidos em ambulatório universitário. *Rev Gest Sist Saúde*. 2020;9(3):479-98. <https://doi.org/10.5585/rgss.v9i3.14523>.
19. Ministério da Saúde (BR). *Vigitel Brasil 2023: vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico: estimativas sobre frequência e distribuição sociodemográfica de fatores de risco e proteção para doenças crônicas nas capitais dos 26 estados brasileiros e no Distrito Federal em 2023*. 1. ed. Brasília: Ministério da Saúde; 2023. 131 p.
20. Barroso WKS, Rodrigues CIS, Bortolotto LA, Mota-Gomes MA, Brandão AA, Feitosa ADM et al. Brazilian Guidelines of Hypertension – 2020. *Arq Bras Cardiol*. 2021;116(3):516-658. <https://doi.org/10.36660/abc.20201238>. PMID:33909761.
21. Rocha MCV, Costa HVCC, Cova MCC, Rocha LMV, Lira CVCF, Souza NCVF et al. Diabetes mellitus em idosos: prevalência e incidência no Brasil. *Braz J Implantol Health Sci*. 2024;6(8):2418-31. <https://doi.org/10.36557/2674-8169.2024v6n8p2418-2431>.
22. Tinôco EEA, Costa EJ, Sousa KC, Marques MJD, Marques TFAS, Martins VA et al. Polifarmácia em idosos: consequências de polimorbidades. *Braz J Surg Clin Res*. 2021;35(2):79-85.
23. Bichara KS, Rezende JC, Agostini LP, Pereira MLVBA, Corrêa PRC, Lisboa RPC et al. Impactos da polifarmácia na saúde e na qualidade de vida da população idosa. *Braz J Health Rev*. 2023;6(3):8685-95. <https://doi.org/10.34119/bjhrv6n3-026>.
24. Bandeira D, Damaceno AN, Weiller TH, Lopes LFD. Evaluation of the coordination of care by users of primary health care services. *Rev Min Enferm*. 2020;24:e-1278. <https://doi.org/10.5935/1415-2762.20200007>.
25. Pereira KG, Peres MA, Iop D, Boing AC, Boing AF, Aziz M et al. Polypharmacy among the elderly: a population-based study. *Rev Bras Epidemiol*. 2017;20(2):335-44. <https://doi.org/10.1590/1980-5497201700020013>. PMID:28832855.
26. Oliveira BS, Ribeiro AMVB, Araujo PS, Ponce JT, Pataro H. Polifarmácia entre idosos de uma unidade de saúde da família: um relato de experiência multiprofissional. *Saúde.com*. 2021;17(3):2348-54. <https://doi.org/10.22481/rsc.v17i3.8213>.
27. Coutinho LSB, Tomasi E. Déficit de autocuidado em idosos: características, fatores associados e recomendações às equipes de Estratégia de Saúde da Família. *Interface*. 2020;24(Supl. 1):e190578. <https://doi.org/10.1590/interface.190578>.
28. Ministério da Saúde (BR). *Autocuidado em Saúde e a Literacia para a Saúde no contexto da promoção, prevenção e cuidado das pessoas em condições crônicas: guia para profissionais da saúde*. 1ª ed. Brasília: Ministério da Saúde; 2023. 53 p.
29. Silva GHM, Silva MSA, Oliveira GPL, Pampolim G, Sogame LCM. Factors related to polypharmacy in elderly people assisted by a Family Health Unit in Manhuaçu – MG. *Clinics Biopsychosocial*. 2023;1(1):32-9. <https://doi.org/10.54727/cbps.v1i1.2>.
30. Silva GNA, de Souza TT. Avaliação do perfil sociodemográfico, clínico e farmacoterapêutico dos idosos atendidos no ambulatório de cuidado farmacêutico da Universidade Federal de Paraíba [dissertation]. João Pessoa: Faculdade de Farmácia, Universidade Federal de Paraíba; 2021 [cited 5 Jan 2025]. 56 p. Available from: <https://repositorio.ufpb.br/jspui/handle/123456789/22847>
31. Araújo MS, Costa NL, Araújo KF, Oliveira AKB, Cunha KC. Incompletude dos dados do programa Hipertensão em Unidades Básicas de Saúde em Marabá, Pará. *RSD*. 2021;10(9):e37110918040. <https://doi.org/10.33448/rsd-v10i9.18040>.

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