



# Older people and access to health care in North Macedonia

## ABSTRACT

As the population ages in North Macedonia, the family structures are changing and the health and social systems have limited capacity to provide integrated and person-centred care, leaving older people in the country to face a number of health, social and economic challenges. The report focuses on documenting the demographics, health status, risk factors and disparities among older people. It examines the utilization of health-care services and health-seeking behaviour of older people and explores the perceptions, practices and experiences of older people, primary health care providers and caregivers, with respect to health and social care services. Furthermore, it looks at describing the situation regarding the provision of integrated health care for older people at both a service and system level. The report also triangulates the data relating to the areas analysed and provides recommendations for the coordination of services and models of care at a service level, while at a system level it recommends ways forward to strengthen patient engagement and empowerment, governance and accountability.

### KEYWORDS

OLDER PEOPLE  
CAREGIVERS  
PATIENT PARTICIPATION  
ACCESS TO HEALTH SERVICES  
HEALTH STATUS  
SOCIAL SUPPORT  
NORTH MACEDONIA

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# CONTENTS

<b>LIST OF TABLES AND FIGURES</b> .....	<b>iv</b>
<b>ACKNOWLEDGEMENTS</b> .....	<b>vi</b>
<b>ABBREVIATIONS</b> .....	<b>vii</b>
<b>BACKGROUND</b> .....	<b>1</b>
Conceptual framework.....	2
<b>METHODS</b> .....	<b>3</b>
Overall study design .....	3
Timeline .....	3
Methods of data collection .....	3
Documentation.....	3
Electronic health records.....	3
Surveys .....	3
Field visit .....	4
Consultative multi-stakeholder meeting .....	4
Limitations .....	5
Analysis plan .....	5
<b>FINDINGS</b> .....	<b>6</b>
Population structure and ageing .....	6
Health status and disability.....	6
Life expectancy and healthy life years among older people .....	6
Self-perceived health status among older people.....	7
Healthy lifestyles among older people.....	8
Health limitations among older people .....	9
Use of doctors, medicines and health services among older people .....	11
Causes of death among older people.....	21
Housing and living conditions of older people .....	22
Perceptions, experiences and practices of health workers, older people and caregivers on the organization and delivery of health services .....	23
Perceptions and experiences of older people .....	23
GP and family medicine doctors' perceptions and practices .....	34
Perceptions and experiences of family caregivers .....	51
Caregivers' experiences of support and coping .....	55
Caregivers' experiences of mistreatment .....	56
Prevalence of potentially harmful caregiver behaviour .....	57
Integrated care for older people (ICOPE).....	59
Levels of implementation of ICOPE services actions.....	59
Levels of implementation of ICOPE system actions .....	60
<b>CONCLUSIONS</b> .....	<b>62</b>
<b>KEY STEPS TOWARDS STRENGTHENING CARE OF OLDER PEOPLE IN NORTH MACEDONIA</b> .....	<b>65</b>
Empowering and engaging people and communities.....	65
Reorienting the model of care.....	65
Strengthening governance and accountability systems .....	66
Creating an enabling environment.....	66
<b>REFERENCES</b> .....	<b>68</b>
<b>ANNEX 1. INTEGRATED CARE FOR OLDER PEOPLE (ICOPE) SCORECARD</b> .....	<b>71</b>

## LIST OF TABLES AND FIGURES

### Tables

Table 1. Share of population aged 65+ years in North Macedonia, by region, 2018 .....	6
Table 2. Basic demographic characteristics of older people registered with a PHC provider, 2018 .....	11
Table 3. PHC consultations by age group, 2018.....	12
Table 4. PHC consultations by older people, by region, 2018 .....	12
Table 5. Association between age and frequency of family medicine doctor consultations, 2018 .....	13
Table 6. Association between frequency of family medicine doctor consultations and region, 2018.....	13
Table 7. Association between frequency of gynaecological consultations and age, 2018 .....	14
Table 8. Association between frequency of gynaecological consultations and region, 2018.....	14
Table 9. Association between frequency of dentist consultations and age, 2018.....	14
Table 10. Association between frequency of dentist consultations and region, 2018 .....	15
Table 11. Geriatric conditions related to health-seeking behaviour among older people, 2018...	15
Table 12. Referral patterns by age, 2018 .....	16
Table 13. Average number of referrals per patient per year by age and sex, 2018 .....	17
Table 14. Referral patterns by region, 2018 .....	17
Table 15. Average number of referrals per patient and average days of waiting time for the most common geriatric conditions, 2018 .....	18
Table 16. Average number of specialist consultations by age and sex, 2018.....	18
Table 17. Average number of prescriptions per patient per year by age and sex, 2018 .....	19
Table 18. Factors predicting hospitalization.....	20
Table 19. Factors predicting frequency of hospitalization.....	20
Table 20. Factors predicting duration of hospital stay.....	20
Table 21. Distribution of characteristics of older people, 2019.....	24
Table 22. Older people's perceptions about their ability to choose a health care provider, by sex and age, 2019 .....	24
Table 23. Older people's perceptions on quality of amenities and office staff, by sex and age, 2019 .....	25
Table 24. Older people's perceptions on timeliness, by sex and age, 2019 .....	26
Table 25. Older people's perceptions on communication, by sex and age, 2019.....	26
Table 26. Older people's perceptions on shared decision-making, by sex and age, 2019.....	27
Table 27. Older people's perceptions on self-management support, by sex and age, 2019 .....	28
Table 28. Older people's perceptions on confidentiality and privacy, by sex and age, 2019.....	29
Table 29. Older people's perceptions on cultural competency, by sex and age, 2019 .....	29
Table 30. Older people's perceptions on dignity, by sex and age, 2019 .....	30
Table 31. Older people's perceptions on emotional support and empathy, by sex and age, 2019 .....	30
Table 32. Older people's perceptions on care continuity and coordination, by sex and age, 2019 .....	32
Table 33. Older people's perceptions on the responsiveness of the PHC facility, by sex and age, 2019 .....	32
Table 34. Distribution of characteristics of health providers, 2019.....	34
Table 35. GP/family medicine doctors' perceptions on the organization and management of health services delivery, 2019 .....	36
Table 36. GP/family medicine doctors' self-reported motivation, 2019 .....	39

Table 37. GP/family medicine doctors' perceptions on quality of amenities, 2019.....	41
Table 38. GP/family medicine doctors' perceptions on the level of integration of care, 2019 .....	42
Table 39. GP/family medicine doctors' perceptions on the level of communication between health providers and patients, 2019 .....	43
Table 40. GP/family medicine doctors' perceptions about the patient's ability to choose, 2019 .....	44
Table 41. GP/family medicine doctors' perceptions on the confidentiality and privacy during health services delivery, 2019.....	44
Table 42. GP/family medicine doctors' perceptions on the respect and dignity of patients during health services delivery, 2019 .....	45
Table 43. GP/family medicine doctors' perceptions on health providers' support for informed choice for patients, 2019.....	46
Table 44. GP/family medicine doctors' perceptions and self-reported practices regarding patients' self-care support, 2019 .....	48
Table 45. GP/family medicine doctors' perceptions on the accessibility of health services, 2019.....	49
Table 46. GP/family medicine doctors' perceptions on quality of care, 2019 .....	49
Table 47. Distribution of caregivers' characteristics in Kochani and Resen, 2019.....	52
Table 48. Overall health of caregivers by sex, 2019.....	54
Table 49. Perceived caregivers' burden, 2019.....	54
Table 50. Frequency with which caregivers provided help with activities of daily living, 2019.....	54
Table 51. Help provided by caregivers, 2019 .....	55
Table 52. Positive appraisal of caregiving, 2019 .....	56
Table 53. Caregivers' perceived quality of support, 2019.....	56
Table 54. Psychological mistreatment experienced by caregivers, 2019 .....	57
Table 55. Physical mistreatment experienced by caregivers, 2019 .....	57
Table 56. Potentially harmful psychological behaviour engaged in by caregivers in the previous three months, 2019.....	58
Table 57. Potentially harmful physical behaviour engaged in by caregivers in the previous three months, 2019.....	58
Table 58. Engagement in potentially harmful caregiver behaviour, 2019.....	58

## Figures

Fig. 1. Situation analysis – factors for consideration (LEAP toolkit).....	2
Fig. 2. Self-perceived health status among older people by age and sex, 2018 (%).....	8
Fig. 3. Share of obese people by age, 2017 .....	9
Fig. 4. People having a long-standing illness or health problem by age and sex, 2018 (%) .....	10
Fig. 5. Self-perceived long-standing limitations in usual activities due to health problem by sex, age and degree of urbanization, 2018 (%).....	10
Fig. 6. Self-reported unmet need for medical examination by sex and age, 2018 (%).....	21
Fig. 7. Relationship of the caregiver to the recipient, 2019 (%).....	53

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Simona Atanasova of the WHO Country Office, North Macedonia led the design and implementation of the study, as well as defining the technical concept, data analysis and writing of this report. Jihane Tawilah (WHO representative, North Macedonia) contributed to the technical concept, study design and review, as well as providing overall support and technical assistance.

Various WHO technical reviewers also contributed to the process. Manfred Huber (WHO Regional Office for Europe) reviewed the report, along with Nuria Toro Polanco (WHO headquarters), who also provided input into the study design and technical concept.

## ABBREVIATIONS

CI	confidence interval
ESE	Association for Emancipation, Solidarity and Equality of Women
EU	European Union
GP	general practitioner
ICOPE	Integrated Care for Older People
IPCHS	integrated people-centred health services
LEAP	Local Engagement Assessment and Planning
MKD	Macedonian Denar (currency)
PHC	primary health care
PHI	Public Health Institution (Gerontology Institute)
SD	standard deviation

## BACKGROUND

Populations age much faster today they did in the past. An older population poses health complexities, creates challenges for all types of health professionals, and substantially increases people's health care and social needs (1). As the population ages in North Macedonia, the family structures are changing and the health and social systems have limited capacity to provide integrated and person-centred care, leaving older people in the country facing a number of health, social and economic challenges. Urgent measures are required to address this, including activities to help communities adapt to the new reality.

In order to tackle the health and social challenges of the ageing population, over the past few years the Ministry of Labour and Social Policy adopted the National Strategy for Elderly People 2010–2020 and the Action Plan for Healthy Ageing 2020. The Ministry of Health introduced several initiatives to provide greater access to health services for older people, such as home visits by community nurses (also called patronage nurses), the rural doctors project<sup>1</sup> and mobile pharmacies, as well as piloting the introduction of integrated health and social services.<sup>2</sup> Furthermore, in 2018 the Ministry of Health – supported by WHO – initiated a health system reform under which the strengthening of primary health care (PHC) was identified as a key intervention to improve the quality, continuity and overall performance of health services (2). The reform aims to ensure equitable access to health care and to rebuild a responsive PHC that helps converge health protection and promotion, disease prevention, and primary curative services on the one hand with highly needed public health population-based and social interventions on the other hand. The reform is based on and inspired by the principles of the WHO Declaration of Alma Ata in 1978 and the renewed Declaration of Astana in 2018; this PHC-led health systems approach is believed to be a driving force for achieving universal health coverage.

This assessment of the health and ageing-relevant health care of older people is the first of its kind in North Macedonia. It derives from a lack of information at national level about the demography of this population group, their vulnerability and specific health conditions, as well as the need to achieve universal health coverage and transform health services, working towards more focused, integrated and person-centred care. The assessment results will contribute to obtaining a clear picture of older people's access to and utilization of a comprehensive range of health services in the country, and of the quality and performance of service delivery and systems involved in caring for older people. It will also serve as a starting point for proposing actions to align the current health situation for older people with the overarching goal of transitioning to the provision of integrated and person-centred care, which is known to have the greatest impact on functional ability in older age.

The report has six main sections. The first focuses on documenting the demographics, health status, risk factors and disparities among older people. The next examines the utilization of health-care services and health-seeking behaviour of older people. The third section explores the perceptions, practices and experiences of older people, PHC providers and caregivers, with respect to health and social services. The following section is focused on describing the status

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<sup>1</sup> The “rural doctor” concept was introduced in 2014 by the Ministry of Health and it included medical teams (a doctor and a nurse) visiting rural areas where PHC doctors were not available.

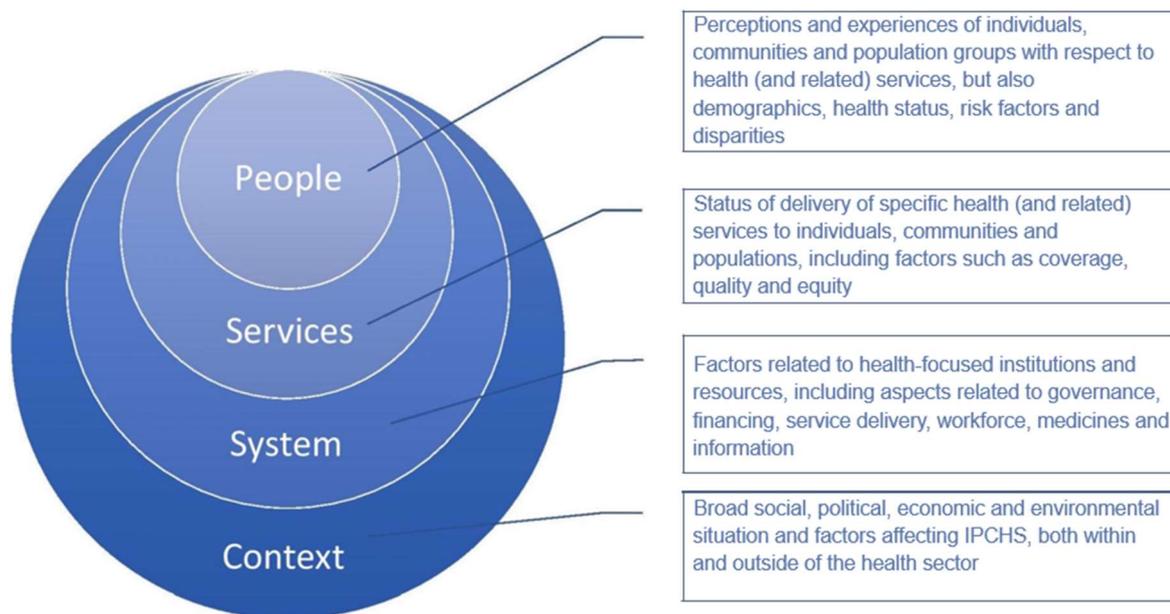
<sup>2</sup> This pilot project was introduced in 2018 in two municipalities (Kochani and Resen), aiming to integrate the health and social services and bring them closer to the community, reaching the most vulnerable members of the communities (older people, older people living alone, people with co-morbidities and people at risk of poverty and social exclusion).

of the provision of integrated health care for older people on both a service and system level. The fifth section triangulates the data of the areas analysed, while the last section focuses on providing recommendations for the coordination of services and models of care at a service level, and recommends ways forward to strengthen patient engagement and empowerment, governance and accountability at the system level.

### Conceptual framework

The assessment is organized around selected themes and variables from the Local Engagement Assessment and Planning (LEAP) – a toolkit for enhancing Integrated and People-Centred Health Services (IPCHS) (Fig. 1.). At its core, this assessment focuses on the **people** level, helping to characterize the demand for IPCHS, which includes understanding the population and community of older people both quantitatively (e.g. demographics, health status, risk factors, disparities and health-seeking behaviour) and qualitatively (e.g. perceptions and experiences regarding their needs and preferences, and the extent to which available services meet those needs and preferences). At the **services** level, the assessment seeks to document the status of delivery of specific health (and other related) services to older people. At the **system** level, the assessment strives to describe the aspects of governance, the workforce, service delivery, and information systems in the provision of integrated care for older people.

Fig. 1. Situation analysis – factors for consideration (LEAP toolkit)



Source: authors' own compilation based on (unpublished) WHO resources.

# METHODS

## Overall study design

A cross-sectional study design was used to document the situation regarding older people in North Macedonia, chosen in order to describe the current system, as well as the service delivery organization and response to the health needs of older people. Only a limited number of studies are carried out to explore these relationships in the country. This study design was preferred to experimental or quasi-experimental designs since it does not entail an intervention in the current system but rather is intended to document the current situation. However, to strengthen plausibility, where information was available, the analysis was carried out at a regional level, by age group and sex, to make comparisons as well as identify possible differences in the contextual factors, such as availability of services. In addition, where information was available, comparisons were made with European Union (EU) Member States.

## Timeline

This assessment took place from September to December 2019. The process was divided into four main phases: (1) scoping and assessment design, (2) adapting the assessment products to the national context, (3) data collection, and (4) final overall reporting.

## Methods of data collection

### Documentation

Secondary data were used to describe the demographic characteristics of older people and the health status, risk factors and disparities among them.

### Electronic health records

Data regarding the utilization of health-care services and health-seeking behaviour in 2018 were extracted from the electronic health records system, known as “Moj Termin” (“My Appointment”). The data extracted focused on the number of people registered with a health care provider in the PHC setting (with general practitioners (GPs)/family medicine doctors, gynaecologists and dentists); PHC consultations; referrals from primary care to secondary and tertiary health care; specialist examinations; prescription trends; and hospitalizations.

### Surveys

The three target populations – PHC providers, older people, and caregivers – were surveyed during two weeks in October 2019 to assess their perceptions, practices, and experiences in providing and accessing care.

- The survey of **PHC providers** was administered online through a structured questionnaire adapted to the national context.<sup>3</sup> The survey was distributed through the Association of Private Doctors in Primary Health Care, the Association of General Medicine and Family Medicine Doctors, and the Association of Private Gynaecologists and the Public Health Institution (PHI) Gerontology Institute “13 November” (a specialized hospital for geriatric and palliative medicine). Participants were eligible to participate if they were health providers at PHC level or working at the PHI Gerontology Institute “13 November” and

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<sup>3</sup> The survey was adapted to the national context from the following IPCHS projects: “Towards integrated people-centered maternal, newborn, and child health care in Mali” (2016–2017) and “End-line assessment of integrated people-centred health services in Nelson Mandela Metro Municipality, Eastern Cape Province, South Africa” (2015–2017). More information can be found at the IPCHS website: [www.integratedcare4people.org](http://www.integratedcare4people.org).

consented to participate in the survey. The questionnaire comprised of 63 questions organized around aspects of the service delivery function, including: organization and management, motivation, quality of amenities and office staff, communication, opportunity for patients to choose providers, confidentiality and privacy, respect and dignity, support for informed choice, self-care support, comprehensiveness and accessibility. The survey focused on understanding the facilitators of and barriers to providing integrated, effective and high-quality services to older people.

- The survey of **older people** was administered face to face in two municipalities, Kochani and Resen, in which the Ministry of Health and the Ministry of Labour and Social Policy piloted the introduction of integrated health care and social services. Convenience sampling was used to identify older people through the mobile health and social services teams in these two municipalities. Participants were eligible to participate if they were aged 65 years or older, resided in one of the two chosen municipalities and consented to participate in the survey. The structured questionnaire (adapted to the national context from the two aforementioned IPCHS projects in Mali and South Africa) consisted of 35 questions and looked at the background characteristics of the older people and their experiences and perceptions regarding various aspects of the service delivery function, including: quality of amenities and office staff, timeliness, communication, opportunity to choose providers, shared decision-making, self-management support, confidentiality and privacy, cultural competency, dignity, emotional support and empathy, care continuity and coordination, and responsiveness.
- The survey of **caregivers** was administered face to face in the same two municipalities, Kochani and Resen. Convenience sampling was used to identify older people through the mobile health and social services teams in these two municipalities. Participants were eligible to participate if they were a caregiver to a person aged 65 years or older, reside in one of the chosen municipalities and consented to participate in the survey. The structured questionnaire – adapted to the national context<sup>4</sup> – consisted of 50 questions and looked at the background characteristics of caregivers, health status, perceived quality of support, psychological and physical mistreatment of caregivers, psychological and physical abuse by caregivers, and caregiving burden.

#### Field visit

A visit of the PHI Gerontology Institute “13 November” was organized to understand the organization and status of delivery of care to older people in this facility which is one of a kind in the country.

#### Consultative multi-stakeholder meeting

A one-day consultative meeting was held in December 2019 with the relevant stakeholders to obtain a consensual agreement over the level of integration of care for older people in the country. These relevant stakeholders included representatives from the Ministry of Health, the Ministry of Labour and Social Policy, the Institute of Public Health, the e-Health Directorate, the Health Insurance Fund, the Center for Family Medicine, the PHI Gerontology Institute “13 November”, the Skopje Clinic for Oncology, the University Clinic of Cardiology, the Primary Healthcare Center Skopje, the Association of General Medicine and Family Medicine Doctors, the Association of Nurses and Midwives, the Union of Retired Persons, the Red Cross and the Association for Emancipation, Solidarity and Equality of Women (ESE). To facilitate the consensus, the Integrated Care for Older People (ICOPE) Implementation

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<sup>4</sup> The questionnaire was adapted to the national context from the National Survey of Stress, Conflict and Coping – Family Carers of Older People implemented by the National Centre for the Protection of Older People in Ireland.

Framework was used, which provides guidance for policy-makers and programme managers to assess and measure concretely the capacity of services and systems to deliver integrated care at the community level (3). The ICOPE approach highlights broader health and social care systems to effectively respond to the diverse and complex needs of older people. A total of 19 actions are needed to implement the ICOPE framework at both the services (meso) and systems (macro) levels. The implementation status of each of these actions in North Macedonia was ranked; the scoring process highlighted the areas for improvement, at the same time identifying concrete measures of future improvements.

## Limitations

Several limitations to this approach should be considered. The survey data are derived from convenience sampling and are not generalizable to all health workers, older people and caregivers in the country. Furthermore, the information collected through the survey of older people and caregivers is limited to participants in the pilot project of integrated health and social services introduced by the Ministry of Health and the Ministry of Labour and Social Policy in 2018. This potentially introduces a selection bias because the users of these services are selected based on health and social vulnerabilities and thus these people might be more vulnerable than other older people in the country. The three surveys only involved self-reported perceptions and experiences; it is not clear to what extent this could lead to misreporting and what effects any resulting biases would have on the findings.

## Analysis plan

The analysis plan for the assessment is described in the following list of key actions.

- Analysing the demographics, health and risk factor indicators was straightforward, through obtaining and triangulating the data from the Institute of the Public Health, the State Statistical Office and Eurostat.
- Data on the utilization of health-care services were obtained from the health information system “Moj Termin”. Stata 13 was used for data analysis and, where available, the data were stratified across the regions, age groups and by sex. Both linear and logistic regression were used to explore the relationship between age and sex and the utilization of health-care services.
- The perceptions of PHC providers, older people and caregivers were obtained through surveys and analysed using Stata 13. The Shapiro–Wilk test was used to determine the normality of the data distribution and the Mann-Whitney U test or the t-test were used to compare the difference in perceptions, experiences and practices between the relevant subgroups.
- The degree of integration of older people’s care, at both services and system levels was analysed using the ICOPE Implementation Framework scorecard through a consultative meeting with the relevant stakeholders (including decision-makers, managers, providers, patients, etc.), which was convened to discuss and reach an agreement on the integration of the care of older people.

## FINDINGS

### Population structure and ageing

In North Macedonia, with a total sub-replacement fertility rate below two children per woman (1.496 in 2018) (4), the total population is projected to reach its peak in 2020 (2.84 million people), after which it is projected to be declining over the next 80 years (5). In parallel with this declining trend, the population is getting older. By 2050 half of the people living in the country will be over 48 years old (5), compared to 2018 when the median age was 38.9 years (6). The proportion of people aged 65 and over has been steadily increasing over the years and is projected to reach 25.7% in 2050 and 32.3% in 2100 (5).

A total of 13.9% of the total population were people aged 65 years and older in 2018 (6). The female-to-male ratio among older people in the country is slightly biased towards the female sex, estimated at 0.80 males per female, although the ratio is 1.069 males per female births. The ratio at older ages narrows, with 0.62 male/female in people aged 85 years and over, as on average women live longer than men in North Macedonia. The share of the population aged 65 years and older varies across the country's eight regions from 9.6% of the population in Polog, to 16.6% in Pelagonia (Table 1) (6).

*Table 1. Share of population aged 65+ years in North Macedonia, by region, 2018*

<b>Region</b>	<b>%</b>
Polog	9.6
Southwest	12.2
Northeast	12.9
Southeast	14.3
Skopje	14.8
Vardar	15.3
East	16.1
Pelagonia	16.6
<b>Total</b>	<b>13.9</b>

Note: data reflect the situation on 31 June 2018.

Source: State Statistical Office of North Macedonia (6).

The old-age dependency ratio<sup>5</sup> is increasing from 19.5 in 2015, expected to reach 45.4 in 2050 and 65.4 by 2100. This means that there were 19.5 older persons per 100 persons of working age in 2015; the estimation is that this number will more than double by 2050 and triple by 2100 (7).

### Health status and disability

#### Life expectancy and healthy life years among older people

Life expectancy at birth has been increasing in North Macedonia. In 2018, women aged 65 years and over in North Macedonia could expect to live for an additional 17.1 years, while the corresponding figure for males was lower, at 14.9 years (8). This represents 4.4 years and

<sup>5</sup> The old-age dependency ratio is that of people of “dependent” age (65 years and older) to those of “economically productive” age (15–64 years) within a population.

3.3 years less compared to older women and older men in the EU, respectively. It is crucial for policy-makers to understand if the increasing number of older people in North Macedonia are living their later years in good health, as the additional years spent in unhealthy conditions (that is, with limitations in functioning, or disability) are likely to result in extra demand for supplementary health care or long-term care services (8). However, no data are available for North Macedonia regarding the healthy life years of people aged 65 years and over.

#### Self-perceived health status among older people

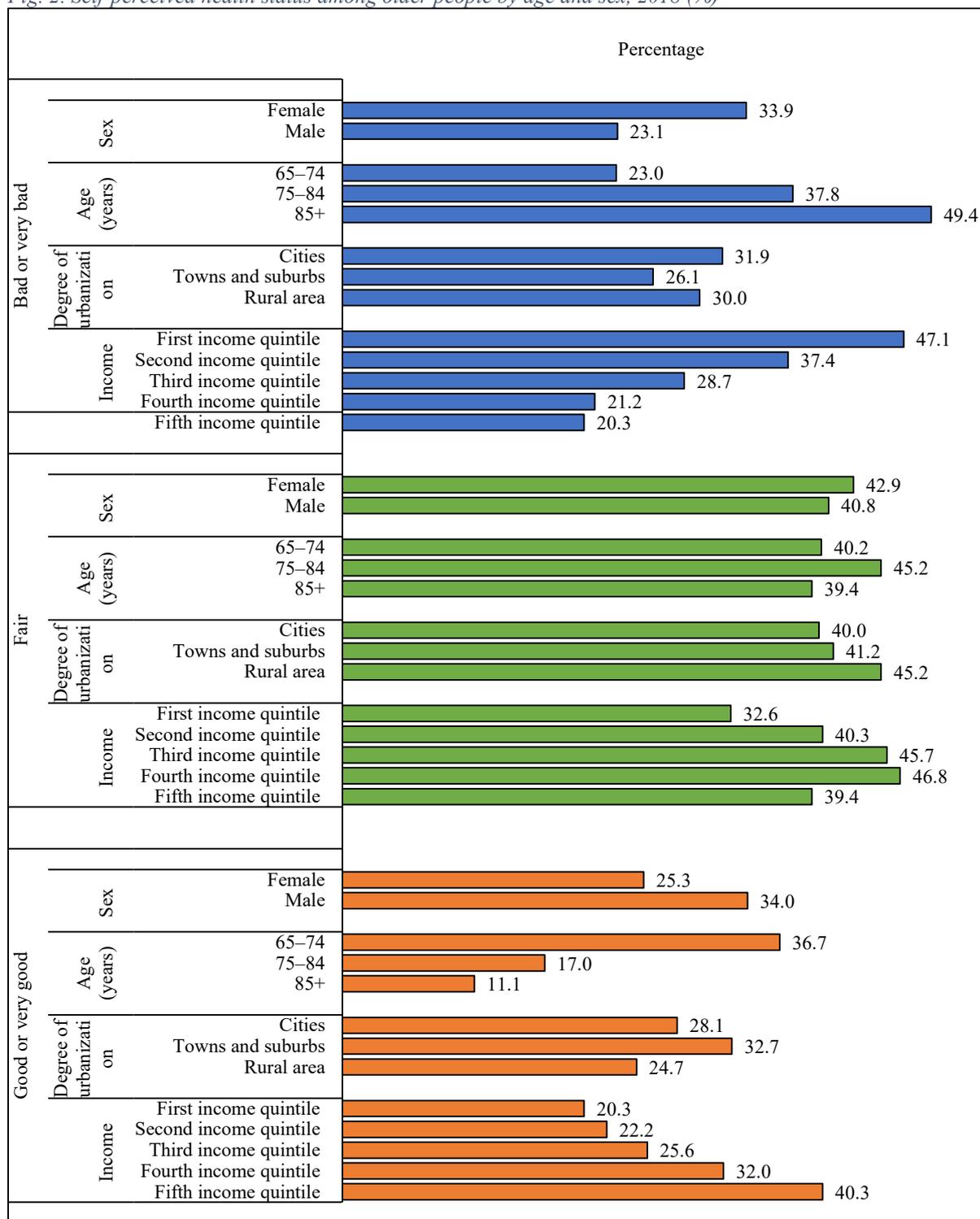
Although a common notion is that most older people are not expected to be in perfect health throughout their later years, still many older people hope that their health and physical condition will be such that they can continue with everyday activities, such as going out and socializing, remaining independent and able to care for themselves and working as long as they want (8).

**As might be expected, in North Macedonia, the share of people perceiving their health as good or very good decreases with age** (Fig. 2). In 2018, 75.4% of the adult population in North Macedonia (aged 16 years and over) considered their health to be good or very good, while this share fell to 29.2% among older people (9). The share of older people perceiving their health as good or very good is substantially lower than that of older people in the EU with the same opinion (42.4%).

Looking more closely across the older people age groups, a drastic decrease can be seen in the share of people perceiving their health to be good or very good, as the age group increases. This share drops from 36.7% among older people aged 65–74 years to 11.1% among older people aged 85 years and over (Fig. 2). The greatest proportion of older people reporting good or very good health status in North Macedonia live in towns and suburbs (32.7%), while the lowest proportion live in rural areas (24.7%) (Fig. 2).

Overall, **a greater share of older men perceived their health as good or very good compared to older women. In addition, the share of older people who perceived their health to be good or very good rose with increasing income.** In 2018, about one fifth (20.3%) of older people in the first income quintile (in other words, the fifth of the population with the lowest income) perceived their own health to be good or very good. This share rose to 40.3% for older people in the fifth income quintile (the 20% of the population with the highest income) (Fig. 2). The relationship between EU health status and sex, income and degree of urbanization was similar to that observed in EU Member States.

Fig. 2. Self-perceived health status among older people by age and sex, 2018 (%)



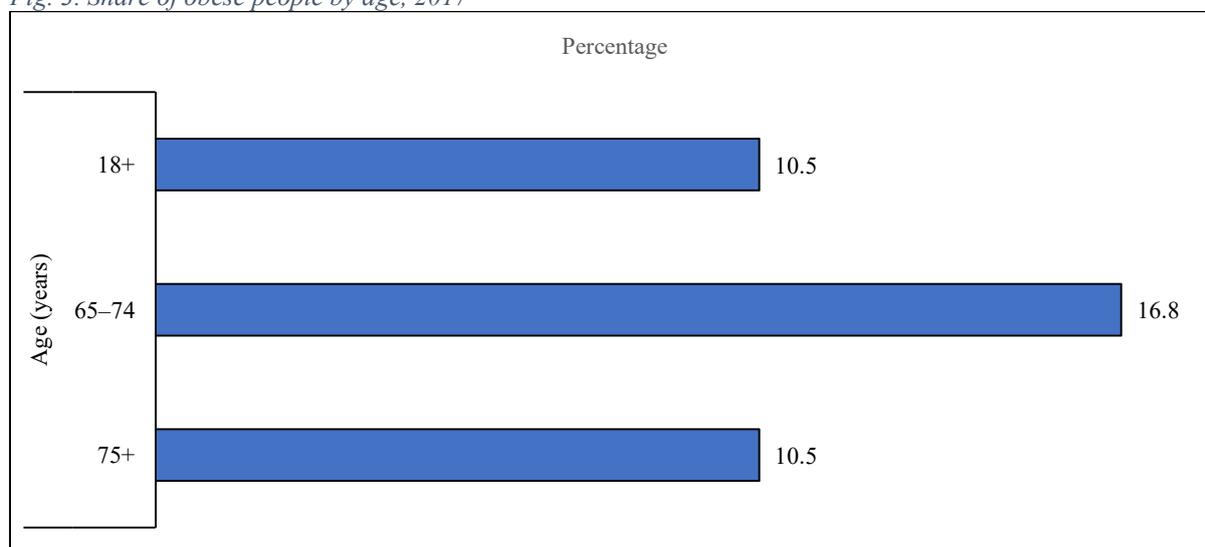
Source: Eurostat EU-SILC data from 2018 (10).

### Healthy lifestyles among older people

Obesity is a serious public health problem, as it significantly increases the risk of chronic conditions such as cardiovascular disease, type-2 diabetes, coronary heart disease and certain cancers. In general, the share of obese people aged 65–74 years in North Macedonia (16.8%) is lower than the EU average (21.2%) (Fig. 3). **As with the EU trend, the share of older people aged 65–74 years in the country who were obese was higher in 2017 than the average of the adult population (aged 18 years and over) (11).** The situation is somewhat

different for people aged 75 years and over and, again, this trend is similar in the EU. The share of obese people in North Macedonia aged 75 years and older was the same as the share of obese people among the adult population in the country (Fig. 3).

Fig. 3. Share of obese people by age, 2017



Source: Eurostat EU-SILC data from 2017 (11).

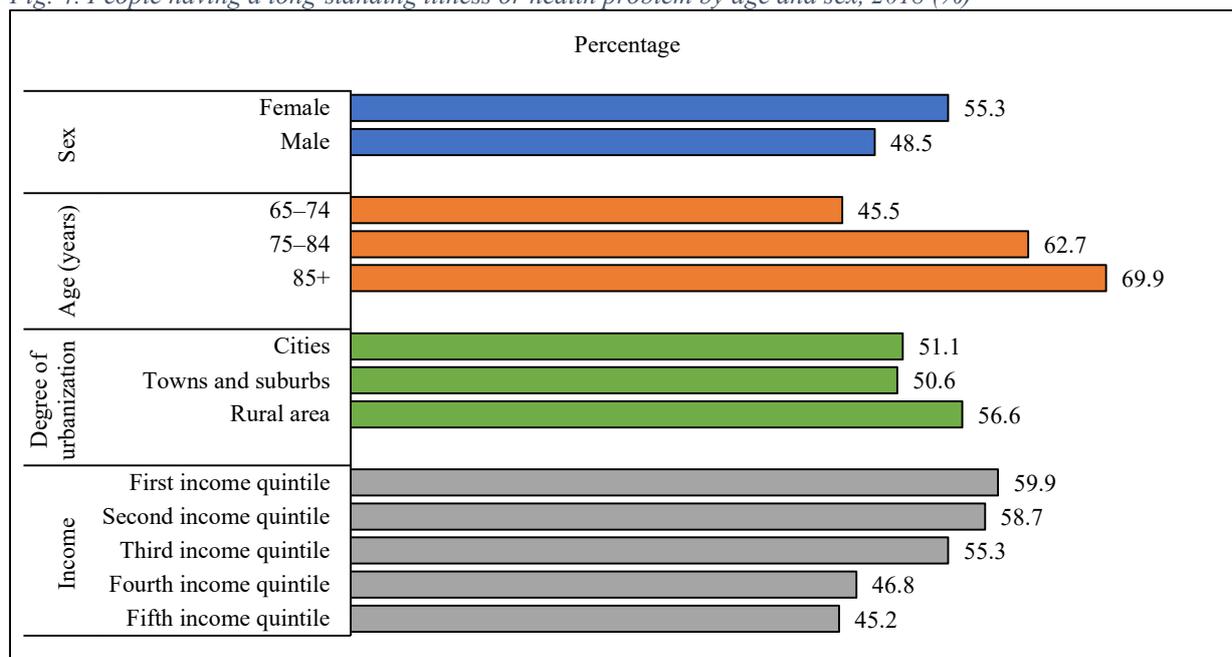
#### Health limitations among older people

Health is closely related to an individual’s well-being and intrinsically tied to aspects of personal independence (8). The share of the adult population that faces challenges in daily life activities – such as eating, bathing and dressing – increases with age. This can be attributed to the relatively high share of older people who suffer from physical and sensory functional limitations, impacting on their vision, hearing, mobility, communication or ability to remember (8).

In 2018, 52.2% of older people in North Macedonia reported having a long-standing illness or health problem; this is lower than in the EU Member States (61.6%) (12). A higher number of older females have a long-standing illness or health problem in the country than older males (Fig. 4). In addition, the proportion of people with long-standing illness or health problems increases with age. A slightly greater proportion of people living in rural areas report having long-standing illness or health problem (56.6%), compared to cities (51.1%) and towns and suburbs (50.6%) (Fig. 4) (12). The relationship between having a long-standing illness or health problem and sex, age and degree of urbanization and income is in line with the EU trends.

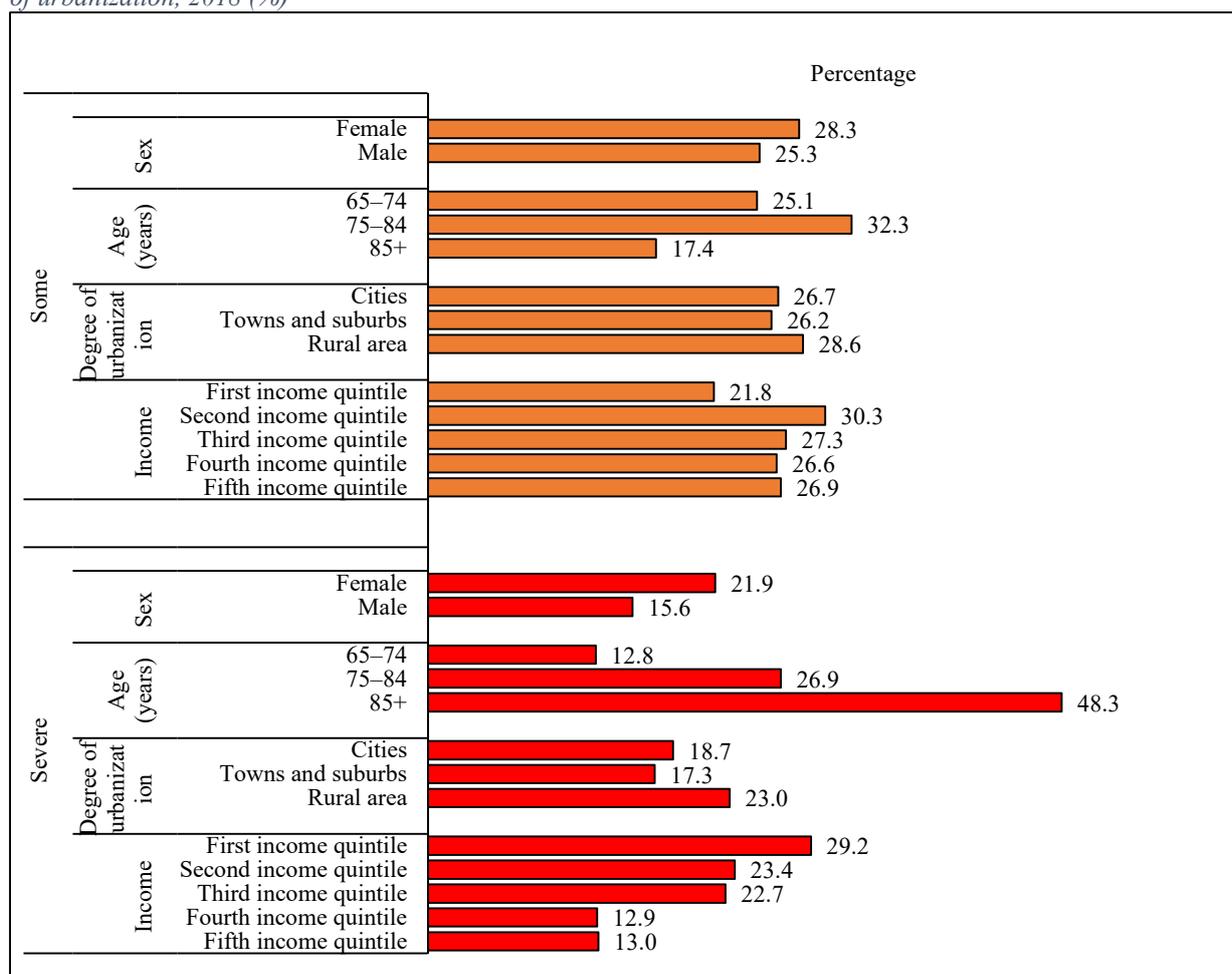
A slightly smaller proportion of older people in North Macedonia (46.1%) than in the EU (48.5%) reported some or severe long-standing limitations in their usual activities due to health problems in 2018 (13). A greater share of women than men reported some or severe long-standing limitations in usual activities due to health problems, which is line with the trend in the EU. As expected, the limitation in usual activities due to health problems increases with age in North Macedonia, and almost half of older people aged 85 years and above, as well as slightly over a quarter of people aged 75–84 years, have severe limitations (Fig. 5). The greatest proportion of older people who reported severe long-standing limitations in their usual activities due to health problems were in rural areas of the country (23%), followed by cities (18.7%) and towns and suburbs (17.3%). A similar trend is found in EU Member States (13).

Fig. 4. People having a long-standing illness or health problem by age and sex, 2018 (%)



Source: Eurostat EU-SILC data from 2018 (12).

Fig. 5. Self-perceived long-standing limitations in usual activities due to health problem by sex, age and degree of urbanization, 2018 (%)



Source: Eurostat EU-SILC data from 2018 (13).

## Use of doctors, medicines and health services among older people

According to North Macedonia's Law on Health Insurance, each insured person shall have the right and the obligation to register with a PHC provider and, in the field of gynaecology, females over the age of 12 years can register with a gynaecologist of their choice (14). For consultations with a specialist in secondary and tertiary health care, a referral from a PHC provider is necessary, except in case of emergency. As presented in Table 2, in 2018 more people chose to register with a GP/family medicine doctor than with dentists and gynaecologists. Eight per cent more females registered with a GP/family medicine doctor and dentist than males.

Table 2. Basic demographic characteristics of older people registered with a PHC provider, 2018

Demographic characteristic	Older people registered with a GP/family medicine doctor (n=373 334)	
	n	%
Age (years)		
65–74	207 651	55.62
75–84	120 303	32.22
85+	45 380	12.16
Sex		
Male	170 406	45.64
Female	202 928	54.36
	Older people registered with a dentist (n=288 114)	
	n	%
Age (years)		
65–74	164 532	57.11
75–84	92 245	32.02
85+	31 337	10.88
Sex		
Male	133 073	46.19
Female	155 041	53.81
	Older people registered with a gynaecologist (n=81617)	
	n	%
Age (years)		
65–74	53 510	65.56
75–84	25 536	27.61
85+	5 571	6.83
Sex		
Male	NA	NA
Female	81 617	100.00

Note. NA: not applicable.

Source: "Moj Termin" data from 2018.

As people age, it can be expected that they need more frequent visits to consult both GPs/family medicine doctors and specialists. In 2018, although older people represented 13.9% of the total population, they accounted for around 22% of the total GP/family medicine doctor visits; 13% of the visits to dentists and 6.7% of gynaecological visits. On average there were 10.13 GP/family medicine doctor consultations per older person per year, which is almost twice the average number of consultations per year for those not in the older age categories (5.5). This number is also substantially higher than the national average number of consultations per

person (6.53) (Table 3). Older people visited dentists on average 1.66 times per patient per year in 2018, which is slightly lower than the patients aged under 65 years (1.78) and the national average (1.77). Older women visited gynaecologists 1.82 times per patient per year, which is substantially lower than women not considered to be older (3.1) and the national average (2.98). The highest average number of GP/family medicine and gynaecological consultations per patient is by older people aged 75–84 years and by older people aged 65–74 years for dentistry.

Table 3. PHC consultations by age group, 2018

Age group (years)	GP/Family medicine doctor	Gynaecology	Dentistry
0–5	6.20	NA	1.51
6–13	4.11	1.44	1.72
14–18	3.46	2.54	1.83
19–33	3.75	4.07	1.85
34–48	5.27	2.80	1.79
49–64	7.83	1.87	1.71
65–74	10.01	1.81	1.70
75–84	10.58	1.91	1.59
85+	9.23	1.65	1.39
<b>Total</b>	<b>6.53</b>	<b>2.98</b>	<b>1.77</b>

Notes. Consultations per person per year in each age group; NA: not applicable.

Source: “Moj Termin” data from 2018.

The highest average number of GP/family medicine doctor consultations per patient was recorded in the Southwest region in 2018 (11.48), while the lowest was in Skopje (9.20) (Table 4). The highest average number of gynaecological consultations took place in the East region (2.04), while the lowest was in Pelagonia (1.55). The highest average number of dentist consultations was recorded in Skopje (1.80), while the lowest was in Polog (1.30).

Table 4. PHC consultations by older people, by region, 2018

Region	GP/Family medicine doctor	Gynaecology	Dentistry
East	11.45	2.04	1.67
Northeast	9.87	1.84	1.55
Pelagonia	9.61	1.55	1.84
Polog	10.38	1.60	1.30
Skopje	9.20	1.81	1.80
Southeast	10.39	1.70	1.54
Southwest	11.48	1.96	1.51
Vardar	11.07	1.97	1.66
<b>Total</b>	<b>10.13</b>	<b>1.82</b>	<b>1.66</b>

Note. Consultations per older person per year in each region.

Source: “Moj Termin” data from 2018.

These differences in the average number of consultations by age and region are statistically significant and age and region are statistically significant individual predictors of the frequency of GP/family medicine doctor consultations among older people (Table 5–Table 10). The differences among the regions might be due to the variation in doctors available in the different regions, which might be creating long waiting lists as a barrier to accessing those services; for example, the Polog region has the lowest number of PHC gynaecologists per 1000 women (0.09), followed by Pelagonia (0.13), and these are among the regions with the lowest average number of gynaecological visits (15). Furthermore, the substantially higher average number of consultations with GPs/family medicine doctors among

older people might be due to the health status of older people. In addition, it can be argued that GPs/family medicine doctors find older people more difficult to treat; this has to do with their training (16). Together with the lack of coordination with other services at PHC level, such as the community nurses, social services, and home-based care, this can result in only episodic care at PHC level, whereas long-term, complex care from multiple providers working in a variety of settings is needed (17,18). This might result in frequent follow-up visits with GPs/family medicine doctors, and referrals, as documented in the data that follow (Table 5–Table 10).

As discussed, perception of good health decreases as age increases in the country and older people are more likely to live with long-standing health problems and limitations. However, there is a contradiction here: while the greatest share of older people perceiving their health to be bad or very bad have long-standing health problems and related limitations is found among people aged 85 years and over, on average, these people visit the GP/family medicine doctor less often than the people aged 65–74 and 75–84 years. One reason for this might be that older people aged 85 years and over might be less able to physically visits their selected GP/family medicine doctor due to limitations in functional ability.

Table 5. Association between age and frequency of family medicine doctor consultations, 2018

Age group (years)	Coefficient	Standard error	t-value	p-value	[95% CI]	Sig.
65–74	Ref.	NA	NA	NA	NA	NA
75–84	.57	.028	20.54	0	.516 to .625	***
85+	-.786	.047	-16.72	0	-.878 to -.694	***
Constant	10.013	.016	608.07	0	9.981 to 10.046	***
Mean dependent variable		10.132	SD dependent variable		6.926	
R-squared		0.003	No. of observations		296651.000	
F-test		441.045	Prob > F		0.000	
Akaike information criterion		1989174.640	Bayesian information criterion		1989206.441	

Notes. \*\*\* p<.01; \*\* p<.05; \* p<.1; CI: confidence interval; NA: not applicable; SD: standard deviation; Sig.: statistical significance.

Source: “Moj Termin” data from 2018.

Table 6. Association between frequency of family medicine doctor consultations and region, 2018

Region	Coefficient	Standard error	t-value	p-value	[95% CI]	Sig.
Vardar	Ref.	NA	NA	NA	NA	NA
Southwest	.412	.06	6.87	0	.294 to .529	***
East	.381	.059	6.45	0	.265 to .496	***
Southeast	-.674	.061	-11.03	0	-.793 to -.554	***
Pelagonia	-1.456	.056	-26.09	0	-1.565 to -1.346	***
Polog	-.684	.059	-11.63	0	-.799 to -.569	***
Northeast	-1.2	.063	-18.93	0	-1.324 to -1.075	***
Skopje	-1.862	.049	-37.94	0	-1.959 to -1.766	***
Constant	11.066	.044	252.95	0	10.98 to 11.152	***
Mean dependent variable		10.132	SD dependent variable		6.926	
R-squared		0.016	No. of observations		296651.000	
F-test		673.203	Prob > F		0.000	
Akaike information criterion		1985389.9	Bayesian information criterion		1985474.727	

Notes. \*\*\* p<.01; \*\* p<.05; \* p<.1; CI: confidence interval; NA: not applicable; SD: standard deviation; Sig.: statistical significance.

Source: “Moj Termin” data from 2018.

Table 7. Association between frequency of gynaecological consultations and age, 2018

Age group (years)	Coefficient	Standard error	t-value	p-value	[95% CI]	Sig.
65–74	Ref.	NA	NA	NA	NA	NA
75–84	.102	.037	2.77	.006	.03 to .175	***
85+	-.153	.1	-1.54	.124	-.349 to .042	
Constant	1.806	.017	108.10	0	1.773 to 1.839	***
Mean dependent variable		1.823		SD dependent variable	1.609	
R-squared		0.001		No. of observations	11906.000	
F-test		5.363		Prob > F	0.005	
Akaike information criterion		45104.322		Bayesian information criterion	45126.477	

Notes. \*\*\* p<.01; \*\* p<.05; \* p<.1; CI: confidence interval; NA: not applicable; SD: standard deviation; Sig.: statistical significance.

Source: “Moj Termin” data from 2018.

Table 8. Association between frequency of gynaecological consultations and region, 2018

Region	Coefficient	Standard error	t-value	p-value	[95% CI]	Sig.
East	Ref.	NA	NA	NA	NA	NA
Northeast	-.196	.066	-2.97	.003	-.325 to -.067	***
Pelagonia	-.489	.06	-8.17	0	-.606 to -.372	***
Polog	-.437	.067	-6.48	0	-.57 to -.305	***
Skopje	-.23	.046	-5.04	0	-.319 to -.14	***
Southwest	-.076	.065	-1.17	.243	-.202 to .051	
Southeast	-.341	.064	-5.32	0	-.466 to -.215	***
Vardar	-.067	.06	-1.12	.261	-.185 to .05	
Constant	2.037	.038	53.53	0	1.963 to 2.112	***
Mean dependent variable		1.823		SD dependent variable	1.609	
R-squared		0.009		No. of observations	11906.000	
F-test		15.257		Prob > F	0.000	
Akaike information criterion		45018.653		Bayesian information criterion	45077.731	

Notes. \*\*\* p<.01; \*\* p<.05; \* p<.1; CI: confidence interval; NA: not applicable; SD: standard deviation; Sig.: statistical significance.

Source: “Moj Termin” data from 2018.

Table 9. Association between frequency of dentist consultations and age, 2018

Age group (years)	Coefficient	Standard error	t-value	p-value	[95% CI]	Sig.
65–74	Ref.	NA	NA	NA	NA	NA
75–84	-.107	.015	-6.94	0	-.137 to -.077	***
85+	-.31	.031	-9.85	0	-.372 to -.249	***
Constant	1.701	.008	203.49	0	1.685 to 1.718	***
Mean dependent variable		1.656		SD dependent variable	1.325	
R-squared		0.003		No. of observations	37287.000	
F-test		64.102		Prob > F	0.000	
Akaike information criterion		126670.860		Bayesian information criterion	126696.439	

Notes. \*\*\* p<.01; \*\* p<.05; \* p<.1; CI: confidence interval; NA: not applicable; SD: standard deviation; Sig.: statistical significance.

Source: “Moj Termin” data from 2018.

Table 10. Association between frequency of dentist consultations and region, 2018

Region	Coefficient	Standard error	t-value	p-value	[95% CI]	Sig.
East	Ref.	NA	NA	NA	NA	NA
Northeast	-.117	.029	-4.02	0	-.175 to -.06	***
Pelagonia	.175	.027	6.52	0	.123 to .228	***
Polog	-.37	.03	-12.48	0	-.428 to -.312	***
Skopje	.138	.024	5.81	0	.091 to .184	***
Southeast	-.213	.033	-6.44	0	-.277 to -.148	***
Southwest	-.162	.031	-5.28	0	-.222 to -.102	***
Vardar	-.009	.03	-0.30	.762	-.068 to .05	
Constant	1.667	.02	82.99	0	1.628 to 1.707	***
Mean dependent variable		1.656		SD dependent variable	1.325	
R-squared		0.017		No. of observations	37287.000	
F-test		92.461		Prob > F	0.000	
Akaike information criterion		126167.045		Bayesian information criterion	126235.256	

Notes. \*\*\* p<.01; \*\* p<.05; \* p<.1; CI: confidence interval; NA: not applicable; SD: standard deviation; Sig.: statistical significance.

Source: "Moj Termin" data from 2018.

The most common reasons for seeing the GP/family medicine doctor in 2018 were hypertension (16.0%), diabetes (5.0%), prostate hyperplasia (3.0%), hyperlipidaemia (2.9%) and back pain (2.4%). In terms of the most common geriatric conditions, the greatest number of older people visiting their selected GP/family medicine doctor in 2018 were affected by lung disease (n=85 930), followed by osteoporosis (n=82 973), diabetes (n=55 961), kidney and bladder problems (n=38 012), arthritis (n=33 404), cardiovascular disease (n=25 421) and dementia (n=12 295). Of these conditions, the greatest average number of visits per patient in 2018 were related to diabetes (4.4), followed by Parkinson's disease (2.0), enlarged prostate (3.8), dementia (3.6) and Alzheimer's disease (3.0). Detailed information is presented in Table 11. In the EU, according to the latest available data, high blood pressure, arthrosis and back problems were the most common chronic diseases reported by older people (8).

Table 11. Geriatric conditions related to health-seeking behaviour among older people, 2018

Condition	Consultations	Patients	Average
	n	n	n
Dementia F00–F03	44 340	12 295	3.6
Arthritis M00–M25	74 808	33 404	2.4
Alzheimer's disease G30	17 091	5 755	3.0
Depression (F32–F33)	24 974	9 169	2.7
Parkinson's disease (G20)	19 362	4 841	4.0
Osteoporosis (M00–M99)	215 829	82 973	2.6
Cardiovascular disease (I25, I48, I50, I63, I65, I67, I73)	68 745	25 421	2.7
Lung disease (J00–J99)	213 451	85 930	2.5
Enlarged prostate (N40)	135 260	35 179	3.8
Adult-onset diabetes (E11)	244 888	55 961	4.4
Kidney and bladder problems (N00–N08, N10–N16, N17–N19, N20–N23, N25–N29, N30–N39)	76 641	38 012	2.0
Glaucoma (H40–H42)	24 836	8 574	2.9
Cataracts (H25–H28)	23 049	11 805	1.9

Source: "Moj Termin" data from 2018.

**Twenty-nine per cent of the total number of referred patients from primary care to secondary and tertiary care are older people; people in the older age groups are referred 2.15 times, which is higher than people in the younger age categories (1.74) and the national average (1.86).** Patients aged 75–84 years have the highest average number of referrals per patient (2.19), closely followed by patients aged 65–74 (2.15) and those aged 85 years and above (1.99) (Table 12). As documented in a 2019 WHO study on PHC organization, performance and quality, “the high referral rates are a symptom of low responsiveness, generating safety concerns and bottlenecks in secondary care” and are also due to the “inability of primary care doctors to prescribe certain medicines, such as insulin or statins, or order specific diagnostic tests, such as endoscopies, magnetic resonance imaging or computed tomography scans” (19). Furthermore, as already mentioned, older people often require long-term, complex care from multiple providers working in a variety of settings and this may contribute to the high referral rates compared to those for younger members of the population in North Macedonia.

Table 12. Referral patterns by age, 2018

Age group (years)	No. of patients	%	No. of referrals	%	Average
0–5	20 961	1.94	32 203	1.60	1.54
6–13	75 340	6.97	118 813	5.90	1.58
14–18	45 653	4.22	70 492	3.50	1.54
19–33	146 395	13.54	232 439	11.55	1.59
34–48	189 783	17.56	321 700	15.98	1.70
49–64	284 977	26.36	553 311	27.49	1.94
65–74	194 827	18.02	418 804	20.81	2.15
75–84	101 685	9.41	222 252	11.04	2.19
85+	21 407	1.98	42 651	2.13	1.99
<b>Total</b>	<b>1 081 028</b>	<b>100.00</b>	<b>2 012 665</b>	<b>100.00</b>	<b>1.86</b>

Source: “Moj Termin” data from 2018.

There is a difference in the number of older patients referred to specialist care, when analysed by sex. A greater proportion of referred patients are female (55%; compared to 45% male) and this pattern is present across the three older age groups (65–74, 75–84 and 85+ years). When looking at the average number of referrals per patient, **older male patients were referred slightly more on average (2.17 referrals per patient) compared to older female patients (2.13), but this pattern does not hold true across the different age groups** (Table 13). The highest average number of referrals per patient was found among males aged 75–84 years (2.26) and the lowest average number of referrals per patient was among females aged 85 years and older (1.84). Patients aged 85 years and above in general were referred fewer times on average (1.99 referrals per patient) compared to the other two older age groups (Table 13).

Analysed by region, Vardar had the highest average number of referrals per older patients (2.51) and Skopje had the lowest (1.85). A similar trend was observed with GP/family medicine doctors; people aged 85 years or older are expected to require more complex care involving multiple providers; however, on average they are referred less often than the older people aged 65–74 years and 85 years and over. While Skopje has the greatest concentration of providers and therefore more referrals can be expected, in this region the average number of referrals is actually the lowest (Table 14). This might be related to the skills and practices of the doctors, or the health status and health-seeking behaviour of the older people in the different regions.

Table 13. Average number of referrals per patient per year by age and sex, 2018

Sex	Age group (years)			Total
	65–74	75–84	85+	
Male	2.12	2.26	2.18	2.17
Female	2.17	2.12	1.84	2.13
<b>Total</b>	<b>2.15</b>	<b>2.19</b>	<b>1.99</b>	<b>2.15</b>

Source: “Moj Termin” data from 2018.

In terms of the most common geriatric conditions, the greatest average number of referrals to secondary and tertiary care per patient in 2018 was for diabetes (1.7), followed by Parkinson’s disease and glaucoma (1.6), depression and enlarged prostate (1.5), osteoporosis, dementia, lung disease, and kidney and bladder problems (1.4). The average waiting time for an appointment at secondary and tertiary care levels per referral in 2018 was highest for people with an enlarged prostate (16.7 days), followed by those with cataracts (16.6), arthritis (15.4 days), osteoporosis (14.5 days) glaucoma (14.0 days). Detailed information is presented in Table 15.

Table 14. Referral patterns by region, 2018

Region	No. of referred patients	%	No. of referrals	%	Average
East	33 011	10.38	66 474	9.72	2.01
Northeast	22 344	7.03	55 117	8.06	2.47
Pelagonia	36 548	11.51	83 020	12.14	2.27
Polog	26 823	8.44	66 084	9.67	2.46
Skopje	116 618	36.68	215 658	31.55	1.85
Southeast	25 132	7.90	60 371	8.83	2.40
Southwest	29 258	9.20	66 352	9.70	2.27
Vardar	28 185	8.86	70 631	10.33	2.51
<b>Total</b>	<b>317 919</b>	<b>100.00</b>	<b>683 707</b>	<b>100.00</b>	<b>2.15</b>

Source: “Moj Termin” data from 2018.

PHC doctors in general in the country are unable to prescribe certain medicines, such as insulin or statins, or to order specific diagnostic tests, such as endoscopies, magnetic resonance imaging or computed tomography scans and this might contribute to the referral trend, which could in turn create long waiting times for the most common geriatric conditions. It is important to note that the data on waiting times do not specify the reason for the waiting time; that is, it can be the result of structural factors, such as the limited number of doctors or appointment slots, or it can be the personal choice of the patient (to wait longer to see a specific health care provider).

**In line with trends observed in the EU, older people in North Macedonia were less likely to consult a specialist compared to a GP/family medicine doctor.** In 2018, 68% of the older people registered with a GP/family medicine doctor consulted a specialist at the secondary or tertiary health care levels (4.7 consultations per older patient per year) (Table 16). Older male patients recorded a slightly higher average number of specialist consultations per patient per year (4.89) compared to older female patients (4.53) (Table 16). Patients aged 85 years and over reported a lower average number of specialist consultations (3.73) compared to patients aged 65–74 years (4.78) and those aged 75–84 years (4.77). However, in terms of age and sex dynamics, male patients aged 74–85 years recorded the highest average number of

specialist consultations (5.18) per patient, while female patients aged 85 years and over reported the lowest average number (3.32).

Table 15. Average number of referrals per patient and average days of waiting time for the most common geriatric conditions, 2018

	Average no. of referrals per patient	Average waiting time in days
Dementia F00–F03	1.4	9.0
Arthritis M00–M25	1.3	15.4
Alzheimer’s disease G30	1.3	11.4
Depression (F32–F33)	1.5	11.4
Parkinson’s disease (G20)	1.6	13.3
Osteoporosis (M00–M99)	1.4	14.5
Cardiovascular disease (I25, I48, I50, I63, I65, I67, I73)	1.1	12.1
Lung disease (J00–J99)	1.4	6.7
Enlarged prostate (N40)	1.5	16.7
Adult-onset diabetes (E11)	1.7	12.1
Kidney and bladder problems (N00–N08, N10–N16, N17–N19, N20–N23, N25–N29, N30–N39)	1.4	10.4
Glaucoma (H40–H42)	1.6	14.0
Cataracts (H25–H28)	1.3	16.6

Source: “Moj Termin” data from 2018.

Table 16. Average number of specialist consultations by age and sex, 2018

Sex	Age group (years)			Total
	65–74	75–84	85+	
Male	4.80	5.18	4.38	4.89
Female	4.76	4.44	3.23	4.53
<b>Total</b>	<b>4.78</b>	<b>4.77</b>	<b>3.73</b>	<b>4.69</b>

Source: “Moj Termin” data from 2018.

The average number of prescriptions per older patient was 52 in 2018 (Table 17). **Seventy-nine per cent of the total number of older patients registered with a GP/family medicine doctor had at least one prescription in 2018**, which is relatively similar to the situation in EU Member States, where 82% of older people reported using prescribed medicines. Of all older patients who had a prescription that year, there were more female (56%) than male (44%) patients. This pattern also holds true for the average number of prescriptions per patient per year (Table 17). **On average, older female patients had 5.8 more prescriptions per year than older male patients.** Older people aged 75–84 years recorded the highest average number of prescriptions per patient (57.60), while people aged 65–74 years reported the lowest (48.95). However, in terms of sex and age dynamics, male patients aged 65–74 had the lowest average number of prescriptions per patient per year (45.43), while female patients aged 75–84 recorded the highest average number (59.86) (Table 17).

Table 17. Average number of prescriptions per patient per year by age and sex, 2018

Sex	Age group (years)			Total
	65–74	75–84	85+	
Male	45.43	54.61	52.71	48.90
Female	51.81	59.86	54.96	54.72
<b>Total</b>	<b>48.95</b>	<b>57.60</b>	<b>54.02</b>	<b>52.16</b>

Source: “Moj Termin” data from 2018.

In 2018, 13% of the older people registered with a GP/family medicine doctor in North Macedonia were hospitalized at least once and 28% of all hospitalized older patients were hospitalized more than once. On average, there were 1.5 hospitalizations per older patient per year. A slightly greater proportion of the total number of hospitalized patients were older males (51%; compared to 49% older females). The number of hospitalizations steeply increases with age. The average number of hospitalizations per patient was highest among older female patients aged 74–85 years (1.56), while the lowest average number of hospitalizations per patient was recorded among older female patients aged 65–74 years (1.46).

The average length of hospital stay was 10.82 days, with females staying more days on average (11.85) than males (9.82). The average number of hospital days increased with age, which is in line with the trend in the EU Member States (20). Patients aged 65–74 years recorded the lowest average number of hospital days (10.22), while patients aged 85 years and over reported the highest average number (15.19). In terms of age and sex dynamics, the highest average number of hospital days was found among female patients aged 85 years and over (19.81) and the lowest average number was recorded among male patients aged 75–84 years (9.53). The highest total number of hospital days were reported at the secondary care level (67.20%). However, the highest average number of hospital days per patient was recorded at tertiary level (11.58) and was lowest in private hospitals (9.68).

Older patients were hospitalized in 55 health facilities and 75 health units in 2018. The highest number of hospitalizations of older people were at the **State General Hospital in Bitola** (8.53%), followed by the **Clinical Hospital in Shtip** (6.75%) and the **City General Hospital “8 September”** in Skopje (5.71%). The **PHI Gerontology Institute “13 November”** (specialized hospital for geriatric and palliative medicine) recorded **713 hospitalizations of older people (1.02%)**. A total of 28% of hospitalizations occur at **internal medicine units**, followed by **ophthalmology units** (9.27%), and in **cardiology** (8.61%) **surgery** (6.64%) and **urology** (3.96%) settings.

**Sex and age are statistically significant factors in predicting the frequency of hospitalization among older people and of the duration of hospital stay.** The odds of being hospitalized more than once decreased by 3.2% in older male patients compared to older female patients ( $p=0.11$ , 95% confidence interval (CI): 0.929–1.008) (Table 18). Older patients aged 75–84 years are 1.123 times more likely to be hospitalized more than once, compared to older patients aged 65–74 years ( $p=0.000$ , 95% CI: 1.076–1.173). Older patients aged 85 years and over are 1.062 times more likely to be hospitalized more than once compared to patients aged 65–74 years ( $p=0.14$ , 95% CI: 0.98–1.151) (Table 19).

The frequency of hospitalization increases by 0.004 as the age increases ( $p=0.000$ , 95% CI: 0.002–0.005) (Table 19). Older male patients stay 1.823 days less in hospital than older female patients ( $p=0.000$ , 95% CI: -2.251- -1.394) and the duration of hospital stay increases by 0.17 days as the age of the patients increases ( $p=0.000$ , 95% CI: 0.136–0.203) (Table 20).

Table 18. Factors predicting hospitalization

Variable	Odds ratio	p-value	95% CI	Sig.
Sex				
Female	Ref.	NA	NA	NA
Male	0.968	0.11	0.929 to 1.008	
Age (years)				
65–74	Ref.	NA	NA	NA
75–84	1.123	0.000	1.076 to 1.173	***
85+	1.062	0.14	0.98 to 1.151	

Notes. \*\*\* p<.01; \*\* p<.05; \* p<.1; CI: confidence interval; NA: not applicable; Sig.: statistical significance.  
Source: “Moj Termin” data from 2018.

Table 19. Factors predicting frequency of hospitalization

Variable	Coefficient	p-value	95% CI	Sig.
Sex	–0.002	0.855	–0.022 to 0.019	
Age	0.004	0.000	0.002 to 0.005	***

Notes. \*\*\* p<.01; \*\* p<.05; \* p<.1; CI: confidence interval; Sig.: statistical significance.  
Source: “Moj Termin” data from 2018.

Table 20. Factors predicting duration of hospital stay

Variable	Coefficient	p-value	95% CI	Sig.
Sex	–1.823	0.000	–2.251 to –1.394	***
Age	0.17	0.000	0.136 to 0.203	***

Notes. \*\*\* p<.01; \*\* p<.05; \* p<.1; CI: confidence interval; Sig.: statistical significance.  
Source: “Moj Termin” data from 2018.

As already demonstrated, older males report better health status overall compared to older females, and a smaller share of them report living with long-term conditions and limitations compared to older women, which might be reflected in the lower odds of requiring hospitalization. Furthermore, it can be expected that as age increases, health deteriorates and the need for more complex care increases, which is reflected in the increased odds of being hospitalized and an increase in the average duration of hospital stay with age.

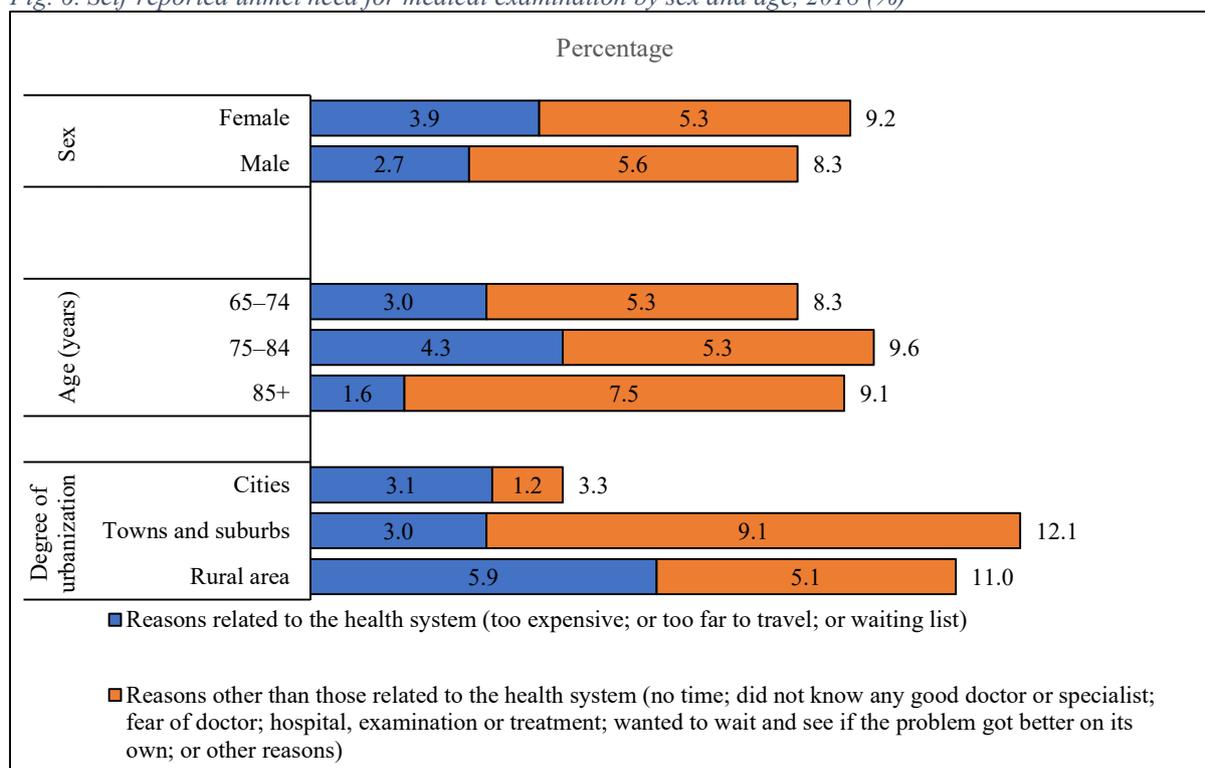
In 2018 a relatively high share of older people in North Macedonia (8.8%) reported unmet health care needs, which is substantially higher than reported in the EU (3.3%) (21). In general, a greater proportion of older women than older men reported unmet need for medical examination, which is in line with the EU trend. In the EU, as age increases the proportion of older people reporting unmet need increases, while in North Macedonia, the greatest proportion of older people reporting unmet need for medical examination was found among people aged 75–84 years and unmet needs were least reported among older people aged 64–74 years (21). The most common reason given for unmet need for medical examination was financial burden (2.1%), which is higher than in the EU (1.4%). In North Macedonia, the greatest proportion of people who reported unmet need for medical examination live in towns and suburban areas (12.1%), followed by rural areas (11%) and cities (3.3%). In the EU, a slightly larger proportion of older people reporting unmet need for medical examination live in rural areas (4.8%<sup>e</sup>),<sup>6</sup> followed by cities and towns and suburban areas (3.8%) (21). A closer analysis of the reasons

<sup>6</sup> e=estimate

given relating to the organization and functioning of health care services – financial reasons (too expensive), transportation (too far to travel), or timeliness (long waiting lists) – shows that 3.4% of the older population in North Macedonia reported unmet need for medical examination, compared to 2.7% of the older population in the EU and 2.3% of the population aged 16 years and over in North Macedonia (21).

Fig. 6 contributes to the discussion on the use of doctors and health services. The greatest share of older people aged 85 years and over reported unmet need for medical examination for reasons other than those related to the health system (e.g. no time; did not know any good doctors or specialists; fear of doctors, hospital, examination or treatment; wanted to wait and see if the problem got better on its own; or other reasons) and this might have contributed to the lower average number of GP/family medicine doctor consultations and referrals compared to the people aged 65–74 and 75–84 years, requiring interventions that are population based. On the other hand, rural areas are substantially affected by unmet need for medical examination for reasons related to the health system (too expensive, too far to travel, or waiting list) and this is reinforced by the lack of PHC doctors and services in the rural areas of the country.

Fig. 6. Self-reported unmet need for medical examination by sex and age, 2018 (%)



Source. Eurostat data from 2018 (21).

### Causes of death among older people

As presented earlier, women are expected to live longer than men. The mortality rate is higher in older men than women (6110.4 and 5219.7, respectively), similar to the trend in the general population (1015.8 and 942.9 per 100 000 people), and the population not categorized as older (324.3 and 189.2 deaths per 100 000 people, respectively). As is also the case among the general population, circulatory diseases were the leading cause of death in older people in 2017, followed by malignant neoplasms, diseases of the endocrine system and respiratory diseases (22). Deaths of older people account for the highest proportion of the total deaths in the country.

## Housing and living conditions of older people

A substantially higher proportion of older people in North Macedonia (35.8%; 34.2% of males and 37.1% of females) were at risk of poverty or social exclusion in 2018, compared to older people in the EU (18.7%) (23). By degree of urbanization, the highest share of older people being at risk of poverty or social exclusion was found in rural areas (47.0%), followed by cities (41.4%) and towns and suburbs (37.4%).

Furthermore, 29.3% of older people in North Macedonia were severely materially deprived<sup>7</sup> in 2018, compared to 4.7% in the EU. This is relatively similar to the share of the total population of severely deprived people in the country (30.5%) (25). By sex, a larger proportion of older women were facing severe difficulties in being able to afford basic foods and services (31.5%) than older males (26.6%) in 2018. This may reflect a range of factors, including: labour market experiences (the gender pay gap; women often having lower pension entitlement than men); increased longevity among women (extending the period over which their financial resources need to last); and a greater share of older women living alone (a two-person household needs relatively fewer resources per person than a single-person household to maintain the same standard of living) (8). By degree of urbanization, the highest share of older people being severely materially deprived was found in cities (33.0%), followed by rural areas (32.9%), and towns and suburbs (27.3%).

A total of 12.1% of the older population in North Macedonia were living alone in 2018, compared to 32.5% in the EU (26). The share of older women living alone was higher (17.7%) than that of men (7.0%). Furthermore, 27.5% of the older population were living in a couple (but with no other people in the household), compared to 47.3% in the EU. Analysed by sex, 34.2% of the older males in the country shared their household with a partner, while the corresponding proportion of women in the same situation was much lower (22.0%). A greater proportion of older females tended to live in other types of households, such as with other family members, friends or other people (36.0%) compared to males (15.2%). 32.9% of older people (43.6% of older males and 24.3% of older females) were living in a couple as well as with other people, compared to 10.2% in the EU. A total of 20.5% of the older population in North Macedonia lived in under-occupied dwellings in 2018, compared to 50.5% in the EU, while the share of working-age adults (aged 18–64 years) living in under-occupied dwellings was 17.0% in North Macedonia (27). 10.2% of the total population were overburdened by the cost of their housing and almost identical rates were recorded for older people among the population (9.2%). This percentage was 10.3% among older people in the EU.

One measure of energy poverty is the inability to keep a home adequately warm: this indicator is often connected to low levels of household income, energy inefficient homes and (relatively) high energy costs. In North Macedonia in 2018, 24.9% of all households were unable to keep their home adequately warm, which is substantially higher than in the EU (7.3%)

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<sup>7</sup> The severe material deprivation rate (24) represents the proportion of people who cannot afford at least four of the nine following items:

- rent or mortgage payments, utility bills, or other loan payments;
- adequate heating for the home
- unexpected financial expenses;
- regular meals that contain meat or proteins;
- an annual holiday away from home;
- a television;
- a washing machine;
- a car;
- a telephone.

(28). Contrary to the EU trend, where the share of households unable to keep their home adequately warm rose among older people, in North Macedonia this share is slightly lower in older people living alone (23.4%) and in households of two adults where at least one is aged 65 years and over (22.0%), compared to the total.

## Perceptions, experiences and practices of health workers, older people and caregivers on the organization and delivery of health services

### Perceptions and experiences of older people

Fifty older people were interviewed face to face across a period of 10 days in October 2019, in two municipalities of North Macedonia (Kochani and Resen). These are the two municipalities where the Ministry of Health and the Ministry of Labour and Social Policy piloted the introduction of integrated health and social services.

Convenience sampling was used to identify older people through the municipalities' mobile health and social services teams. Participants were eligible if they were aged 65 years and older, resided in one of the two municipalities and consented to participate in the survey. The structured questionnaire, adapted to the national context,<sup>8</sup> consisted of 35 questions and examined the background characteristics of the older people and their experiences and perceptions of the different aspects of service delivery function, including: quality of amenities and office staff, timeliness, communication, opportunity to choose provider, shared decision-making, self-management support, confidentiality and privacy, cultural competency, dignity, emotional support and empathy, care continuity and coordination, and responsiveness.

In terms of profile, the participants were aged between 65 and 96 years, with the mean age at 75 years. Three quarters of the participants resided in rural areas (n=38), slightly over half of them were female (n=27) and most of them Macedonian (n=43). Two thirds of the respondents had primary-level education (n=30) and a monthly income under 12 000 Macedonian Denar (MKD) (the minimum wage at the time of the study) (n=29). Table 21 shows the detailed characteristics of the participants.

**Patients' ability to choose** providers was measured by older people's perception of their ability to see the doctor, nurse, or other health care provider of choice on a scale of 0 to 10 (Table 22). The responses ranged from 3 to 10 and the mean and median were 7 (SD=1.64). Half of the respondents rated the ability to choose as being 7 or 8: a quarter of the respondents rated the ability to see a health provider of choice as 7 (n=13) and almost the same number rated with 8 (n=12). There are no statistically significant differences in perception of the ability to see a health provider of choice by sex (Mann-Whitney test:  $z=1.032$ ;  $p=0.3020$ ) and age group (Mann-Whitney test:  $z=0.643$ ;  $p=0.5199$ ).

**Quality of amenities** was measured by the older people's perceptions about conditions in the waiting room (space, seating, fresh air) and attitudes of the office staff in the health facility they visited within the previous six months. Most of the older people interviewed rated the conditions in the waiting as good (n=41) or very good (n=3) (Table 23). There are no statistically significant differences in the perceptions of conditions of the waiting room by sex (Mann-Whitney test:  $z=1.776$ ;  $p=0.0757$ ) and age group (Mann-Whitney test:  $z=-0.959$ ;  $p=0.3378$ ). However, one third of the respondents reported that they had never or rarely felt

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<sup>8</sup> The survey was adapted to the national context from the following IPCHS projects: "Towards integrated people-centered maternal, newborn, and child health care in Mali" (2016–2017) and "End-line assessment of integrated people-centred health services in Nelson Mandela Metro Municipality, Eastern Cape Province, South Africa" (2015–2017). More information can be found at the IPCHS website: [www.integratedcare4people.org](http://www.integratedcare4people.org).

welcome by the health providers in the health facility they visited in the previous six months (n=15) and the same number of respondents stated they felt welcomed sometimes. There is no statistically significant difference in perception of feeling welcome by health providers by sex (Mann-Whitney test:  $z=0.557$ ;  $p=0.5773$ ) and age group (Mann-Whitney test:  $z=-0.192$ ;  $p=0.8477$ ).

Table 21. Distribution of characteristics of older people, 2019

Variable	n
Location	
Urban	12
Rural	38
Municipality	
Kochani	30
Resen	20
Age (years)	
65–74	26
75+	24
Sex	
Female	27
Male	23
Ethnicity	
Macedonian	43
Albanian	6
Roma	1
Education	
Primary	30
Secondary	18
Undergraduate	2
Monthly income (MKD)	
≤12000	29
12001–25000	18
≥25000	3
Long-standing illness or health condition	
Yes	39
No	11

Note. n=50.

Source: 2019 survey data.

Table 22. Older people's perceptions about their ability to choose a health care provider, by sex and age, 2019

Choice	Sex		Age (years)		Total
	F	M	65–74	75+	
On a scale of 0 to 10, 0 being the worst and 10 the best, how would you rate the health centre in terms of being able to see the doctor, nurse, other health care provider of your choice?					
3	0	2	1	1	2
4	0	1	0	1	1
5	4	2	2	4	6
6	6	2	6	2	8
7	4	9	5	8	13
8	7	5	8	4	12
9	3	2	2	3	5
10	3	0	2	1	3

Note. n=50.

Source: 2019 survey data.

Table 23. Older people's perceptions on quality of amenities and office staff, by sex and age, 2019

Quality of amenities and office staff	Sex		Age (years)		Total
	F	M	65–74	75+	
Conditions in the waiting room in the health facility visited in the last 6 months; for example space, seating, and fresh air					
Very poor	0	0	0	0	0
Poor	1	5	4	2	6
Good	24	17	21	20	41
Very good	2	1	1	2	3
Excellent	0	0	0	0	0
Feeling welcome by the health providers in the health facility visited in the last 6 months					
Never	1	1	1	1	2
Rarely	6	7	7	6	13
Sometimes	9	6	8	7	15
Frequently	8	8	8	8	16
Always	3	1	2	2	4

Note. n=50.

Source: 2019 survey data.

**Timeliness** was measured by older people's self-reported waiting time before being seen by their provider and their perception of the acceptability of the length of time spent at the health care unit waiting for consultation/treatment. Over two thirds of the older people (n=34) reported that they waited between 30 minutes and 1 hour before being seen by the provider; one fifth (n=10) waited less than 30 minutes; and six of them waited between one and two hours (Table 24). There are no statistically significant differences in the reported length of waiting time by sex (Mann-Whitney test:  $z=0.095$ ;  $p=0.9246$ ) and age group (Mann-Whitney test:  $z=1.559$ ;  $p=0.1191$ ).

Slightly less than half of the respondents found their waiting time to be fine (n=24), while almost a third of them found it long (n=14), one fifth found it a little bit long (n=11) and one respondent found it to be very long. There are no statistically significant differences in perception about the length of this waiting time by sex (Mann-Whitney test:  $z=-1.030$ ;  $p=0.3029$ ) and age group (Mann-Whitney test:  $z=-1.143$ ;  $p=0.2530$ ).

**Communication with health providers** was measured by the perceptions of older people about the completeness of information and explanations provided by health providers, for example, on how to use new medicines and their potential side-effects, as well as opportunities for family members to ask the health provider questions if desired. Ease of understanding of the information provided was also assessed. Table 25 presents the detailed responses regarding communication with health providers.

Table 24. Older people's perceptions on timeliness, by sex and age, 2019

Timeliness	Sex		Age (years)		Total
	F	M	65–74	75+	
Waiting time before being seen by your provider					
< 30 min	5	5	3	7	10
30 min–1 hour	19	15	19	15	34
1–2 hours	3	3	4	2	6
2–4 hours	0	0	0	0	0
>4 hours	0	0	0	0	0
Rating of this waiting time					
Unbearable	0	0	0	0	0
Very long	1	0	0	1	1
Long	8	6	9	5	14
A little bit long	7	4	7	4	11
Fine	11	13	10	14	24

Note. n=50.

Source: 2019 survey data.

Table 25. Older people's perceptions on communication, by sex and age, 2019

Communication	Sex		Age (years)		Total
	F	M	65–74	75+	
How complete was your provider's explanation of your condition and treatment?					
Very poor	0	0	0	0	0
Poor	1	2	2	1	3
Good	20	16	18	18	36
Very good	4	4	4	4	8
Excellent	2	1	2	1	3
How easy to understand was the information provided by your provider?					
Very difficult	0	0	0	0	0
Difficult	10	9	9	10	19
Good	9	9	9	9	18
Very good	8	4	7	5	12
Excellent	0	1	1	0	1
How would you rate the information about how to use new medicines and their possible side-effects?					
Very poor	0	0	0	0	0
Poor	7	7	6	8	14
Good	13	11	14	10	24
Very good	4	3	3	4	7
Excellent	3	2	3	2	5
Do your family and friends have opportunities to ask your provider questions if they wanted?					
Never	2	1	2	1	3
Rarely	3	2	4	1	5
Sometimes	5	10	7	8	15
Frequently	11	7	11	7	18
Always	6	3	2	7	9

Note. n=50.

Source: 2019 survey data.

Almost three quarters of respondents rated the completeness of their health care provider’s explanation of their condition and treatment as good (n=36); however, over one third reported that they found it difficult to understand the information provided by the health provider (n=19) and a similar number rated the information about how to use new medicines and their potential side-effects as poor (n=14). There are no statistically significant differences in the rating of the completeness of the provider’s explanation by sex (Mann-Whitney test:  $z=0.382$ ;  $p=0.7022$ ) and age group (Mann-Whitney test:  $z=0.000$ ;  $p=1.000$ ).

Slightly over one quarter of respondents found understanding the information provided by the health care providers to be very good or excellent (n=13); over one third found it to be good (n=18); and a significant proportion found it difficult to understand (n=19). There are no statistically significant differences in the rating of ease of understand the information provided by the health care provider by sex (Mann-Whitney test:  $z=0.331$ ;  $p=0.7406$ ) and age group (Mann-Whitney test:  $z=0.784$ ;  $p=0.4328$ ).

Almost a quarter of respondents rated the information about how to use new medicines and their side-effects as very good or excellent (n=13); close to half of them found it to be good (n=24); and close to one third found it to be poor (n=14). There are no statistically significant differences in the rating of information about how to use new medicines and their side-effects by sex (Mann-Whitney test:  $z=0.429$ ;  $p=0.6677$ ) and age group (Mann-Whitney test:  $z=0.480$ ;  $p=0.6309$ ).

Only about a fifth of respondents stated that family members always had an opportunity to ask the provider questions if desired (n=9) and 18 people reported that their family members frequently had such an opportunity. There are no statistically significant differences in perception about having an opportunity for family members to ask the health provider questions if desired by sex (Mann-Whitney test:  $z=0.954$ ;  $p=0.3401$ ) and age group (Mann-Whitney test:  $z=-1.488$ ;  $p=0.1367$ ).

**Older people’s participation in decisions about their health care** was measured by their perception about the level of their involvement in decisions relating to their care. Slightly more than half of the participants responded that they were involved in the decision-making about their care as much as they wanted to be (n=26), while a significant number responded that they were never or rarely involved (n=10), were sometimes involved (n=7) or were frequently involved, but less than they wanted, in the decisions about their care (n=7) (Table 26). There are no statistically significant differences in the rating of the level of involvement in the decisions about care by sex (Mann-Whitney test:  $z=-0.179$ ;  $p=0.8577$ ) and age group (Mann-Whitney test:  $z=-1.031$ ;  $p=0.3024$ ).

*Table 26. Older people’s perceptions on shared decision-making, by sex and age, 2019*

Shared decision-making	Sex		Age (years)		Total
	F	M	65–74	75+	
In the last 6 months, how often did your provider involve you in decisions about your care?					
Never	5	2	5	2	7
Rarely	1	2	2	1	3
Sometimes	3	4	3	4	7
Frequently, but less than I wanted	4	3	4	3	7
As much as I wanted	14	12	12	14	26

Note. n=50.

Source: 2019 survey data.

**Self-management support** was measured by older peoples' perception about the health care provider's help in making a treatment plan that the patient could follow in their daily life. Less than half of the respondents reported that the providers frequently or always helped them make a treatment plan (n=22), while almost the same number of respondents reported that their provider never or rarely helped them with such a plan (n=19), and close to a fifth reported that this happens sometimes (n=9) (Table 27). There are no statistically significant differences in perception about the level of self-management support by sex (Mann-Whitney test:  $z=-0.449$ ;  $p=0.6535$ ) and age group (Mann-Whitney test:  $z=-0.368$ ;  $p=0.7127$ ).

Table 27. Older people's perceptions on self-management support, by sex and age, 2019

Self-management support	Sex		Age (years)		Total
	F	M	65–74	75+	
Did the provider help you make a treatment plan that you could do in your daily life?					
Never	7	6	6	7	13
Rarely	4	2	3	3	6
Sometimes	6	3	7	2	9
Frequently	3	6	5	4	9
Always	7	6	5	8	13

Note. n=50.

Source: 2019 survey data.

**Confidentiality and privacy** during health service delivery were measured by the frequency with which physical examinations and treatments were performed in such a way that the privacy of the patient's body was respected and the frequency with which their doctor, nurse or other health care provider kept their personal information confidential. Almost all the respondents reported that their physical privacy (that of their body) was frequently or always respected (n=46) and all of them responded that their personal information was frequently or always kept confidential (Table 28). There are no statistically significant differences in the rating of the frequency with which the physical examinations and treatments were done so that the patients' physical privacy was respected by sex (Mann-Whitney test:  $z=-0.483$ ;  $p=0.6294$ ) and age group (Mann-Whitney test:  $z=-1.782$ ;  $p=0.0747$ ); nor in the frequency with which respondents' doctor, nurse or other health care provider kept their personal information confidential by sex (Mann-Whitney test:  $z=-0.834$ ;  $p=0.4046$ ) and age group (Mann-Whitney test:  $z=-1.692$ ;  $p=0.0906$ ).

**Cultural competency** was measured by the confidence of the older people interviewed that their health care providers had thought about their values and traditions when recommending treatment, as well as by the older people's experiences with discrimination based on ethnicity. Almost all the participants responded that they were confident or very confident that their providers had thought about the patient's values and traditions when recommending treatment. There are no statistically significant differences in the rating of the confidence of the older people that the providers had thought about the patient's values and traditions when recommending treatment by sex (Mann-Whitney test:  $z=0.287$ ;  $p=0.7743$ ) and age group (Mann-Whitney test:  $z=1.001$ ;  $p=0.3168$ ). Almost three quarters of respondents had never experienced discrimination by health providers because of their ethnicity (n=36), while seven of them reported having rarely, six sometimes and one having frequently experienced discrimination by providers based on ethnicity (Table 29). There are no statistically significant differences in the older people's experiences with discrimination due to ethnicity by sex (Mann-Whitney test:  $z=0.148$ ;  $p=0.8823$ ) and age group (Mann-Whitney test:  $z=1.427$ ;  $p=0.1534$ ).

Table 28. Older people's perceptions on confidentiality and privacy, by sex and age, 2019

Confidentiality and privacy	Sex		Age (years)		Total
	F	M	65–74	75+	
In the last 6 months					
How often were your physical examinations and treatments carried out so the privacy of your body was respected?					
Never	3	0	2	1	3
Rarely	0	0	0	0	0
Sometimes	0	1	1	0	1
Frequently	4	4	6	2	8
Always	20	18	17	21	38
How often did your doctor, nurse or other health care provider keep your personal information confidential (that means that anyone who you did not want informed could not find out about your medical conditions)?					
Never	0	0	0	0	0
Rarely	0	0	0	0	0
Sometimes	0	0	0	0	0
Frequently	6	3	7	2	9
Always	21	20	19	22	41

Note. n=50.

Source: 2019 survey data.

Table 29. Older people's perceptions on cultural competency, by sex and age, 2019

Cultural competency	Sex		Age (years)		Total
	F	M	65–74	75+	
How confident are you that your provider thought about your values and traditions when they recommended treatments to you?					
Not confident	0	0	0	0	0
Somewhat confident	1	1	1	1	2
Confident	18	16	16	18	34
Very confident	8	6	9	5	14
How often did you feel discriminated against by providers because of your ethnicity?					
Never	20	16	21	15	36
Rarely	2	5	3	4	7
Sometimes	5	1	1	5	6
Frequently	0	1	1	0	1
Always	0	0	0	0	0

Note. n=50.

Source: 2019 survey data.

**Dignity** was measured by the perception of older people about the dignity with which they were treated by health care providers. The responses ranged between 3 and 10 on a 0–10 scale, with a median of 8 and a mean score of 7.48 (SD=1.47) (Table 30). Most of the respondents rated the level of dignity as 8 (n=20), followed by 7 (n=11) on the scale. Women had a statistically significant higher rating of the dignity with which they were treated, compared to men (Mann-Whitney test:  $z=2.077$ ;  $p=0.0378$ ). There are no statistically significant differences in the dignity rating by age group (Mann-Whitney test:  $z=1.132$ ;  $p=0.2577$ ).

Table 30. Older people's perceptions on dignity, by sex and age, 2019

Dignity	Sex		Age (years)		Total
	F	M	65–74	75+	
On a scale of 0 to 10, 0 being the worst and 10 the best, how would you rate your providers for the dignity with which you were treated?					
3	0	1	1	0	1
4	0	1	1	0	1
5	0	3	1	2	3
6	3	2	1	4	5
7	5	6	5	6	11
8	13	7	11	9	20
9	3	2	3	2	5
10	3	1	3	1	4

Note. n=50.

Source: 2019 survey data.

**Emotional support and empathy** were measured by the respondents' perceptions about being able to discuss health concerns with health care providers and the extent of support and encouragement provided. The highest number of participants responded that they could discuss their greatest health concerns with their providers frequently or always (n=24), followed by those who responded that this was possible sometimes (n=13) (Table 31). However, almost one third of respondents reported that were never or rarely able to discuss their health concerns with providers (n=14). There are no statistically significant differences in the perception of frequency with which older people can discuss health concerns with their provider, by sex (Mann-Whitney test:  $z=1.102$ ;  $p=0.2706$ ).

Table 31. Older people's perceptions on emotional support and empathy, by sex and age, 2019

Emotional support and empathy	Sex		Age (years)		Total
	F	M	65–74	75+	
How often are you able to discuss your greatest health concerns with your provider?					
Never	4	3	0	7	7
Rarely	4	3	5	2	7
Sometimes	4	8	4	8	13
Frequently	8	8	11	5	16
Always	7	1	6	2	8
How often did providers give you support and encouragement?					
Never	2	2	0	4	4
Rarely	5	3	4	4	8
Sometimes	3	2	4	1	5
Frequently	8	11	8	11	19
Always	9	5	10	4	14

Note. n=50.

Source: 2019 survey data.

Older people aged 65–74 years show a statistically significant higher rating of the frequency with which they can discuss their greatest health concerns with their health provider compared to older people aged 75 years and over (Mann-Whitney test:  $z=2.648$ ;  $p=0.0081$ ). Over two thirds of the respondents reported that health providers provided them frequently or

always with support and encouragement (n=33); however, one quarter reported that they had never or rarely felt supported or encouraged by their health provider (n=12) and five of them had felt supported only sometimes. There are no statistically significant differences in the rating of the extent of support and encouragement provided by health care providers by sex (Mann-Whitney test:  $z=0.234$ ;  $p=0.8153$ ) and age groups (Mann-Whitney test:  $z=1.662$ ;  $p=0.0965$ ).

**Care continuity and coordination** were measured by: older people's experiences with being seen by the same provider each time at PHC level; their perception that the person who ensured their follow-up was aware of the care provided by other providers; and their perception of coordination and communication among the different health care providers treating the patient.

Most of the participants responded that at the PHC level they were always or frequently taken care of by the same provider each time (n=44) (Table 32). There are no statistically significant differences in the rating of the opportunity of a patient to be seen by the same provider each time at PHC level by sex (Mann-Whitney test:  $z=-1.089$ ;  $p=0.2762$ ). Older people aged 75 years and over have a statistically significant higher rating of the opportunity of a patient to be seen by the same provider at PHC level compared to people aged 65–74 years (Mann-Whitney test:  $z=-2.117$ ;  $p=0.0343$ ).

Most participants reported that the person who ensured their follow-up was frequently or always aware of the health care they received from other providers (n=43). There is no statistically significant difference in the perception that the person who ensured their follow-up was aware of the care received by other providers by sex (Mann-Whitney test:  $z=0.142$ ;  $p=0.8873$ ) and age group (Mann-Whitney test:  $z=-1.402$ ;  $p=0.1609$ ).

Slightly less than half of the respondents reported that they thought the different people treating and caring for them (such as family medicine doctors, hospital doctors, hospital nurses, specialist nurses, patronage nurses) frequently or always worked well together to give them the best possible care (n=24) (Table 32); over one third thought that they sometimes worked well together (n=19); and seven of them reported thinking that health providers never or rarely worked well together. There is no statistically significant difference in the perception of the statement that the different providers work well together by sex (Mann-Whitney test:  $z=0.240$ ;  $p=0.2148$ ) and age group (Mann-Whitney test:  $z=1.298$ ;  $p=0.1942$ ).

**Responsiveness** was measured by the rating of the older people of their PHC centre by taking into consideration the above-mentioned aspects of service delivery function (on the 0–10 scale). The median score was 7 and the mean was 7.1 (SD=1.568). Most of the respondents rated their PHC facility as an 8 (n=15), followed by 7 (n=13) (Table 33). Females ranked the responsiveness of the PHC facility statistically higher compared to men (Mann-Whitney test:  $z=2.416$ ;  $p=0.0157$ ). There is no statistically significant difference in the perception of the responsiveness of the health facility by age group (Mann-Whitney test:  $z=1.076$ ;  $p=0.2821$ ).

Table 32. Older people's perceptions on care continuity and coordination, by sex and age, 2019

Care continuity and care coordination	Sex		Age (years)		Total
	F	M	65–74	75+	
Being taken care of by the same provider each time in primary care					
Never	0	0	0	0	0
Rarely	0	0	0	0	0
Sometimes	4	2	6	0	6
Frequently	3	1	2	2	4
Always	20	20	18	22	40
Person who ensures your follow-up is aware of health care received from others					
Never	0	1	0	1	1
Rarely	1	0	1	0	1
Sometimes	4	1	3	2	5
Frequently	3	6	7	2	9
Always	19	15	15	19	34
The different people treating and caring for the patient (such as GPs, hospital doctors, hospital nurses, specialist nurses, community nurses) work well together to give the best possible care					
Never	1	1	0	2	2
Rarely	2	3	2	3	5
Sometimes	10	9	9	10	19
Frequently	4	7	8	3	11
Always	10	3	7	6	13

Note. n=50.

Source: 2019 survey data.

Table 33. Older people's perceptions on the responsiveness of the PHC facility, by sex and age, 2019

Responsiveness	Sex		Age (years)		Total
	F	M	65–74	75+	
On a scale of 0 to 10, 0 being the worst and 10 being the best, and thinking about these elements and all the questions you answered before, how would you rate the primary care facility?					
3	0	1	1	0	1
4	0	3	1	2	3
5	0	3	0	3	3
6	5	3	4	4	8
7	7	6	7	6	13
8	10	5	9	6	15
9	2	2	2	2	4
10	3	0	2	1	3

Note. n=50.

Source: 2019 survey data.

Overall, there was a high level of satisfaction among older people about having the opportunity to see a health provider of their choice and being able to be seen each time by the same provider. This is regulated by the Law on Health Insurance and allows for a patient to be able to select a primary care doctor (14). Furthermore, there was a high level of satisfaction among older people with the physical environment in health care settings (e.g. quality of amenities in the health facilities). Although there is real concern about older people often being the subject of ageism (which, according to WHO is the stereotyping, prejudice, and discrimination against people on the basis of their age and can have harmful effects on older

people),<sup>9</sup> the participants in this particular survey were satisfied with the levels of dignity, confidentiality and privacy afforded to them and their treatment in health care settings. However, a substantial proportion of older people did not feel welcomed by office staff and more than half of them found the waiting time long (to a greater or lesser extent), which might have the effect of a potential barrier to access to services.

Self-management support, health literacy, involving communities and shared decision-making are central to empowering and engaging individuals and communities as part of delivering integrated, people-centred services (29). Individuals and families need to be active participants in care in order to achieve better clinical outcomes through the co-production of care, particularly for noncommunicable and chronic diseases. This step is crucial because on a daily basis it is the individuals who will be living with and responding to their health needs, making choices regarding their health behaviours and their ability to self-care (29). However, only slightly more than half of participants in the survey reported that they were involved in the decision-making about the care by their providers as much as they wanted to be, while most of them reported that their family members frequently had an opportunity to ask the care provider questions if desired. In addition, one third of the older people reported that they found it difficult to understand the information provided by the health provider, and a similar number of people rated the information about how to use new medicines and their potential side-effects as poor.

The practice of primary care doctors helping older people to make a treatment plan for the patient to follow in their daily life was not found to be consistently experienced by older people in North Macedonia. A significant proportion of the survey participants reported they could not discuss their health concerns freely with their providers. Almost a quarter of the older people interviewed did not feel supported and encouraged to ask questions about diseases/conditions, treatment and care. These are important elements to be addressed while reorienting the model of care in order to ensure that older people in the country are involved in a systematic way in decision-making about their health, that they are aware of and understand their health condition(s), and are able to self-care in an informed way, contributing to better health outcomes.

The data presented at the beginning of the report regarding unmet need for medical examinations noted that the greatest share of older people with such unmet need for reasons related to the health system (e.g. too expensive, too far away, and long waiting lists) were living in rural areas. The qualitative data from this survey confirmed this finding, as the recommendations from the participants included not only increasing the availability of primary care doctors in rural areas, but also bringing services closer to their homes and communities. In addition, the participants confirmed the need to reduce the waiting list for secondary and tertiary care services in order to improve access. There is a clear need for greater support for people living alone and for immobile patients, which requires strengthening the coordination among the different health providers and integration with social services. Affordability has come to light as an important element and the need to reduce prices for medicines not covered by the Health Insurance Fund. Last but not least, among the recommendations from the participants of the survey is the need to improve the quality of care and attitudes of health workers, which is crucial in providing people-centred care.

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<sup>9</sup> More information is available on the WHO website: <https://www.who.int/health-topics/ageing>.

## GP and family medicine doctors' perceptions and practices

A survey of health workers was carried out over a two-week period in October 2019. The survey was administered online through a structured questionnaire adapted to the national context.<sup>10</sup> It was distributed through the Association of Private Doctors in Primary Health Care, the Association of General Medicine and Family Medicine Doctors, the Association of Private Gynaecologists and the PHI Gerontology Institute “13 November”. Participants were eligible to participate if they were health providers in the PHC setting or in the hospital “13 November” and consented to participate in the survey. The questionnaire comprised of 63 questions organized around various aspects of service delivery function, including: organization and management, motivation, quality of amenities and office staff, communication, opportunity for patients to choose providers, confidentiality and privacy, respect and dignity, support for informed choice, self-care support, comprehensiveness and accessibility. The survey focused on understanding the facilitators of and barriers to providing integrated, effective and high-quality services to older people. A total of 158 health workers completed the survey; however, for the purpose of analysis the responses from the GPs and family medicine doctors (n=123) were used (the response rates from PHC gynaecologists, nurses, and other specialists in the PHC setting and the “13 November” hospital were relatively low and were therefore not included in the analysis). Although the sample cannot be claimed to be fully representative, it is diverse enough in terms of location, age, sex, ethnicity and years of work experience.

In terms of the **profile of the health workers**, most worked in urban areas (102/123; 82.9%) and were aged between 26 and 66 years (with the mean age of the respondents at 46.7 years). A total of 48% of participants were GPs, while 52% were family medicine doctors. Slightly over three quarters were female (94/123; 76.4%) and over two thirds had worked over 10 years in their current position (84/123; 68.3%). Three quarters of the participants were Macedonian (93/123; 75.6%) and most of them manage other staff as part of their job (102/123; 82.9%). Over three quarters reported that they see over 30 patients a day (94/123; 76.4%) and slightly over half reported spending between 10 and 20 minutes with each patient (68/123; 55.3%), while over a third were spending 5–10 minutes per patient (47/123; 38.2%). In total, almost 22% of the respondents reported that they felt emotionally drained by the job every day (27/123); almost one third reported feeling emotionally drained a few times a week (36/123); and 43.9% reported that they could manage the conflicting demands on their time every day (54/123). Table 34 presents the detailed characteristics of the survey respondents.

Table 34. Distribution of characteristics of health providers, 2019

Background characteristics	<i>n</i>	<i>n</i>	%
Location			
Urban	102	123	82.93
Rural	21	123	17.07
Age (years)			
≤35	23	123	18.70
36–55	60	123	48.78
≥56	40	123	32.52
Sex			
Female	94	123	76.42
Male	29	123	23.58

<sup>10</sup> The survey was adapted to the national context from the following IPCHS projects: “Towards integrated people-centered maternal, newborn, and child health care in Mali” (2016–2017) and “End-line assessment of integrated people-centred health services in Nelson Mandela Metro Municipality, Eastern Cape Province, South Africa” (2015–2017). More information can be found at the IPCHS website: [www.integratedcare4people.org](http://www.integratedcare4people.org).

Table 34 contd

Occupational group			
GP	59	123	47.97
Family medicine doctor	64	123	52.03
Average monthly income (MKD)			
≤25 000 (~€400)	39	123	31.71
25 000–40 000 (~€400–650)	64	123	52.03
≥40 000 (~€650)	20	123	16.26
Years worked in that position			
Less than 1 year	7	123	5.69
1–2 years	3	123	2.44
2–5 years	13	123	10.57
5–10 years	16	123	13.01
More than 10 years	84	123	68.29
Do you manage staff as part of your job?			
Yes	102	123	82.93
No	21	123	17.07
Ethnicity			
Macedonian	93	123	75.61
Albanian	18	123	14.63
Other	12	123	9.76
I feel emotionally drained by my work			
A few times a year	25	123	20.33
Monthly	6	123	4.88
A few times a month	29	123	23.58
A few times a week	36	123	29.27
Every day	27	123	21.95
How many patients do you see a day?			
Fewer than 5	0	123	0.00
5–10	2	123	1.63
10–20	5	123	4.07
20–30	22	123	17.89
More than 30	94	123	76.42
On average, how much time do you spend with each patient?			
Less than 5 minutes	2	123	1.63
5–10 minutes	47	123	38.21
10–20 minutes	68	123	55.28
20–30 minutes	5	123	4.07
More than 30 minutes	1	123	0.81
I am able to manage all the conflicting demands on my time at work			
A few times a year	11	123	8.94
Monthly	7	123	5.69
A few times a month	23	123	18.70
A few times a week	28	123	22.76
Every day	54	123	43.90

Note. n=123.

Source: 2019 survey data.

**Organization and management of health services delivery** was measured by the perception of GPs and family medicine doctors that the people providing care for their patients work well together; having the opportunity for group meetings to discuss how patient care can be improved; the level of collaboration between physicians and nurses; the provision of adequate supervision and support to patronage and other community-based nurses; providers being aware of to whom they are accountable and who supervises them; having access to protocols and guidelines for patient care, along with frequency of use of these protocols and guidelines; having a system for eliciting and reviewing patient and family opinions; and having the opportunity for scientific development/continuous education. Table 35 presents the detailed responses of the GPs and family medicine doctors in North Macedonia regarding their perceptions on the organization and management of health services delivery in the country.

Table 35. GP/family medicine doctors' perceptions on the organization and management of health services delivery, 2019

Organization and management	Health care worker		Total
	GP	Family medicine doctor	
People providing care for my patients/service users work well together			
Never	0.00 (0)	1.56 (1)	0.81 (1)
Rarely	3.39 (2)	6.25 (4)	4.88 (6)
Sometimes	22.03 (13)	21.88 (14)	21.95 (27)
Frequently	38.98 (23)	43.75 (28)	41.46 (51)
Always	35.59 (21)	26.56 (17)	30.89 (38)
Our group meets to discuss how care for our patients can be improved			
A few times a year	10.17 (6)	17.19 (11)	13.82 (17)
Monthly	8.47 (5)	9.38 (6)	8.94 (11)
A few times a month	18.64 (11)	18.75 (12)	18.70 (23)
A few times a week	15.25 (9)	23.44 (15)	19.51 (24)
Every day	47.46 (28)	31.25 (20)	39.02 (48)
There is good collaboration among and between physicians and nurses			
Never	1.69 (1)	0.00 (0)	0.81 (1)
Rarely	0.00 (0)	1.56 (1)	0.81 (1)
Sometimes	1.69 (1)	1.56 (1)	1.63 (2)
Frequently	35.59 (21)	29.69 (19)	32.52 (40)
Always	61.02 (36)	67.19 (43)	64.23 (79)
Health facilities provide supervision and support to patronage nurses			
Never	11.86 (7)	10.94 (7)	11.38 (14)
Rarely	22.03 (13)	15.62 (10)	18.70 (23)
Less than needed	23.73 (14)	35.94 (23)	30.08 (37)
Appropriate	33.90 (20)	34.38 (22)	34.15 (42)
More than enough	8.47 (5)	3.12 (2)	5.69 (7)
I know to whom I am accountable and am supervised			
Never	0.00 (0)	1.56 (1)	0.81 (1)
Rarely	1.69 (1)	3.12 (2)	2.44 (3)
Less than needed	3.39 (2)	3.12 (2)	3.25 (4)

Table 35 contd

	Appropriate	64.41 (38)	59.38 (38)	61.79 (76)
	More than enough	30.51 (18)	32.81 (21)	31.71 (39)
	Do you have access to the protocols and guidelines you need for patient care?			
Never		0.00 (0)	1.56 (1)	0.81 (1)
	Rarely	10.17 (6)	4.69 (3)	7.32 (9)
	Sometimes	20.34 (12)	17.19 (11)	18.70 (23)
	Frequently	42.37 (25)	40.62 (26)	41.46 (51)
	Always	27.12 (16)	35.94 (23)	31.71 (39)
	How often do you use the protocols and guidelines for patient care?			
A few times a year		11.86 (7)	12.50 (8)	12.20 (15)
	Monthly	8.47 (5)	3.12 (2)	5.69 (7)
	A few times a month	20.34 (12)	17.19 (11)	18.70 (23)
	A few times a week	16.95 (10)	15.62 (10)	16.26 (20)
	Every day	42.37 (25)	51.56 (33)	47.15 (58)
	Our health facility has a system for eliciting and reviewing patient and family opinion			
Never		22.03 (13)	10.94 (7)	16.26 (20)
	Rarely	15.25 (9)	26.56 (17)	21.14 (26)
	Sometimes	20.34 (12)	20.31 (13)	20.33 (25)
	Frequently	32.20 (19)	28.12 (18)	30.08 (37)
Always		10.17 (6)	14.06 (9)	12.20 (15)
	I have opportunities for professional development/continuing education			
Never		1.69 (1)	3.12 (2)	2.44 (3)
	Rarely	10.17 (6)	7.81 (5)	8.94 (11)
	Less than needed	25.42 (15)	31.25 (20)	28.46 (35)
	Appropriate	52.24 (32)	37.50 (24)	45.53 (56)
	More than enough	8.47 (5)	20.31 (13)	14.63 (18)

Note. n=123.

Source: 2019 survey data.

Seventy-two per cent of the health workers reported that the people providing care for their patients work well together frequently or always (89/123); 22% reported that they sometimes work well together (27/123); and less than 6% reported that they never or rarely work well together (7/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=1.066$ ;  $p=0.2864$ ).

Thirty-nine per cent of the health workers reported meeting every day with the group to discuss how patient care can be improved (48/123); almost 20% met a few times a week (24/123); 19% met a few times a month (23/123); 9% met monthly (11/123); and 14% reported meeting a few times a year (17/123). There is no statistically significant difference in this self-reported practice between GPs and family medicine doctors (Mann-Whitney test:  $z=1.625$ ;  $p=0.1041$ ).

Almost all of the respondents reported that there was good collaboration among and between physicians and nurses frequently or always (119/123; 97%) and there is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=-0.695$ ;  $p=0.4867$ ).

Forty per cent reported that the level of support to patronage and other community-based nurses by health facilities was appropriate or more than enough (49/123); one third reported that it was less than enough (37/123); and the same proportion reported that was never or rarely enough (37/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=0.140$ ;  $p=0.8891$ ).

Ninety-three per cent of respondents reported that the extent to which they knew to whom they were accountable and who was their supervisor was appropriate or more than enough (115/123) and there is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=-0.018$ ;  $p=0.9858$ ).

Seventy-three per cent of the health workers reported that they frequently or always had access to the protocols and guidelines needed for patient care (90/123); 19% reported that they sometimes had access to protocols and guidelines (23/123); and 8% never or rarely had access to the necessary protocols and guidelines (10/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=-1.175$ ;  $p=0.2399$ ). A total of 47% reported that they used these protocols and guidelines every day (58/123); 16% reported using them a few times a week (20/123); 19% used them a few times a month (23/123); 6% used them monthly (7/123); and 12% reported using them a few times a year (15/123). There is no statistically significant difference in this self-reported practice between GPs and family medicine doctors (Mann-Whitney test:  $z=-0.978$ ;  $p=0.3280$ ).

Forty-two per cent of respondents reported that their health facility frequently or always had a system for eliciting and reviewing patient and family opinions (52/123); 20% reported sometimes having such a system (25/123); and 37% never or rarely had one (46/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=-0.551$ ;  $p=0.5817$ ).

Forty-seven per cent reported that access to opportunities for professional development/continuing education was at an appropriate level (56/123); 15% reported that there were more than enough opportunities (18/123); 28% reported that they had less opportunities than needed for professional development/continuing education (35/123); and 11% reported never or rarely having such opportunities (14/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=-0.375$ ;  $p=0.7074$ ).

**Motivation of health workers** in North Macedonia was measured by the perceptions of GPs and family medicine doctors about the appropriateness of the number of patients and the time they spend with each patient; the existence of rewards and recognition for patient- and family-centred practice; whether stress reduction and well-being were adequately addressed; whether they felt they were becoming more callous towards people since taking the job; the level of strain involved in their work; whether they were thinking about changing organization/institution; the level of support available for the training needed for their area of work; their effectiveness in dealing with care recipients' problems; and feeling that they were positively influencing other peoples' lives through their work. Table 36 presents the detailed responses of the GPs and family medicine doctors regarding their self-reported motivation.

Forty-three per cent of the health workers that participated in the survey reported that the number of patients and time spent with each patient was frequently or always appropriate (53/123); however, 24% reported that the number of patients and time spent with each patient was never or rarely appropriate (29/123); and over one third of them reported that it was only

sometimes appropriate (41/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=1.521$ ;  $p=0.1282$ ).

*Table 36. GP/family medicine doctors' self-reported motivation, 2019*

Motivation	Health care worker		Total
	GP	Family medicine doctor	
Do you think the number of patients and time you spend with each patient is appropriate?			
Never	5.08 (3)	9.38 (6)	7.32 (9)
Rarely	11.86 (7)	20.31 (13)	16.26 (20)
Sometimes	33.90 (20)	32.81 (21)	33.33 (41)
Frequently	37.29 (22)	26.56 (17)	31.71 (39)
Always	11.86 (7)	10.94 (7)	11.38 (14)
There are rewards and recognition for patient- and family-centred practice			
Never	42.37 (25)	42.19 (27)	42.28 (52)
Rarely	27.12 (16)	26.56 (17)	26.83 (33)
Sometimes	13.56 (8)	18.75 (12)	16.26 (20)
Frequently	10.17 (6)	10.94 (7)	10.57 (13)
Always	6.78 (4)	1.56 (1)	4.07 (5)
Staff's stress-reduction and well-being needs are addressed			
Never	55.93 (33)	51.56 (33)	53.66 (66)
Rarely	20.34 (12)	37.50 (24)	29.27 (36)
Sometimes	10.17 (6)	7.81 (5)	8.94 (11)
Frequently	3.39 (2)	3.12 (2)	3.25 (4)
Always	10.17 (6)	0.00 (0)	4.88 (6)
Working with people all day is a strain for me			
Never	5.08 (3)	9.38 (6)	7.32 (9)
Rarely	18.64 (11)	17.19 (11)	17.89 (22)
Sometimes	38.98 (23)	45.31 (29)	42.28 (52)
Frequently	33.90 (20)	25.00 (16)	29.27 (36)
Always	3.39 (2)	3.12 (2)	3.25 (4)
I have enough support to get the training I need in my area of work			
Never	3.39 (2)	0.00 (0)	1.63 (2)
Rarely	20.34 (12)	23.44 (15)	21.95 (27)
Sometimes	25.42 (15)	18.75 (12)	21.95 (27)
Frequently	35.59 (21)	28.12 (18)	31.71 (39)
Always	15.25 (9)	29.69 (19)	22.76 (28)
I deal very effectively with the problems of my care recipients			
Never	0.00 (0)	0.00 (0)	0.00 (0)
Rarely	1.69 (1)	0.00 (0)	0.81 (1)
Sometimes	5.08 (3)	3.12 (2)	4.07 (5)
Frequently	55.93 (33)	75.00 (48)	65.85 (81)
Always	37.29 (22)	21.88 (14)	29.27 (36)
I think about changing organizations			
Never	42.37 (25)	39.06 (25)	40.65 (50)
Rarely	20.34 (12)	31.25 (20)	26.02 (32)
Sometimes	25.42 (15)	21.88 (14)	23.58 (29)
Frequently	6.78 (4)	4.69 (3)	5.69 (7)

Table 36 contd

Always	5.08 (3)	3.12 (2)	4.07 (5)
I feel I'm positively influencing other people's lives through my work			
Never	0.00 (0)	0.00 (0)	0.00 (0)
Rarely	0.00 (0)	0.00 (0)	0.00 (0)
Sometimes	15.25 (9)	10.94 (7)	13.01 (16)
Frequently	49.15 (29)	56.25 (36)	52.85 (65)
Always	35.59 (21)	32.81 (21)	34.15 (42)
I've become more callous toward people since I started this job			
Very mild, barely noticeable	22.03 (13)	29.69 (19)	26.02 (32)
Mild	20.34 (12)	21.88 (14)	21.14 (26)
Moderate	32.20 (19)	31.25 (20)	31.71 (39)
Strong	18.64 (11)	15.62 (10)	17.07 (21)
Very strong, very noticeable	6.78 (4)	1.56 (1)	4.07 (5)

Note. n=123.

Source: 2019 survey data.

Fifteen per cent of the respondents reported that there were frequently or always rewards and recognition for patient-and family-centred practice (18/123); however, 69% reported that there were never or rarely such rewards and recognition (85/123); and 16% reported that this was the case only sometimes (20/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=1.152$ ;  $p=0.8791$ ).

Eight per cent reported that the staff's stress-reduction and well-being needs were frequently or always addressed (10/123), while 83% reported that the staff's needs in these areas were never or rarely addressed (102/123) and 9% of respondents reported that they were only sometimes addressed (9/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=0.355$ ;  $p=0.7225$ ).

Over one third of the participating health workers reported that working with people all day was frequently or always a strain for them (40/123); one quarter reported that working with people all day was never or rarely a strain for them (31/123); and 42% reported that this was sometimes a strain (52/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=0.953$ ;  $p=0.3404$ ).

Slightly over half of the respondents reported that they had enough support to get the training needed for their area of work frequently or always (67/123; 54%), while 24% (29/123) reported that they never or rarely had enough support to fulfil their training needs and 22% reported that they only sometimes had the required support (27/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=-1.238$ ;  $p=0.2157$ ).

Almost all the health workers reported that they frequently or always dealt very effectively with the problems of their care recipients (117/123; 95%), or sometimes did so (5/123; 4%). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=1.384$ ;  $p=0.1663$ ).

Over two thirds of the participating health care providers reported that they never or rarely thought about changing organization (82/123; 67%), while almost 10% thought

frequently or always about changing the organization (12/123) and 24% reported thinking about it sometimes (29/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=0.296$ ;  $p=0.7673$ ).

Most of the respondents reported that they frequently or always felt that they were positively influencing other people's lives through their work (107/123; 87%) and 13% reported feeling that way sometimes (16/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=-0.045$ ;  $p=0.9641$ ).

Twenty-one per cent of the participating health workers reported that they had become strongly or very strongly/very noticeably more callous toward people since taking the job (26/123), 32% reported moderate levels of such callousness (39/123), and 47% reported very mild/barely noticeable or mild levels of callousness toward people since taking the job (58/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=1.342$ ;  $p=0.1796$ ).

**Quality of amenities** was measured by the GPs and family medicine doctors' rating of the conditions in the waiting room (e.g. space, seating, fresh air). Over two thirds of the health providers rated the cleanliness and maintenance of their health facility as very good or excellent (82/123; 67%) and one third reported that it was good (37/123), while 3% reported that cleanliness and maintenance levels were poor (4/123) (Table 37). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=0.740$ ;  $p=0.4590$ ). 82% of the respondents rated the access to hand-washing facilities at their health care unit as being very good or excellent (101/123); 16% rated it as good; and almost 2% rated it as poor (4/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=-0.433$ ;  $p=0.6649$ ).

Table 37. GP/family medicine doctors' perceptions on quality of amenities, 2019

Quality of amenities	Health care worker		Total
	GP	Family medicine doctor	
How would you rate the cleanliness and maintenance of health care units?			
Very poor	0.00 (0)	0.00 (0)	0.00 (0)
Poor	1.69 (1)	4.69 (3)	3.25 (4)
Good	30.51 (18)	29.69 (19)	30.08 (37)
Very good	33.90 (20)	39.06 (25)	36.59 (45)
Excellent	33.90 (20)	26.56 (17)	30.08 (37)
How would you rate access to hand-washing facilities at health care units?			
Very poor	0.00 (0)	0.00 (0)	0.00 (0)
Poor	3.39 (2)	0.00 (0)	1.63 (2)
Good	15.25 (9)	17.19 (11)	16.26 (20)
Very good	25.42 (15)	23.44 (15)	24.39 (30)
Excellent	55.93 (33)	59.38 (38)	57.72 (71)

Note.  $n=123$ .

Source: 2019 survey data.

**The level of integration of care** was measured by the perception of the GPs and family medicine doctors about the communication of health workers with other organizations providing care; and whether they had access to patients' recent test and examination results, as well as to reports from specialists and hospitals. Over two thirds of the health providers reported that their communication with other organizations providing care for their patients was frequently or always good (76/123, 62%), while 11% reported that the communication was never or rarely good (14/123) and 27% reported that there was only sometimes good communication between providers (33/123) (Table 38). There is no statistically significant difference in the perception between GPs and family medicine doctors (Mann-Whitney test:  $z=0.192$ ;  $p=0.8481$ ). Most of the respondents reported that they frequently or always had access to their patients' most recent test and examination results (99/123; 80%); 7% reported that they never or rarely had access to recent results (8/123); and 13% had access to them only sometimes (16/123). There is no statistically significant difference between GPs and family medicine doctors (Mann-Whitney test:  $z=-1.026$ ;  $p=0.3050$ ). Most health care workers reported that they frequently or always received a report from a specialist or hospital if their patient had visited them (108/123; 88%); 3% reported never or rarely getting a report (4/123); and 9% reported sometimes receiving such a report (11/123). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=0.509$ ;  $p=0.6105$ ).

Table 38. GP/family medicine doctors' perceptions on the level of integration of care, 2019

Integration of care	Health care worker		Total
	GP	Family medicine doctor	
There is good communication with other organizations providing care for my patients			
Never	0.00 (0)	1.56 (1)	0.81 (1)
Rarely	11.86 (7)	9.38 (6)	10.57 (13)
Sometimes	28.81 (17)	25.00 (16)	26.83 (33)
Frequently	42.37 (25)	56.25 (36)	49.59 (61)
Always	16.95 (10)	7.81 (5)	12.20 (15)
How often do you have access to patient's most recent test results or exams when you need them?			
Never	1.69 (1)	3.12 (2)	2.44 (3)
Rarely	3.39 (2)	4.69 (3)	4.07 (5)
Sometimes	15.25 (9)	10.94 (7)	13.01 (16)
Frequently	62.71 (37)	53.12 (34)	57.72 (71)
Always	16.95 (10)	28.12 (18)	22.76 (28)
Do you get a report from a specialist or hospital if your patient has visited them?			
Never	1.69 (1)	1.56 (1)	1.63 (2)
Rarely	3.39 (2)	0.00 (0)	1.63 (2)
Sometimes	8.47 (5)	9.38 (6)	8.94 (11)
Frequently	47.46 (28)	57.81 (37)	52.85 (65)
Always	38.98 (23)	31.25 (20)	34.96 (43)

Note. n=123.

Source: 2019 survey data.

**Communication between health providers and patients** was measured by the frequency with which the patients were encouraged to discuss their concerns freely, and the frequency with which the patients were encouraged to ask questions about diseases, treatment and care. Most of the health workers reported that patients were frequently or always encouraged to discuss their concerns freely (112/123; 91%), while 8% reported that patients

were sometimes encouraged (10/123), and less than 1% reported that patients were rarely encouraged to do so (1/123) (Table 39). There is no statistically significant difference in perceptions between GPs and family medicine doctors (Mann-Whitney test:  $z=-0.366$ ;  $p=0.7140$ ). Almost all of the health workers reported that patients were frequently or always being encouraged to ask questions about diseases, treatment and care (117/123; 95%) and just under 5% reported that patients were sometimes encouraged to ask such questions (6/123). There is no statistically significant difference between GPs and family medicine doctors in terms of this perception (Mann-Whitney test:  $z=-0.979$ ;  $p=0.3277$ ).

**Patients' ability to choose** was measured by the frequency with which patients had a choice between health providers in a health care unit and the frequency with which patients could see a specialist when they wished. Most of the health workers reported that patients frequently or always had a choice between health care providers (113/123; 92%). GPs had a statistically significant higher rating of the frequency with which patients had a choice between health providers in a health care unit compared to family medicine doctors (Mann-Whitney test:  $z=2.028$ ;  $p=0.0426$ ) (Table 40). Over three quarters of the health workers participating in the survey reported that patients could frequently or always see a specialist if they wished to (93/123; 76%), while 19% reported that patients could sometimes see a specialist if desired (23/123) and less than 6% reported that patients could rarely see a specialist when they wanted (7/123). There is no statistically significant difference between GPs and family medicine doctors in this respect (Mann-Whitney test:  $z=0.554$ ;  $p=0.5798$ ).

Table 39. GP/family medicine doctors' perceptions on the level of communication between health providers and patients, 2019

Communication	Health care worker		Total
	GP	Family medicine doctor	
How often are patients encouraged to discuss their concerns freely?			
Never	0.00 (0)	0.00 (0)	0.00 (0)
Rarely	1.69 (1)	0.00 (0)	0.81 (1)
Sometimes	6.78 (4)	9.38 (6)	8.13 (10)
Frequently	44.07 (26)	39.06 (25)	41.46 (51)
Always	47.46 (28)	51.56 (33)	49.59 (61)
How often are patients encouraged to ask questions about diseases, treatment and care?			
Never	0.00 (0)	0.00 (0)	0.00 (0)
Rarely	0.00 (0)	0.00 (0)	0.00 (0)
Sometimes	6.78 (4)	3.12 (2)	4.88 (6)
Frequently	30.51 (18)	26.56 (17)	28.46 (35)
Always	62.71 (37)	70.31 (45)	66.67 (82)

Note.  $n=123$ .

Source: 2019 survey data.

**Confidentiality and privacy during health services delivery** were measured by the perceptions of GPs and family medicine doctors about the frequency with which the confidentiality of the patients' records was preserved and whether the consultations were carried out in a manner that protects patient confidentiality. Almost all of the health providers (120/123; 98%) reported that the confidentiality of patients' medical records was frequently or always preserved and there is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=1.684$ ;  $p=0.0922$ ) (Table 41). A significant majority of the health workers reported that consultations were frequently or always

carried out in a manner that protects patient confidentiality (118/123; 96%) and there is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=1.911$ ;  $p=0.0560$ ).

Table 40. GP/family medicine doctors' perceptions about the patient's ability to choose, 2019

Choice	Health care worker		Total
	GP	Family medicine doctor	
How often do individuals have a choice between health care providers in a health care unit?			
Never	3.39 (2)	0.00 (0)	1.63 (2)
Rarely	0.00 (0)	1.56 (1)	0.81 (1)
Sometimes	1.69 (1)	9.36 (6)	5.69 (1)
Frequently	10.17 (6)	20.31 (13)	15.45 (19)
Always	84.75 (50)	68.75 (44)	76.42 (94)
How often do individuals have the opportunity to see a specialist, if they wish to?			
Never	0.00 (0)	0.00 (0)	0.00 (0)
Rarely	5.08 (3)	6.25 (4)	5.69 (7)
Sometimes	20.34 (12)	17.19 (11)	18.70 (23)
Frequently	45.76 (27)	56.25 (36)	51.22 (63)
Always	28.81 (17)	20.31 (13)	24.39 (30)

Note.  $n=123$ .

Source: 2019 survey data.

Table 41. GP/family medicine doctors' perceptions on the confidentiality and privacy during health services delivery, 2019

Confidentiality and privacy	Health care worker		Total
	GP	Family medicine doctor	
How often is the confidentiality of patients' medical records preserved (except if the information is needed by other health care providers)?			
Never	0.00 (0)	0.00 (0)	0.00 (0)
Rarely	0.00 (0)	0.00 (0)	0.00 (0)
Sometimes	3.39 (2)	1.56 (1)	2.44 (3)
Frequently	10.17 (6)	25.00 (16)	17.89 (22)
Always	86.44 (51)	73.44 (47)	79.67 (98)
How often are consultations carried out in a manner that protects patient confidentiality?			
Never	0.00 (0)	0.00 (0)	0.00 (0)
Rarely	0.00 (0)	0.00 (0)	0.00 (0)
Sometimes	3.39 (2)	4.69 (3)	4.07 (5)
Frequently	15.25 (9)	29.69 (19)	22.76 (28)
Always	81.36 (48)	65.62 (42)	73.17 (90)

Note.  $n=123$ .

Source: 2019 survey data.

**The level of respect and dignity afforded to patients during health services delivery** was measured by the frequency with which the patients were treated with respect as well as the frequency with which patient consent was sought before testing or starting treatment. Almost all of the health providers reported that the patients were frequently or always treated with respect (120/123; 98%) and there is no statistically significant difference in this response between GPs and family medicine doctors (Mann-Whitney test:  $z=1.057$ ;  $p=0.2903$ ) (Table 42). Almost all respondents reported that patient consent was frequently or always sought before testing or starting treatment (117/123; 95%) and there is no statistically significant difference in this respect between GPs and family medicine doctors (Mann-Whitney test:  $z=0.107$ ;  $p=0.9145$ ).

Table 42. GP/family medicine doctors' perceptions on the respect and dignity of patients during health services delivery, 2019

Respect and dignity	Health care worker		Total
	GP	Family medicine doctor	
How often are patients treated with respect?			
Never	0.00 (0)	0.00 (0)	0.00 (0)
Rarely	0.00 (0)	0.00 (0)	0.00 (0)
Sometimes	1.69 (1)	3.12 (2)	2.44 (3)
Frequently	10.17 (6)	15.62 (10)	13.01 (16)
Always	88.14 (52)	81.25 (52)	84.55 (104)
How often is patient consent sought before testing or starting treatment?			
Never	0.00 (0)	1.56 (1)	0.81 (1)
Rarely	1.69 (1)	0.00 (0)	0.81 (1)
Sometimes	5.08 (3)	1.56 (1)	3.25 (4)
Frequently	25.42 (15)	31.25 (20)	28.46 (35)
Always	67.80 (40)	65.62 (42)	66.67 (82)

Note.  $n=123$ .

Source: 2019 survey data.

**Health providers' support of patients' informed choice** was measured by the perceptions and self-reported practices of GPs and family medicine doctors regarding the frequency with which patients were provided information on alternative treatment options; the frequency with which patients were consulted over their preferences for alternative treatment options; whether the needs and preferences of the service users should be central to health services; and the importance of getting to know each service user as an individual (e.g. their medical history, social situation, support, cultural factors, pre-morbid status, etc.). Table 43 presents the detailed responses of the GPs and family medicine doctors regarding support provided to patients in making informed choices.

Slightly over two thirds of the health workers reported that patients were frequently or always provided information on alternative treatment options (78/123; 63%), while 11% reported that patients were never or rarely provided this kind of information (14/123) and one quarter of the respondents reported that patients were sometimes provided it (31/123). There is no statistically significant difference in this respect between GPs and family medicine doctors (Mann-Whitney test:  $z=-0.071$ ;  $p=0.9432$ ).

Table 43. GP/family medicine doctors' perceptions on health providers' support for informed choice for patients, 2019

Support for informed choice	Health care worker		Total
	GP	Family medicine doctor	
How often are patients provided information on alternative treatment options?			
Never	1.69 (1)	1.56 (1)	1.63 (2)
Rarely	13.56 (9)	6.25 (4)	9.76 (12)
Sometimes	22.03 (13)	28.12 (18)	25.20 (31)
Frequently	28.81 (17)	34.38 (22)	31.71 (39)
Always	33.90 (20)	29.69 (19)	31.71 (39)
How often are patients consulted about their preferences over alternative treatment options?			
Never	0.00 (0)	0.00 (0)	0.00 (0)
Rarely	6.78 (4)	4.69 (3)	5.69 (7)
Sometimes	30.51 (18)	23.44 (15)	26.83 (33)
Frequently	28.81 (17)	35.94 (23)	32.52 (40)
Always	33.90 (20)	35.94 (23)	34.96 (43)
The needs and preferences of service users should be central in health services			
Strongly disagree	0.00 (0)	0.00 (0)	0.00 (0)
Somewhat disagree	8.47 (5)	7.81 (5)	8.13 (10)
Neither agree nor disagree	5.08 (3)	4.69 (3)	4.88 (6)
Somewhat agree	54.24 (32)	40.62 (26)	47.15 (58)
Strongly agree	32.20 (19)	46.88 (30)	39.84 (49)
It is important to get to know each service user as an individual (e.g. their medical history, social, supports, cultural factors, pre-morbid status)			
Strongly disagree	0.00 (0)	0.00 (0)	0.00 (0)
Somewhat disagree	5.08 (3)	0.00 (0)	2.44 (3)
Neither agree nor disagree	0.00 (0)	0.00 (0)	0.00 (0)
Somewhat agree	30.51 (18)	23.44 (15)	26.83 (33)
Strongly agree	64.41 (38)	76.56 (49)	70.73 (87)

Note. n=123.

Source: 2019 survey data.

Over two thirds of the participating health workers reported that patients were frequently or always consulted about their preferences over alternative treatment options (83/123; 67%), 6% of them reported that patients were never or rarely consulted over their preferences for alternative treatments (7/123) and 27% reported that they were sometimes

consulted (3/123). There is no statistically significant difference on these matters between GPs and family medicine doctors (Mann-Whitney test:  $z=-0.754$ ;  $p=0.4511$ ).

Forty per cent of the health providers reported that they strongly agreed that the needs and preferences of service users should be central to health services (49/123); 47% somewhat agreed (58/123); 5% neither agreed nor disagreed with this statement (6/123); and 8% strongly disagreed (10/123). There is no statistically significant difference on this issue between GPs and family medicine doctors (Mann-Whitney test:  $z=-1.405$ ;  $p=0.1601$ ).

Seventy-one per cent of the respondents strongly agreed that it was important to get to know each service user as an individual (87/123; 98%); 27% somewhat agreed (33/123); and 2% somewhat disagreed (3/123). There is no statistically significant difference on this opinion between GPs and family medicine doctors (Mann-Whitney test:  $z=-1.611$ ;  $p=0.1071$ ).

**Patients' self-care support** was measured by the perceptions and self-reported practices of the GPs and family medicine doctors about the frequency with which they co-developed a care plan for their patients to help them manage their condition in their daily life; the frequency with which they provided written information to patients about their condition or treatment in a language they could understand; and whether they offered education about peer-based services and mutual support groups as part of the planning process. 80% of the providers frequently or always co-developed a care plan for their patients for how they could manage their condition in their daily life (99/123); 16% sometimes co-developed a care plan (20/123); and 3% never or rarely co-developed a plan (4/123) (Table 44). There is no statistically significant difference in this self-reported practice between GPs and family medicine doctors (Mann-Whitney test:  $z=0.388$ ;  $p=0.6977$ ).

A total of 78% of the respondents reported that they frequently or always provided written information to the patients about their condition or treatment in a language they could understand (96/123), while 19% reported that they sometimes provided written information to patients (23/123) and 3% reported that they rarely or never did so (4/123). There is no statistically significant difference between GPs and family medicine doctors in this respect (Mann-Whitney test:  $z=-0.163$ ;  $p=0.8703$ ). 14% of the health care workers strongly agreed on the importance of offering education about peer-based services and mutual support groups as part of the planning process (18/123); 49% somewhat agreed (60/123); 14% neither agreed nor disagreed (17/123); 16% somewhat disagreed (20/123); and less than 7% strongly disagreed (8/123). There is no statistically significant difference in GPs' and family medicine doctors' agreement on this (Mann-Whitney test:  $z=0.119$ ;  $p=0.9052$ ).

**Comprehensiveness of care** was measured by the number of providers an older person can see as needed, from the following health professionals: health promoter, dietician, social worker, home visitor, physiotherapist, dental/oral health worker, psychologist/psychotherapist and psychiatrist.

The respondents' scores ranged from 1 to 8, with an overall mean score of 3.398 (SD=1.754). Thus, **an older person has access on average to 3.4 providers out of 8**. There is no statistically significant difference in the mean number of health providers an older person can see between GPs (mean=3.169; SD=0.226) and family medicine doctors (mean=3.609; SD=0.218) ( $t=-1.3946$ ;  $p\text{-value}=0.1657$ ). The greatest proportion of health workers responded that their patients could access psychiatrists (77%), followed by dental/oral health workers (65%), physiotherapists (61%), home visitors (45%), psychologists/psychotherapists (39%), social workers (25.9%), health promoters/educators (18%) and dieticians (18%).

Table 44. GP/family medicine doctors' perceptions and self-reported practices regarding patients' self-care support, 2019

Self-care support	Health care worker		Total
	GP	Family medicine doctor	
How often do you co-develop a care plan with your patients for how they can manage their condition in their daily lives?			
Never	1.69 (1)	0.00 (0)	0.81 (1)
Rarely	1.69 (1)	3.12 (2)	2.44 (3)
Sometimes	16.95 (10)	15.62 (10)	16.26 (20)
Frequently	42.37 (25)	50.00 (32)	46.34 (57)
Always	37.29 (22)	31.25 (20)	34.15 (42)
How often do you provide written information to patients about their condition or treatment in language they can understand?			
Never	1.69 (1)	0.00 (0)	0.81 (1)
Rarely	1.69 (1)	3.12 (2)	2.44 (3)
Sometimes	15.25 (9)	21.88 (14)	18.70 (23)
Frequently	38.98 (23)	26.56 (17)	32.52 (40)
Always	42.37 (25)	48.44 (31)	45.53 (56)
I offer education about peer-based services and mutual support groups as part of the planning process			
Strongly disagree	6.78 (4)	6.25 (4)	6.50 (8)
Somewhat disagree	13.56 (8)	18.75 (12)	16.26 (20)
Neither agree	15.25 (9)	12.50 (8)	13.82 (17)
Somewhat agree	50.85 (30)	46.88 (30)	48.78 (60)
Strongly agree	13.56 (8)	15.62 (10)	14.63 (18)

Note. n=123.

Source: 2019 survey data.

**Accessibility of health services** was measured by the perception of the GPs and family medicine doctors regarding the appropriateness of the length of time spent by patients at the health care units waiting for consultation/treatment. 71% of the health providers reported that the length of time spent at the health care units waiting for consultation/treatment was frequently or always reasonable (87/123); 20% reported that it was sometimes reasonable (25/123); and 9% reported that it was never or rarely reasonable (11/123) (Table 45). GPs have statistically significant higher ranking of the acceptability of waiting time length compared to family medicine doctors (Mann-Whitney test:  $z=2.771$ ;  $p=0.0056$ ).

**Quality of care** was measured by the GPs' and family medicine doctors' perceptions about whether older people received lower quality care compared to other vulnerable people (e.g. women, children, people who are poorly educated, or poor, etc.) and their satisfaction with the quality of care they gave to older people. Eighty-four per cent of the respondents reported that they did not think that older people received lower quality care compared to other vulnerable people (103/123), while 16% reported that they thought older people did receive lower quality care compared to other vulnerable individuals (20/123) (Table 46). There is no statistically significant difference in this perception between GPs and family medicine doctors (Mann-Whitney test:  $z=0.685$ ;  $p=0.4933$ ).

Table 45. GP/family medicine doctors' perceptions on the accessibility of health services, 2019

Accessibility	Health care worker		Total
	GP	Family medicine doctor	
How often is the length of time spent at health care units waiting for consultation/ treatment reasonable?			
Never	0.00 (0)	0.00 (0)	0.00 (0)
Rarely	3.39 (2)	14.06 (9)	8.94 (11)
Sometimes	16.95 (10)	23.44 (15)	20.33 (25)
Frequently	50.85 (30)	50.00 (32)	50.41 (62)
Always	28.81 (17)	12.50 (8)	20.33 (25)

Note. n=123.

Source: 2019 survey data.

Table 46. GP/family medicine doctors' perceptions on quality of care, 2019

Quality of care	Health care worker		Total
	GP	Family medicine doctor	
Do you think that older people receive lower quality of care compared to other vulnerable people (e.g. women, children, poorly educated, poor people, etc.)?			
No	81.36 (48)	85.94 (55)	83.74 (103)
Yes	18.64 (11)	14.06 (9)	16.26 (20)
Are you satisfied with the quality of care you provided to older people?			
Never	1.69 (1)	0.00 (0)	0.81 (1)
Rarely	0.00 (0)	1.56 (1)	0.81 (1)
Sometimes	5.08 (3)	10.94 (7)	8.13 (10)
Frequently	47.46 (28)	64.06 (41)	56.10 (69)
Always	45.76 (27)	23.44 (15)	34.15 (42)

Note. n=123.

Source: 2019 survey data.

The reasons for the perception that older people were receiving lower quality of care included:

- the health system being overloaded, and limited appointments were available at the secondary and tertiary levels;
- the perception that older people were facing financial barriers in accessing care;
- lack of resources and capacity;
- stereotypes, negligence of older people and lack of support from family members for older people;
- inadequate organization of the home-care services for immobile older people, including lack of personnel and trained people to provide care for older people (including activities of daily living), lack of specialized facilities to accommodate and care for them, limited collaboration between family members and health providers regarding older people's treatment.

A total of 90% of the health providers participating in the survey were frequently or always satisfied with the quality of care they provided to older people (111/123); 8% reported that they were sometimes satisfied (10/123); and 2% reported that they were never or rarely satisfied (2/123) with the quality of the care provided. GPs have statistically significant higher ranking of satisfaction with the quality of care than family medicine doctors (Mann-Whitney test:  $z=2.569$ ;  $p=0.0102$ ).

The adequate number of qualified and competent health workers is a prerequisite for PHC that functions properly. Special attention needs to be given to ensure the health workforce is well prepared, with an appropriate skill mix, in order to meet population health needs equitably and sustainably (29). The survey among health workers documented that crucial elements need to be addressed as part of reorienting the health workforce to be better prepared to address the needs of older people in North Macedonia.

Looking closely at the motivation of health workers, the survey found that a substantial proportion of the health workers reported that they found working with people all day to be a strain for them, and that they had become more callous towards people since taking the job. However, a systematic way of reducing stress and meeting the needs of staff for ensuring their wellbeing through mechanisms and tools still remains to be established. Furthermore, a difference was highlighted in the frequency with which health providers felt supported to obtain the training they needed in their area of work, which is a potential indicator of the need to create universal approaches to strengthening the skills and capacities of health professionals. Slightly less than half of the participants in the survey reported thinking about changing organizations, which is in line with the recent trend of health workers migrating to EU Member States or towards the private sector. Health providers reported that there were not always rewards and recognition for patient- and family-centred practices. There was a high level of agreement on the perception that they dealt very effectively with the problems of their care recipients and most of them felt that they were positively influencing other people's lives through their work.

Overall, there was agreement regarding the quality of the amenities in which health care providers worked. Most of the health providers perceived the waiting time in their practices as being adequate. However, the number of patients and time spent with each patient was perceived to be not always adequate, indicating that the number of patients being seen per day was relatively high and/or that health providers needed more time to effectively address the patients' needs.

There was agreement among the survey participants about the high levels of communication and coordination with other health providers. The information health system "Moj Termin" might have been a factor in this positive perception, as it enables electronic access to the patients' health records and access to recent test and examination results reported by hospitals and specialists. That said, it is important to note that this coordination through "Moj Termin" is rather limited to coordination of GPs/family medicine doctors with hospitals and specialists; other public health services (such as community nurses and nurses working in the PHC field) and social services are not yet covered by the system.

The perception among almost all health providers was that patients could discuss their health concerns freely and that patients were being encouraged to ask questions about diseases, treatment and care. Furthermore, there was a high level of agreement that health providers (a) co-developed care plans for their patients on how they could manage their condition in their daily life and (b) provided written information to patients about their condition or treatment in a language they could understand. However, awareness was rather limited about the importance

of offering education on peer-based services and mutual support groups as part of the planning process. Differences were found in the practices of the participating health providers, in terms of provision of support for informed choice for patients, information on alternative treatment options, and patient consultation on their potential preferences for alternative treatments. This is an indicator of the lack of a universal approach to involving patients in decision-making about their health. A lack of awareness was also found about the importance of the needs and preferences of the service users, as only 40% of respondents strongly agreed with the statement that patients' needs and preferences should be central to health services. In addition, a significant proportion of health facilities were found to have no system in place for eliciting and reviewing patient and family opinions, which is a potential barrier to the process of empowering and involving individuals and families in the delivery of integrated, people-centred services.

#### *Relationship between health workers' and older people's experiences and perceptions*

Overall, a high level of satisfaction was found with the quality of amenities in health facilities. However, a substantial proportion of older people reported not feeling welcomed by the office staff. While most of the health providers perceived the waiting time in their practices to be adequate, more than half of the older people participating in the survey found waiting times to be long, at least to some extent, which might be a potential barrier to older people accessing services. The perceptions of older people regarding the opportunity of the patient to choose a health provider and about care continuity and coordination among the different providers matched the perception of health providers. Health care workers and older people concurred about the high level of confidentiality and privacy provided to patients and the dignity with which patients were treated.

Although almost all health providers reported that they co-developed care plans for their patients and provided written information about the patients' conditions or treatment, older people reported facing difficulties in understanding the information provided by health providers regarding their health and treatment and the use of new medicines. Furthermore, despite health providers reporting a high level of support for ensuring informed choice by patients, in terms of providing information on alternative treatment options and consulting patients on their preferences for alternative treatment, a substantial proportion of the participating older people did not feel sufficiently involved in decision-making about their care (not to the extent desired). In addition, a significant proportion of health facilities were reported as not having a system for eliciting and reviewing patient and family opinions.

There was a difference in perceptions among health workers and older people in terms of emotional support and empathy around care. While the perceptions among almost all health providers was that patients could discuss their health concerns freely, a significant proportion of older people reported that they could not discuss these concerns freely with their providers and/or the family members and friends did not have the opportunity to ask questions of the providers if desired. Furthermore, the perception among almost all of the health providers was that their patients were encouraged to ask questions about their disease, treatment and care, while almost a quarter of the older people participating in the survey did not feel supported and encouraged by the health providers.

#### *Perceptions and experiences of family caregivers*

The survey of caregivers was administered face to face, with 48 participants across two municipalities (Kochani and Resen). Convenience sampling was used to identify older people through the mobile health and social services teams in these two municipalities. Participants were eligible to participate if they were a caregiver to a person aged 65 years and older, reside in one of the two municipalities and consented to participate in the survey. The structured

questionnaire adapted to the national context<sup>11</sup> consisted of 50 questions and looked at the background characteristics of caregivers, health status, perceived quality of support, psychological and physical mistreatment of caregivers, psychological and physical abuse by caregivers, and overall caregiving burden.

In terms of the **caregivers' profile**, two thirds (n=30) of the caregivers lived in rural areas, slightly over half of them (n=26) were aged between 46 and 64 years and one third were older caregivers (aged 65 years and older) (n=16). Most of the caregivers were female (n=37), had no other dependents (n=35) and co-resided with the older person receiving the care (n=39). Additional demographic details of the caregivers interviewed are shown in Table 47.

*Table 47. Distribution of caregivers' characteristics in Kochani and Resen, 2019*

<b>Characteristics</b>	<b>n</b>
<b>Location</b>	
Urban	18
Rural	30
<b>Municipality</b>	
Kochani	28
Resen	20
<b>Age (years)</b>	
<46	6
46–64	26
≥65	16
<b>Sex</b>	
Female	37
Male	11
<b>Ethnicity</b>	
Macedonian	41
Albanian	7
<b>Education</b>	
Primary	16
Secondary	23
University	9
<b>Marital status</b>	
Single	7
Married	36
Divorced	1
Widow	4
<b>Employment status/source of income</b>	
Unemployed	27
Employed	8
Retired	13
Social assistance	13
<b>Monthly income (MKD)</b>	
≤12 000 (~€200)	20
12 001–25 000 (~€200–400)	23

<sup>11</sup> The questionnaire was adapted to the national context from the National Survey of Stress, Conflict and Coping – Family Carers of Older People implemented by the National Centre for the Protection of Older People in Ireland.

Table 47 contd

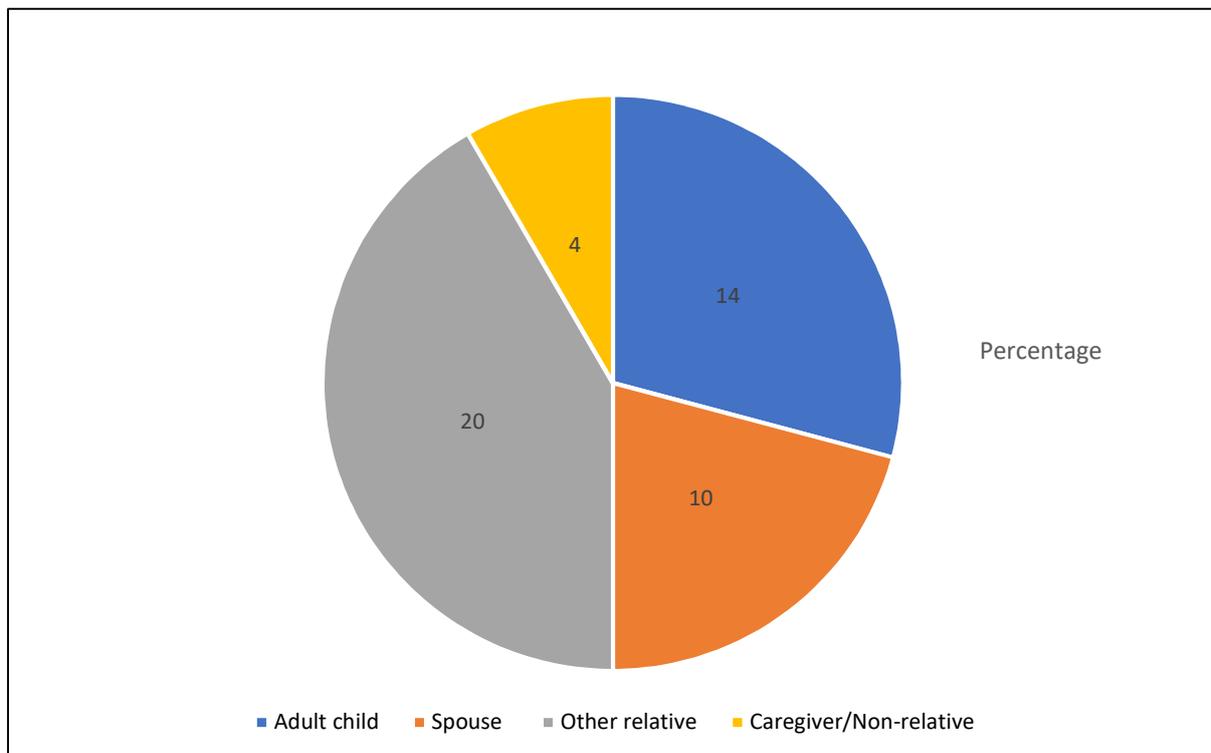
≥25 000 (€~400)	5
Number of full-time dependents (other than the care recipient)	
No other dependents	35
1 other dependent	12
2 other dependents	1
Living arrangements	
Co-residing with the care recipient	39
Not residing with the care recipient	9

Note. n=48.

Source: 2019 survey data.

Regarding the **caregiving relationship**, almost all of the caregivers were close relatives, spouses, or adult children of the older person. A few caregivers were not relatives (Fig. 7).

Fig. 7. Relationship of the caregiver to the recipient (%), 2019



Source: authors' own compilation based on 2019 survey results.

In terms of the **caregivers' perceived general health**, one fifth of the caregivers (n=10) perceived their health as being poor, while the rest perceived that it was either good or very good (n=38). There is no statistically significant difference in perception of health status between female and male caregivers (Mann-Whitney test:  $z=0.244$ ;  $p=0.8070$ ) (Table 48).

The Zarit Burden Interview (ZBI) (30) was used to assess **perceived burden among caregivers** and the impact of caregiving on physical and emotional health, finances, social life and interpersonal relationships. Scores on the ZBI range from 0 to 88, with higher scores being indicative of greater caregiver burden. The average ZBI score was 52.03 and all caregivers (100%) perceived the caregiving burden as moderate to severe or severe (Table 49).

Table 48. Overall health of caregivers by sex, 2019

In general, how would you rate your overall health?	Sex		Total
	Female	Male	
Good	19	7	26
Poor	8	2	10
Very good	10	2	12
<b>Total</b>	<b>37</b>	<b>11</b>	<b>48</b>

Note. n=48.  
Source: 2019 survey data.

Table 49. Perceived caregivers' burden, 2019

ZBI score	Frequency
Little to no burden (0–20)	0
Mild to moderate burden (21–40)	0
Moderate to severe burden (41–60)	45
Severe burden (61–88)	3

Notes. n=48; ZBI scores range from 0 to 88 with higher scores indicating greater burden.  
Source: 2019 survey data.

In terms of **caregiving and caregiving activities**, slightly over three quarters of the respondents (n=37) reported providing care for more than 80 hours per week. Regarding the frequency with which caregivers provided support for activities of daily living to the care recipient, the vast majority provided help all the time with housework (n=42), taking a bath or shower (n=39), walking (n=32), dressing and undressing (n=37), cutting and eating food (n=33) and using the toilet (n=33) (Table 50).

Table 50. Frequency with which caregivers provided help with activities of daily living, 2019

Care provided	Frequency		
	Never	Sometimes	All the time
	<i>n</i>	<i>n</i>	<i>n</i>
Housework	0	6	42
Taking a bath or shower	7	2	39
Walking	7	9	32
Dressing and undressing	8	3	37
Cutting and eating food	12	3	33
Using the toilet	10	5	33

Note. n=48.  
Source: 2019 survey data.

Responses to each of the six activities of daily living discussed were dichotomized into whether no help was provided or help was provided (sometimes/all the time) and scores were summarized to create a scale that measured the overall level of help. The results are shown in Table 51. Almost all the caregivers (n=44) reported providing help sometimes or all the time, which equates to an overall high level of care provided.

The most common self-reported **challenges and needs faced by caregivers when caring for older people** included not having time for her/himself (31/48), closely followed by: giving medication (30/48), lack of time to take care of other responsibilities (25/48),

communication (22/48), lack of finances (20/48) and the perception that the care recipient hates the caregiver (1/48).

Table 51. Help provided by caregivers, 2019

Help provided	Frequency
	<i>n</i>
No help provided	4
Help provided	44

Note. n=48.

Source: 2019 survey data.

Caregivers reported that they would find beneficial the following support: a support group for caregivers caring for older people (28/58), assistance from professionals (24/48), education/training for caring for older people (23/48), assistance from other family members (22/48), financial support (21/48), more time to rest (13/48), material assistance (12/48), access to information (4/48), institutions/elderly homes (4/48), flexible work time (3/48).

#### Caregivers' experiences of support and coping

**Positive appraisal of caregiving** was assessed by the respondents being asked to appraise the value of their caregiving role, using a four-item "positive value" subscale of the Caregivers of Older People in Europe (COPE) index (31). The positive value scale examines aspects of caregiving which are often valued by caregivers.

The vast majority of the caregivers (n=43) felt that they coped well as a caregiver, almost all (n=46) found caregiving worthwhile and had a good relationship with the care recipient (n=45), and slightly over three quarters of respondents felt they were appreciated as a caregiver (n=37). However, a substantial proportion of caregivers (n=11) indicated that they only sometimes felt appreciated as a caregiver (Table 52). **Overall, caregivers found caregiving to be a positive experience.**

Respondents' **perceived quality of support in caregiving** was measured using the "quality of support" subscale of the COPE index to assess the perceived adequacy of social and professional support provided to caregivers.

A significant majority (n=38) of the caregivers had never or only sometimes felt supported by their friends and neighbours, while one third (n=17) had never or only sometimes felt supported by family. Around three quarters of the caregivers had never or only sometimes felt supported by the health and social services (n=38) and two thirds (n=33) had never or only sometimes felt properly supported in their role of caregiver (Table 53). **This indicates overall limited levels of perceived quality of social and professional support for caregivers.**

Table 52. Positive appraisal of caregiving, 2019

COPE appraisal	Never	Sometimes	Often	Always
	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>
Do you feel you cope well as a caregiver?	0	5	10	33
Do you find caregiving worthwhile?	0	2	6	40
Do you have a good relationship with the person you care for?	0	3	7	38
Do you feel that anyone appreciates you as a caregiver?	0	11	9	28

Note. n=48.  
Source: 2019 survey data.

Table 53. Caregivers' perceived quality of support, 2019

Perceived support	Never	Sometimes	Often	Always
	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>
Do you feel well supported by your friends and/or neighbours?	11	17	12	8
Do you feel well supported by your family?	4	13	13	18
Do you feel well supported by health and social services?	6	32	4	6
Overall, do you feel well supported in your role of caregiver?	3	30	8	7

Note. n=48.  
Source: 2019 survey data.

### Caregivers' experiences of mistreatment

**Psychological mistreatment of caregivers by care recipients** was assessed as part of the survey. The most common forms of psychological mistreatment that caregivers had experienced included the use of a harsh tone of voice, insulting or swearing at the caregiver (n=20), screaming or yelling at them (n=18) and shouting in anger at them (n=15). A small proportion of the caregivers (n=3) reported being threatened by physical force and being threatened with hitting or being thrown at (n=2) (Table 54). Overall, psychological mistreatment was experienced to some extent by all the caregivers interviewed.

**Physical mistreatment of caregivers by care recipients** was also assessed within the framework of the survey. A small number of caregivers indicated that they had rarely or sometimes felt afraid that the care recipient might hurt them (n=3), and the same number of respondents had rarely experienced being pushed, grabbed, shoved or pinched by their care recipient (Table 55). Overall, most of the caregivers interviewed had never experienced physical mistreatment by their care recipient.

Table 54. Psychological mistreatment experienced by caregivers, 2019

<i>In the past three months, has the person you care for...</i>	Never	Rarely	Sometimes	Often	Always
	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>
Used a harsh tone of voice, insulted you or sworn at you	28	10	8	2	0
Screamed or yelled at you	30	9	5	4	0
Shouted at you in anger	33	7	5	3	0
Threatened to use physical force against you	45	1	0	2	0
Threatened to hit or throw something at you	46	1	0	1	0

Note. n=48.

Source: 2019 survey data.

Table 55. Physical mistreatment experienced by caregivers, 2019

<i>In the past three months, has the person you care for...</i>	Never	Rarely	Sometimes	Often	Always
	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>
Made you feel afraid that s/he might hit or hurt you	45	2	1	0	0
Pushed, grabbed shoved, or pinched you	45	3	0	0	0
Thrown something at you	48	0	0	0	0
Hit or slapped you	48	0	0	0	0
Kicked you or hit you with her/his fist	48	0	0	0	0

Note. n=48.

Source: 2019 survey data.

### Prevalence of potentially harmful caregiver behaviour

The most commonly reported **potentially harmful psychological behaviour** displayed by caregivers was use of a harsh tone of voice, insulting or swearing at the care recipient (n=20), screaming or yelling at them (n=40), threatening to send the person to a nursing home (n=5) and threatening to stop taking care of or abandoning the care recipient (n=1) (Table 56). These behaviours had occurred rarely or sometimes in the previous three months.

The most commonly reported **potentially harmful physical caregiver behaviours** were actual physically harmful behaviours; that is, rough handling of the care recipient (n=15) and shaking the care recipient (n=6), followed by feeling afraid that they might hurt the care recipient (n=4) (Table 57). These behaviours had occurred rarely or sometimes in the previous three months.

Table 56. Potentially harmful psychological behaviour engaged in by caregivers in the previous three months, 2019

<i>In the past three months, have you...</i>	Never	Rarely	Sometimes	Often	Always
	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>
Used a harsh tone of voice, insulted or sworn at or called the person you care for names?	28	10	10	0	0
Screamed or yelled at the person you care for?	18	19	9	2	0
Threatened to send the person you care for to a nursing home?	43	0	5	0	0
Threatened to stop taking care of or abandon the person you care for?	40	4	3	1	0
Threatened to use physical force against the person you care for?	47	1	0	0	0

Note. n=48.

Source: 2019 survey data.

Table 57. Potentially harmful physical behaviour engaged in by caregivers in the previous three months, 2019

<i>In the past three months, have you...</i>	Never	Rarely	Sometimes	Often	Always
	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>
Felt afraid that you might hit or hurt the person you care for?	44	2	2	0	0
Roughly handled the person you care for in other ways?	33	9	6	0	0
Hit or slapped the person you care for?	46	2	0	0	0
Shaken the person you care for?	42	2	4	0	0
Withheld food from the person you care for?	46	1	0	0	1

Note. n=48.

Source: 2019 survey data.

For the purpose of analysis, if the harmful behaviour is dichotomized into “engaged in potentially harmful behaviour” for caregivers who answered the questions regarding the harmful behaviour with “sometimes/often/all the time” and “not engaged in potentially harmful behaviour” for caregivers who answered the questions with “never/rarely”, **a significant proportion (slightly less than half; n=22) of the caregivers had engaged in potentially harmful behaviour** (Table 58).

Table 58. Engagement in potentially harmful caregiver behaviour, 2019

Potentially harmful caregiver behaviour	Frequency <i>n</i>
Not engaged in potentially harmful behaviour	26
Engaged in potentially harmful behaviour	22

Note. n=48.

Source: 2019 survey data.

## Integrated care for older people (ICOPE)

The ICOPE Implementation Framework (3) provides a scorecard which was used to help assess the overall capacity of health and social care services and systems to deliver integrated care in community settings in North Macedonia. A one-day consultative meeting was held in December 2019 with relevant stakeholders from the Ministry of Health, the Ministry of Labour and Social Policy, the Institute of Public Health, the e-Health Directorate, the Health Insurance Fund, the Center for Family Medicine, the PHI Gerontology Institute “13 November”, the Skopje Clinic for Oncology, the University Clinic of Cardiology, the Primary Healthcare Center Skopje, the Association of General Medicine and Family Medicine Doctors, the Association of Nurses and Midwives, the Union of Retired Persons, the Red Cross and the ESE to obtain a consensual agreement over the level of integration of care for older people in the country. A total of 19 actions are needed to implement the ICOPE framework at both the services (meso) and systems (macro) levels. The implementation status of each of these actions in North Macedonia was ranked; the scoring process highlighted the areas for improvement, as well as identifying concrete measures of future improvements. The results of the ICOPE scorecard analysis are presented in Annex 1.

**The overall score relating to the average level of implementation of the ICOPE framework was 20/52, indicating rather minimal integration of care for older people.**

### Levels of implementation of ICOPE services actions

**The average level of implementation of actions for the integration of health and social services resulted in a score of 8/26, indicating a minimal level of integration of services for older people.** Only few civil society organizations are included in providing services to older people in North Macedonia, especially services relating to home-based care and support. In the municipality Karpoš in Skopje, personal assistants are trained to work in the community, supporting older people. The Union of Retired Persons is actively engaged in all aspects of older people’s well-being, including advocating for their health and social care needs. However, there is no formal engagement of community members or organizations in the delivery of health or social care services for older people. Any community service provided is delivered on an ad hoc or project basis. Furthermore, support and training for family caregivers are limited, despite these people being a critical component of the unpaid workforce caring for older people. There is little help dealing with physical and mental health and well-being, skill-based competences and respite care when needed. Day centres are operational in some municipalities; however, they predominantly serve for the socialization of active older people and do not provide care as such.

The patronage nurses in North Macedonia – in addition to their primary role in providing care to pregnant women, mothers and neonates – also provide care for older people in their homes. However, this is limited to older people co-residing with the primary recipient of the care, as there is a lack of patronage nurses and they have limited access to transport, especially in rural areas. No formal case-finding systems currently exist to identify older people in the community who need health and social care services; where this does exist, it is limited to a pilot project in two municipalities (Kochani and Resen) through the mobile integrated health and social care services, certain activities of the Red Cross, the Union of Retired Persons. In some of the municipalities in Skopje, such as in Karpoš, some services are provided locally to older people. However, as described earlier, these activities are mostly stand-alone, and project based.

When a decline in the intrinsic capacity of an older person is noted, or when older people access health or social care services, standardized comprehensive assessments are not routinely carried out. Most assessment attempts are performed by smaller groups of physicians at PHC level, but no standardized process exists that can be shared between providers. Overall, care services are not adapted to support the development of personalized care plans for older people based on a person-centred assessment of their health (e.g. disease management) and social care needs, as well as their goals and preferences. There is a lack of local health and social care service provider networks to facilitate timely referral to appropriate (levels of) care for older people. The health and social systems are fragmented and referral between them is limited to informal mechanisms. Within the health system, referrals are possible to the PHI Gerontology Institute “13 November” in Skopje; however, due to limited capacity it has waiting lists for admission to the geriatric unit.

A community-based workforce is not available to deliver health and/or social care services to older people in their community or homes and is limited to the patronage nurses and individual pilot projects. The workforce has no or minimal access to the infrastructure needed to deliver safe and effective care to older people and their caregivers in the community. As discussed, day centres are available but are limited to socialization of older people. Most of the residential elderly homes are privately owned and their geographic distribution is uneven. Some initial implementation attempts have been made at acceptable care delivery for older people, targeting functional ability, such as the provision of certain assistive products covered by the Health Insurance Fund. However, an evaluation is needed of the extent to which the currently available care aligns with the recommended components of care (e.g. WHO guidelines (32)).

#### Levels of implementation of ICOPE system actions

**The score on the implementation of processes to align care systems to support integrated care was 12/26, indicating that the process of aligning the system with the ICOPE framework has begun.** Implementation of processes to actively engage and empower older people and their families or caregivers is rather limited in North Macedonia; however, some processes exist at national level to encourage civil society and local service providers to participate in the development of health and social care policies. These mechanisms to support and encourage community engagement and participation in policy and service development are rather informal. Furthermore, the overall perception is that abuse of older people remains underreported, as most caregivers are family members. There is a need to create policy or frameworks to support integrated care and protect older people from abuse.

Limited quality-assurance processes are in place to measure person-centred care or provider outcomes, aside from the targets for preventive health measures included in the payment mechanisms of the private PHC providers, which incentivize process rather than quality and the outcomes of services provided. There is a lack of system-level capacity assessments that would provide important information on the gaps and opportunities for delivering integrated health and social care services to all older people, including disadvantaged groups.

Initiatives to develop workforce capacity exist, but these are not interdisciplinary or do not comprehensively focus on the recommended ICOPE components. There are no financial incentive mechanisms to support coordinated or shared care between providers at the service level. Equally, no standardized human resource processes are in place to support the paid workforce across the health and social care services. Data on the intrinsic capacity and/or functional ability of older people are not collected as part of the existing health information

system, “Moj Termin”. Some PHC providers measure intrinsic capacity or functional ability in older adults, but this is rather ad hoc. Digital technologies to support older people to self-manage, for example through self-monitoring using mHealth (mobile technologies) or web-based tools are not provided or are not supported for the purpose of assisting older people with self-management.

## CONCLUSIONS

In 2018, 288 594 people in North Macedonia were aged 65 years and over, which represents 13.9% of the total population. This share is expected to rise up to 25.7% in the next 30 years. The increase in the number and share of older people creates health care complexities and challenges for all health professionals, as well as substantially augmenting the health and social care needs of the population. Thus, urgent measures and activities are required to help elderly communities adapt to the new reality.

Although it can be expected that health deteriorates with age, the share of older people in North Macedonia perceiving their health as good or very good is substantially lower than the EU average. Only a third of the older people in the country perceive their health as good or very good. In addition, over half of them reported long-standing illness or health problems and slightly less than half reported long-standing limitations in their usual activities due to a health problem. This potentially undermines older people's personal independence and leads to them requiring greater assistance in activities of daily life. Obesity – a risk factor for noncommunicable diseases – is particularly affecting older people aged 65–74 years.

Due to the relatively high prevalence of long-standing health problems, long-standing limitations resulting from health problems and the complex care needed to effectively address the health conditions affecting older people, it can be expected that they would need more frequent access to both GPs/family medicine doctors and specialists. In 2019, this type of health care appointment accounted for 22% of the total GP/family medicine doctor visits. Furthermore, on average, older people had almost twice the number of GP/family medicine doctor consultations per person per year as people aged under 65 years (that is, those not classed as “older”). A contributing factor to the high number of consultations is the overall poor health status of older people in North Macedonia, resulting in relatively high referral rates to specialist care and reflecting a need for long-term, complex care from multiple providers working in a variety of settings.

The long waiting lists and waiting times to see a doctor were regularly referenced throughout the surveys reported on in this analysis; older people find these timescales inadequate to effectively address their needs. There is a rather limited network of local health and social care service providers, so timely referral to appropriate (levels of) care for older people remains difficult. While the care coordination and continuity among health providers is enabled through the system of referrals and access to electronic health records in “Moj Termin” (“My Appointment”), the health and social care systems are rather fragmented in the country and referrals between them are limited to informal mechanisms; this, too, leaves older people's needs ineffectively addressed.

In terms of dynamics between the sexes, older women tend to live longer than older men, which is in line with the trend in the EU Member States; however, life expectancy is still several years short of that in the EU. Older women in general tend to report worse health than men and a greater share of women reported having long-standing illness or health problems and long-standing limitations due to health problems. Older women in the country tend to have a higher average number of prescriptions per year, while men have slightly higher average number of specialist consultations. The odds of being hospitalized more than once is lower by 3.2% in older male patients compared to older female ones and the duration of hospital stay is shorter in older men than women. A greater share of older women reported unmet needs for medical examination. However, in both men and women, most of the reasons for unmet

medical examination are not related to the health system (e.g. no time; did not know any good doctors or specialists; fear of doctors, hospital, examination or treatment; wanted to wait and see if the problem got better on its own; or other reasons). A greater share of women than men are at risk of poverty or social exclusion and being severely materially deprived. In the context of North Macedonia this may be because older women tend to live alone (a two-person household needs relatively fewer resources per person than a single-person household to maintain the same standard of living) and they tend to live longer than men (extending the period over which their financial resources need to last). This is also potentially the effect of labour market experiences, such as the gender pay gap.

Another vulnerability identified through the analysis is among older people in rural areas. Compared to cities and towns and suburbs, older people living in rural areas tend to report worse health and are more affected by long-standing illnesses or health problems and thus by limitations in their usual activities due to those health problems. While the overall unmet need for medical examination is lower in the rural areas of the country compared to the towns and suburbs, data indicate that in the rural areas there is a higher concentration of the unmet need for medical examination due to the health system-related reasons (too expensive, too far away or long waiting lists), compared to the cities and towns and suburbs. This can be expected as there is a lack of PHC services in rural areas, and people living in these areas are particularly affected by risk of poverty or social exclusion.

People aged 85 years or older would seem to require an additional level of attention, given the high prevalence of long-standing conditions among this age group, their overall self-reported health and functional ability limitations, and coupled with their lower reported level of use of doctors and health services than the other age groups. This may require developing targeted interventions aimed at addressing the most common reasons (not health system-related ones) for unmet need for medical examination among this age group.

The Health Insurance Fund has recognized the complexity of the needs of older people and the important role of GPs/family medicine doctors in addressing those needs. The capitation payment mechanism takes into account the age of the person in order to properly incentivize GP/family medicine doctors to work with older people. However, it is also important for the health system to recognize the importance of engaging people, their families and caregivers and civil society organizations in health and social care delivery; this can help to fill care gaps and contribute to decreasing the caregiver burden. The data indicate that most of the family caregivers in the country provide care for more than 80 hours per week, and almost all of them find the caregiving burden to be moderate to severe. This means that the impact of caregiving on physical and emotional health, finances, social life and interpersonal relationships is relatively high. Furthermore, there is no consistency in the support provided to family caregivers by health and social services.

Last but not least, slightly less than half of the caregivers have engaged in some form of potentially harmful behaviour (physical or psychological). The involvement of community members and organizations is rather limited in the country, being stand-alone and project based. Thus, it is crucial to develop interventions and measures that will better support the physical and mental well-being of caregivers, as well as their skills-based care competences, which are essential to supporting the care of older people.

Furthermore, self-management support, health literacy, involving communities and shared decision-making are all central to empowering and engaging individuals and communities as part of delivering integrated, people-centred services. Although almost all

health providers reported that they co-develop care plans for their patients and provide written information about the patient's condition or treatment, older people continue to face difficulties in understanding the information provided by their health providers regarding their health and treatment and the use of new medicines. In addition, the data indicate that there is limited agreement among the health providers on the importance of offering education about peer-based services and mutual support groups as part of the planning process for self-care. These barriers could potentially lead to challenges in disease management and control. To address them, the services should support the development of personalized care plans for older people based on a person-centred assessment of their health (e.g. disease management) and social care needs, as well as their goals and preferences.

The analysis documented that the health and care services in North Macedonia are not adapted to support the development of personalized care plans for older people. In addition, despite the high level of support reported by health providers in terms of ensuring informed choice for patients by providing information on alternative treatment options (including consultation with patients on their preferences), a substantial proportion of older people do not feel involved to their desired extent in the decision-making about their care. In addition, a substantial proportion of older people do not feel supported and encouraged regarding their health care. Addressing these aspects of the service delivery function is crucial, since communication, emotional support and empathy, self-management support and involvement in decision-making directly influence the health outcomes of older people and can contribute to improving health overall.

The study found that the overall high burden of caring for older people among health workers has affected their levels of motivation and there is a lack of mechanisms supporting health workers' well-being and incentives for patient and family-centred practice, as well as limited opportunities for scientific development/continuous education. The community-based workforce is limited to patronage nurses – focusing predominantly on pregnant women, mothers and children, due to capacity limitations – and they are not linked to the other PHC providers in the country or to other project-based initiatives. Overall, the workforce has no or only minimal access to the infrastructure needed to deliver safe and effective care to older people and support to caregivers in the community.

## KEY STEPS TOWARDS STRENGTHENING CARE OF OLDER PEOPLE IN NORTH MACEDONIA

### Empowering and engaging people and communities

**Older people, their families and caregivers and civil society should be actively involved in service delivery.** There is a disconnect between the perceptions of health providers and older people in terms of the level of involvement of older people in decision-making. This also extends to the level of support for informed choice and providing emotional support and empathy to older people. There is a lack of formal mechanisms to involve people, communities and civil society organizations in a systematic way and at both national and local levels.

In order to do so:

- community groups and other local services should be consulted, to identify opportunities for expanding community engagement; and
- the relationship of health and social services with the community should be formalized, for example by establishing weekly support and monitoring visits from care workers to community volunteers, registering volunteers in health facilities, and providing incentives and training.

**Caregivers should be offered support and training.** Most of the care for older people is provided by family members, who lack the necessary skills and competencies, as well as lacking support from health and social care services to effectively support and address the needs of care recipients.

To achieve this:

- caregivers should be consulted within and across services, to evaluate the acceptability of planned/pilot support or of training initiatives, as well as to assess opportunities for scaling them up; and
- efforts should be made to ensure that there is available psychological support to appropriately respond to the caregiver burden; plans for community-based respite care should be initiated, such as community day centres or temporary home-based support.

**Underserved and marginalized people should be reached.** This approach is crucial to working towards providing universal health coverage. The study documented differences in needs, access to services and other vulnerabilities by sex, degree of urbanization and the different age groups.

Addressing these vulnerabilities requires:

- developing a clear case-finding strategy for the community and engaging with providers, community members and civil society in order to consult them on developing implementation strategies;
- including older people and caregivers in the consultation; and
- identifying opportunities for scaling up case finding, assessing acceptability and feasibility, and ensuring coordination between service providers.

### Reorienting the model of care

**The coordination of services delivered by multidisciplinary teams should be supported,** as the older people in North Macedonia need long-term, complex care from multiple providers across a variety of settings.

This can be achieved by:

- undertaking person-centred assessments when older people access health or social care services and a decline in intrinsic capacity is suspected or observed;
- supporting appropriately trained health and social care workers to develop personalized care plans; and
- establishing networks of health and social care providers to enable timely referral and service provision.

**Services should be oriented towards community-based care**, as data indicate that services in rural areas are rather limited and there is a lack of community-based services targeting older people.

This can be implemented by:

- delivering care through a community-based workforce, supported by community-based services;
- making available the infrastructure (e.g. physical space, transport, telecommunications) needed to support safe and effective care delivery in the community; and
- delivering care (with assistive products when needed) that is acceptable to older people and targets functional ability.

### Strengthening governance and accountability systems

- Policy and regulatory frameworks should be created or updated to support integrated care and to protect against abuse of older people.
- Quality-assurance and -improvement processes should be implemented for health and social care services, by developing processes for the use of quality outcomes data.
- System-level quality measures should be expanded to include person-centred outcomes and provider outcomes across services.
- The capacity to deliver care equitably should be regularly reviewed.

### Creating an enabling environment

**Capacity should be developed in the current and emerging workforce (both paid and unpaid) to enable integrated care to be delivered.** This can be achieved by evaluating the current capacity of the workforce, specifically their knowledge and skills to deliver the right care.

Key competences include:

- basic screening skills, assessing intrinsic capacity and functional ability and the need for social care (mobility, vision, hearing, cognition, mood, psychological);
- basic skills in the management of health conditions that affect older people (e.g. frailty, urinary incontinence, risk of falls);
- a basic understanding of how depression, dementia and alcohol use manifest in older people;
- the ability to identify neglect or abuse of older people;
- the ability to conduct person-centred assessments and to develop care plans; and
- basic competences in the areas of communication, multidisciplinary teamwork, information technology and public health.

It would also be helpful to develop workforce capacity-building initiatives targeting the current and emerging workforce (in both paid and unpaid roles). For the emerging workforce, capacity-building initiatives might include:

- transitioning to competence-based curricula;
- adopting inter-professional education models; and
- expanding training into PHC and community-based centres.

**Financing mechanisms should be structured to support integrated health and social care for older people.** This can be achieved by modifying policies and processes to structure financing for health and social care services around a shared or pooled funding model. This would include financial incentives for appropriate care coordination at the service level, as well as the cost of interventions and essential medicines and devices needed to maintain intrinsic capacity and functional ability.

**Equitable human resource management processes should be established to support the (paid and unpaid) workforce.** Human resource processes (structured and standardized appropriately to the specific context and across services) should be implemented to support the equitable management of the workforce, including paid and unpaid workers, across the various services, consistent with the principles of WHO's *Global Strategy on Human Resources for Health: Workforce 2030 (33)*.

**Health information and communications technology should be used to facilitate communication and information exchange.**

This involves:

- continuing to review the need for digital health care technology; and
- continuing to review policy for data privacy and security, along with the latest developments to support digital health care technologies.

**Data on the intrinsic capacity and functional ability of older adults within existing health information systems should be collected and reported.**

To enable this:

- across services, tools should be implemented to measure the intrinsic capacity and functional ability of older people as part of system-level health information or surveillance measures;
- the experiences of services already using or trialling tools to inform implementation should be taken into consideration; and
- a reporting plan should be developed for data on intrinsic capacity and functional ability.

**Digital technologies should be used to support older people's self-management.**

This requires:

- undertaking a needs and capacity assessment to provide or support digital technologies; and
- evaluating available digital technologies to determine effectiveness, acceptability and fit within the existing system.

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## ANNEX 1. INTEGRATED CARE FOR OLDER PEOPLE (ICOPE) SCORECARD

<b>Integrate health and social care services</b>		<b>STAGE OF IMPLEMENTATION</b>			<b>SUBTOTAL</b>
		<b>NONE TO MINIMAL</b>	<b>INITATING</b>	<b>SUSTAINING</b>	
<b>ENGAGE AND EMPOWER PEOPLE AND COMMUNITIES</b>					
1	Actively engage older people, their families and caregivers and civil society in service delivery*	<input type="checkbox"/> (0)	<input checked="" type="checkbox"/> (2)	<input type="checkbox"/> (3)	
2	Offer caregivers support and training*	<input type="checkbox"/> (0)	<input checked="" type="checkbox"/> (2)	<input type="checkbox"/> (3)	
<b>SUBTOTAL FOR SERVICE ACTIONS 1 AND 2</b>					<b>4/6</b>
<b>SUPPORT THE COORDINATION OF SERVICES DELIVERED BY MULTIDISCIPLINARY PROVIDERS</b>					
3	Actively seek and identify older people in need of care in the community	<input checked="" type="checkbox"/> (0)	<input type="checkbox"/> (1)	<input type="checkbox"/> (2)	
4	Undertake comprehensive assessments of older people when they access health or social services and a decline in intrinsic capacity is suspected or observed*	<input type="checkbox"/> (0)	<input type="checkbox"/> (2)	<input type="checkbox"/> (3)	
5	Support appropriately trained health and social care workers to develop comprehensive care plans for the older people that are feasible, practical and target intrinsic capacity and functional ability*	<input checked="" type="checkbox"/> (0)	<input type="checkbox"/> (2)	<input type="checkbox"/> (3)	
6	Establish networks of health and social care providers to enable timely referral and service provision*	<input type="checkbox"/> (0)	<input checked="" type="checkbox"/> (2)	<input type="checkbox"/> (3)	
<b>SUBTOTAL FOR SERVICE ACTIONS 3–6</b>					<b>2/11</b>
<b>ORIENT SERVICES TOWARDS COMMUNITY-BASED CARE</b>					
7	Deliver care through a community-based workforce, supported by community-based services*	<input checked="" type="checkbox"/> (0)	<input type="checkbox"/> (2)	<input type="checkbox"/> (3)	
8	Make available the infrastructure (e.g. physical space, transport, telecommunications) that is needed to support safe and effective care delivery in the community*	<input checked="" type="checkbox"/> (0)	<input type="checkbox"/> (2)	<input type="checkbox"/> (3)	
9	Deliver care (with assistive products when needed) that is effective, acceptable to older people and targets functional ability*	<input type="checkbox"/> (0)	<input checked="" type="checkbox"/> (2)	<input type="checkbox"/> (3)	
<b>SUBTOTAL FOR SERVICE ACTIONS 7–9</b>					<b>2/9</b>
<b>SERVICES</b>					<b>8/26</b>
<b>Align care systems to support integrated care</b>		<b>STAGE OF IMPLEMENTATION</b>			<b>SUBTOTAL SCORE</b>
		<b>NONE TO MINIMAL</b>	<b>INITATING</b>	<b>SUSTAINING</b>	
<b>STRENGTHEN GOVERNANCE AND ACCOUNTABILITY SYSTEMS</b>					
10	Support the active engagement of older people and their families or caregivers, civil society and local service providers in policy and service development*	<input type="checkbox"/> (0)	<input checked="" type="checkbox"/> (2)	<input type="checkbox"/> (3)	
11	Create or update policy and regulatory frameworks to support integrated care and to protect against abuse of older people*	<input type="checkbox"/> (0)	<input checked="" type="checkbox"/> (2)	<input type="checkbox"/> (3)	

12	Implement quality-assurance and -improvement processes for health and social care services*	<input type="checkbox"/> (0)	<input checked="" type="checkbox"/> (2)	<input type="checkbox"/> (3)
13	Regularly review the capacity to deliver care equitably*	<input checked="" type="checkbox"/> (0)	<input type="checkbox"/> (2)	<input type="checkbox"/> (3)

**SUBTOTAL FOR SYSTEM ACTIONS 10–13      6/12**

**ENABLE SYSTEM-LEVEL STRENGTHENING**

14	Develop capacity in the current and emerging workforce (paid and unpaid) to deliver integrated care*	<input type="checkbox"/> (0)	<input checked="" type="checkbox"/> (2)	<input type="checkbox"/> (3)
15	Structure financing mechanisms to support integrated health and social care for older people*	<input checked="" type="checkbox"/> (0)	<input type="checkbox"/> (2)	<input type="checkbox"/> (3)
16	Establish equitable human resource management processes to support the workforce (paid and unpaid)	<input type="checkbox"/> (0)	<input checked="" type="checkbox"/> (1)	<input type="checkbox"/> (2)
17	Use information and communication technologies to facilitate communication and information exchange	<input type="checkbox"/> (0)	<input type="checkbox"/> (1)	<input checked="" type="checkbox"/> (2)
18	Collect and report data on intrinsic capacity and functional ability of older adults within existing health information systems	<input type="checkbox"/> (0)	<input checked="" type="checkbox"/> (1)	<input type="checkbox"/> (2)
19	Use digital technologies to support older people’s self-management	<input checked="" type="checkbox"/> (0)	<input type="checkbox"/> (1)	<input type="checkbox"/> (2)

**SUBTOTAL FOR SYSTEM ACTIONS 14–19      6/14**

**SYSTEMS      12/26**

**TOTAL SCORE      18/52**

**FOR SERVICES AND SYSTEM IMPLEMENTATION OF ICOPE**

Overall, average levels of implementation	NO TO MINIMAL IMPLEMENTATION	INITIATING IMPLEMENTATION	SUSTAINING IMPLEMENTATION
<b>SERVICE</b>	<input checked="" type="checkbox"/> 0–10	<input type="checkbox"/> 11–18	<input type="checkbox"/> 19–26
<b>SYSTEM</b>	<input type="checkbox"/> 0–10	<input checked="" type="checkbox"/> 11–18	<input type="checkbox"/> 19–26
<b>OVERALL</b>	<input checked="" type="checkbox"/> 0–20	<input type="checkbox"/> 22–36	<input type="checkbox"/> 38–52

\*Essential

## *The WHO Regional Office for Europe*

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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