sciensano

HEALTH SERVICES RESEARCH

PATIENT-REPORTED INDICATOR SURVEYS (PARIS): INSIGHTS FROM BELGIUM

Focused on people living with chronic conditions

D. ANNAERT • R. EKELSON • S. BENSEMMANE • A. VAN VYVE • R. DE SCHREYE

.be

WHO WE ARE

Sciensano can count on more than 950 staff members who are committed to health every day.
As our name suggests, science and health are central to our mission. Sciensano's strength and uniqueness lie within the holistic and multidisciplinary approach to health. More particularly we focus on the close and indissoluble interconnection between human and animal health and their environment (the "One health" concept). By combining different research perspectives within this framework, Sciensano contributes in a unique way to everybody's health.
For this, Sciensano builds on the more than 100 years of scientific expertise.

Sciensano

Epidemiology and Public Health - Health Services Research

June 2025 • Brussels • Belgium
Report number: D/2025.14.440/15

D. Annaert[1]
•
R. Ekelson[1]
•
S. Bensemmane[1]
•
A. Van Vyve[2]
•
R. De Schreye[1]

1 Sciensano, Epidemiology and Public Health, Health Services Research, Brussels
2 Association du Diabète, Brussels

Contactperson: Dagmar Annaert • T + 32 2/642.58.19 • dagmar.annaert@sciensano.be

With the financial support of

Partners

Please cite as: D. Annaert, R. Ekelson, S. Bensemmane, A. Van Vyve, R. De Schreye. Patient-Reported Indicator Surveys (PaRIS): Insights from Belgium. Focused on people living with chronic conditions. Brussels, Belgium: Sciensano. 2025, June. Report number: D/2025.14.440/15.

ALGEMEEN OVERZICHT

Het PaRIS-project (Patient-Reported Indicator Surveys), geleid door de OESO, verzamelt patiëntgerichte uitkomsten en ervaringen van mensen van 45 jaar en ouder met chronische aandoeningen. Het is de eerste internationale enquête in zijn soort, met indicatoren uit 19 landen. België voerde zijn hoofdonderzoek uit tussen maart 2023 en januari 2024. In totaal werden 4.687 patiëntvragenlijsten geanalyseerd, wat resulteerde in een participatiegraad van 33,4% voor België. De vragenlijsten werden online (59,7%) en op papier (40,3%) ingevuld. De bevindingen richten zich op respondenten met minstens één chronische aandoening (n = 3.503).

Door patiënten gerapporteerde gezondheidsuitkomsten (PROM's):

- Bijna driekwart (72,2%) van de respondenten rapporteerde een goede algemene gezondheid. Naarmate het aantal chronische aandoeningen toenam, daalde de gezondheidsperceptie – vooral bij mensen met een lager opleidings- of inkomensniveau.
- Meer dan zeven op de tien (71,9%) respondenten rapporteerden een positief welzijn. Dit was hoger bij mensen zonder chronische aandoeningen en daalde bij toenemende aandoeningen, vooral bij vrouwen en mensen met een lager inkomen.
- Iets meer dan twee derde (69,7%) van de steekproef gaf aan een goede fysieke gezondheid te hebben. Deze daalde bij een toename van chronische aandoeningen, waarbij vrouwen iets lagere scores rapporteerden. Een hoger opleidings- en inkomensniveau hing samen met een betere fysieke gezondheid, ongeacht het aantal aandoeningen.
- Meer dan vier op de vijf (82,7%) respondenten rapporteerden een goede mentale gezondheid. Hogere opleiding en inkomen waren gekoppeld aan betere uitkomsten, maar de mentale gezondheid daalde met het aantal chronische aandoeningen, vooral bij vrouwen.
- Een goed sociaal functioneren werd gerapporteerd door 85,9% van de respondenten. Dit daalde naarmate het aantal chronische aandoeningen toenam, vooral bij vrouwen en mensen met een lager opleidings- of inkomensniveau. Hoger opgeleiden en mensen met een hoger inkomen rapporteerden juist beter sociaal functioneren, zeker bij twee of meer chronische aandoeningen.

Door patiënten gerapporteerde ervaringen (PREM's):

- Meer dan 95% van de respondenten rapporteerde een goede kwaliteit van medische zorg te ervaren, met minimale verschillen tussen groepen op basis van chronische aandoeningen of sociaal-demografische kenmerken. Dit percentage is een van de hoogste onder de deelnemende landen en significant hoger dan het OESO-gemiddelde van 87% (op basis van één vergelijkingsinterval).
- Bijna twee derde (63,1%) voelde zich zelfverzekerd in het beheren van hun eigen gezondheid, al nam dit vertrouwen af bij een toenemend aantal chronische aandoeningen.
- Zeven op de tien (69,5%) waren het eens of volledig eens met de stelling dat het gezondheidszorgsysteem betrouwbaar is. Hoewel het algehele vertrouwen hoog was, waren er kleine verschillen: mannen en mensen met een hoger opleidings- of inkomensniveau rapporteerden over het algemeen meer vertrouwen.
- Iets meer dan twee derde (67,7%) rapporteerde een goede ervaren coördinatie van zorg. Er was een kleine maar consistente toename in de gerapporteerde zorgcoördinatie zichtbaar naarmate de leeftijd toenam. Persoonsgerichte zorg werd zeer goed beoordeeld: 92,7% gaf aan vertrouwen te hebben in de persoonlijke aard van hun zorg, ongeacht het aantal chronische aandoeningen – een significant hoger percentage dan het OESO-gemiddelde van 85% (op basis van één vergelijkingsinterval).

Algemene gezondheidsuitkomsten en ervaringen

- Algemene gezondheid, welzijn en fysieke gezondheid waren nauw verbonden met PREM's. Verbeteringen in PREM's, met name in ervaren kwaliteit van zorg en persoonsgerichte zorg, gingen gepaard met aanzienlijke verbeteringen in deze gezondheidsuitkomsten.
- Patiënten met hoge bloeddruk rapporteerden doorgaans betere uitkomsten en ervaringen, terwijl patiënten met Alzheimer/dementie en depressie het slechtst scoorden op de belangrijkste indicatoren.
- Digitale gezondheidsvaardigheden blijven een punt van zorg. Slechts 8% van de patiënten met chronische aandoeningen voelde zich zeker bij het gebruik van online gezondheidsinformatie. Digitale hulpmiddelen van huisartsen werden zelden gebruikt: slechts vier patiënten meldden een videoconsult, en slechts 58.3% vonden de website gemakkelijk bruikbaar – vooral bij mensen met een lagere opleiding.
- De algehele gezondheidsuitkomsten waren vergelijkbaar tussen patiënten met en zonder zorgplan, al rapporteerden patiënten zonder zorgplan een betere algemene gezondheid en fysieke gezondheid. Patiënten met zorgplannen ervoeren een hogere mate van persoonsgerichte zorg, wat wijst op een meer individuele en holistische zorgervaring.
- Financiële problemen hingen samen met slechtere fysieke en mentale gezondheid, lager welzijn en minder vertrouwen in het gezondheidzorgsysteem. Ondanks dit suggereren hoge beoordelingen van ervaren kwaliteit en persoonsgerichte zorg dat zorgdiensten effectief inspelen op de behoeften van financieel kwetsbare groepen.

Inzichten in de eerstelijnszorg

- Alle deelnemende eerstelijnspraktijken konden elektronische medische dossiers uitwisselen, die ook consequent beschikbaar waren tijdens consultaties.
- Ondersteuning voor zelfmanagement werd voornamelijk mondeling geboden (85,5%), met extra informatie via folders, online materialen en doelgerichte initiatieven.
- Minder dan de helft (47,5%) van de praktijken was goed voorbereid op effectieve zorgcoördinatie. België bleef ook achter in de betrokkenheid van niet-artsen bij de chronische zorg: bij patiënten met twee of meer chronische aandoeningen lag de betrokkenheid op 46,3%, ver onder het OESO-gemiddelde van 83%.

APERÇU GÉNÉRAL

Le projet PaRIS (Patient-Reported Indicator Surveys), dirigé par l'OCDE, recueille les résultats et les expériences centrés sur le patient pour les personnes âgées de 45 ans et plus atteintes de maladies chroniques. Il s'agit de la première enquête internationale de ce type, fournissant des indicateurs dans 19 pays. Dans le cadre de cette initiative, la Belgique a mené son enquête principale entre mars 2023 et janvier 2024. Un total de 4 687 réponses d'enquêtes de patients ont été analysées, ce qui a donné un taux de participation de 33,4 % pour la Belgique. Les enquêtes ont été remplies en ligne (59,7 %) et sur papier (40,3 %). Les résultats portent principalement sur les répondants atteints d'au moins une maladie chronique (n = 3 503).

Résultats en matière de santé perçue par les patients (PROMs) :

- Près de trois quarts (72,2 %) des répondants ont déclaré avoir une bonne santé générale. Cependant, la perception de la santé diminue avec le nombre de maladies chroniques, en particulier chez les personnes ayant un faible niveau d'éducation ou de revenu.
- Plus de sept répondants sur dix (71,9 %) ont déclaré un bien-être positif. Le bien-être était généralement plus élevé chez les personnes sans maladies chroniques et diminuait avec le nombre de maladies, notamment chez les femmes et les personnes à faible revenu.
- Un peu plus des deux tiers (69,7 %) ont signalé une bonne santé physique. Celle-ci diminuait avec l'augmentation des maladies chroniques, les femmes déclarant des scores légèrement inférieurs. Un niveau d'éducation et de revenu plus élevé était associé à une meilleure santé physique, indépendamment du nombre de maladies chroniques.
- Plus de quatre répondants sur cinq (82,7 %) ont déclaré une bonne santé mentale. Bien qu'un niveau d'éducation et de revenu plus élevé soit lié à de meilleurs résultats, la santé mentale diminuait avec le nombre de maladies chroniques, en particulier chez les femmes.
- Un bon fonctionnement social a été signalé par 85,9 % des répondants. Toutefois, ce taux diminuait avec l'augmentation du nombre de maladies chroniques, surtout chez les femmes et les personnes à faible niveau d'éducation ou de revenu. À l'inverse, un niveau d'éducation et de revenu plus élevé était associé à un meilleur fonctionnement social, notamment chez les personnes ayant deux maladies chroniques ou plus.

Expériences rapportées par les patients (PREMs) :

- Plus de 95 % des répondants ont déclaré avoir bénéficié d'une bonne qualité des soins médicaux perçue, avec peu de variation selon les maladies chroniques ou les facteurs sociodémographiques. Ce chiffre était parmi les plus élevés de tous les pays participants et statistiquement supérieur à la moyenne de l'OCDE de 87 % (selon un intervalle de comparaison).
- Près de deux tiers (63,1 %) se sentaient en confiance dans l'autogestion de leur santé, bien que cette confiance diminuait avec l'augmentation du nombre de maladies chroniques.
- Sept répondants sur dix (69,5 %) étaient d'accord ou tout à fait d'accord pour dire que le système de santé est digne de confiance. Bien que la confiance globale soit élevée, de légères variations existaient : les hommes et les personnes ayant un niveau d'éducation ou un revenu plus élevé avaient tendance à exprimer une plus grande confiance.
- Un peu plus des deux tiers (67,7 %) ont déclaré une bonne coordination des soins perçue. Une légère mais constante augmentation de la coordination perçue a été observée selon les groupes d'âge. Les soins centrés sur la personne étaient très bien évalués, 92,7 % des répondants exprimant leur confiance dans le caractère personnalisé de leurs soins, quel que soit le nombre de maladies chroniques – un score significativement supérieur à la moyenne de l'OCDE de 85 % (selon un intervalle de comparaison).

Résultats et expériences de santé générale

- La santé générale, le bien-être et la santé physique étaient étroitement liés aux PREMs. Des améliorations dans les PREMs, en particulier dans la qualité des soins et les soins centrés sur la personne, se traduisent par des gains substantiels dans ces résultats de santé.
- Les patients de notre échantillon souffrant d'hypertension artérielle ont systématiquement rapporté de meilleurs résultats et expériences, tandis que ceux atteints de la maladie d'Alzheimer/de démence ou de dépression ont présenté les scores les plus faibles sur les indicateurs clés.
- La littératie numérique en santé reste un défi. Seuls 8 % des patients atteints de maladies chroniques se sentaient confiants dans l'utilisation des informations de santé en ligne. De plus, les outils numériques fournis par les médecins généralistes étaient rarement utilisés : seuls quatre patients ont déclaré avoir eu une consultation vidéo, et seuls 58.3% ont trouvé le site Web facile à utiliser, notamment chez les personnes moins éduquées.
- Les résultats globaux en matière de santé étaient similaires entre les patients avec et sans plans de soins, bien que ceux sans plan de soins aient déclaré une meilleure santé générale et santé physique. Les patients disposant de plans de soins ont rapporté une meilleure expérience de soins centrés sur la personne, reflétant des soins plus individualisés et holistiques.
- Les difficultés financières étaient associées à une moins bonne santé physique et mentale, à un bien-être réduit et à une moindre confiance dans le système de santé. Malgré cela, les évaluations élevées de la qualité des soins et des soins centrés sur la personne suggèrent que les services de santé répondent efficacement aux besoins des populations financièrement vulnérables.

Aperçus sur les soins de première ligne

- Tous les cabinets de soins de première ligne participants étaient capables d'échanger des dossiers médicaux électroniques, qui étaient systématiquement disponibles lors des consultations.
- Le soutien à l'autogestion était principalement fourni verbalement (85,5 %), avec des ressources supplémentaires proposées via des brochures, des documents en ligne et des initiatives de fixation d'objectifs.
- Moins de la moitié (47,5 %) des cabinets participants étaient bien préparés à assurer une coordination efficace des soins. En outre, la Belgique était en retard en matière d'implication du personnel non médical dans la gestion des maladies chroniques, avec un taux de participation de 46,3 % pour les patients atteints de deux maladies chroniques ou plus, bien en dessous de la moyenne de l'OCDE (83 %).

GENERAL OVERVIEW

The PaRIS (Patient-Reported Indicator Surveys) project, led by the OECD, captures patient-centred outcomes and experiences for people aged 45+ with chronic conditions. It is the first international survey of its kind, providing indicators across 19 countries. As part of this initiative, Belgium conducted its main survey between March 2023 and January 2024. A total of 4,687 patient survey responses were analysed, which resulted in a 33.4% participation rate for Belgium. Surveys were completed online (59.7%) and on paper (40.3%). Findings are focussing on respondents with at least one chronic condition (n = 3,503).

Patient-reported outcome measures (PROMs):

- Nearly three-quarters (72.2%) of the respondents reported having a good general health. However, as the number of chronic conditions increased, perceptions of general health declined – especially among individuals with lower education and income.
- More than seven out of ten (71.9%) respondents reported a positive well-being. It was generally higher in those without chronic conditions and decreased with more conditions, notably among females and those in lower income groups.
- Just over two-thirds (69.7%) of the sample reported good physical health. Physical health declined as chronic conditions increased, with women reporting slightly lower scores. Higher education and income levels were associated with better physical health, regardless of the number of chronic conditions.
- More than four out of five (82.7%) respondents reported good mental health. While higher education and income were linked to better outcomes, mental health diminished with additional chronic conditions, particularly among women.
- Good social functioning was reported by 85.9% of respondents. However, this declined with increasing number of chronic conditions, particularly among women and those with lower education or income. Conversely, higher education and income were associated with better social functioning, especially for those with two or more chronic conditions.

Patient-reported experience measures (PREMs):

- Over 95% of the respondents reported experiencing good quality of medical care, with minimal variation by chronic conditions or socio-demographic factors. This figure was among the highest of all participating countries, and statistically significantly above the OECD average of 87% (based on one comparative interval).
- Almost two-thirds (63.1%) felt confident in managing their own health, though this confidence declined with an increasing number of chronic conditions.
- Seven out of ten (69.5%) agreed or strongly agreed that the healthcare system is trustworthy. While overall trust was high, minor variations existed: men and individuals with higher education and income tended to express greater trust.
- Just over two-thirds (67.7%) reported good experienced coordination of care. A small yet consistent increase in reported care coordination was observed across age groups. Person-centred care was rated highly, with 92.7% expressing confidence in the personalized nature of their care, regardless of chronic condition count – a statistically significantly higher score than the OECD average of 85% (based on one comparative interval).

General health outcomes and experiences

- General health, well-being, and physical health were closely linked with PREMs. Improvements in PREMs, particularly in quality of care and person-centred care, show substantial gains in these health outcomes.

- Patients within our sample with high blood pressure consistently reported better outcomes and experiences, while those with Alzheimer's/dementia and depression showed the lowest scores across key indicators.
- Digital health literacy remains a concern. Just 8% of patients with chronic conditions felt confident using online health information. Additionally, digital tools provided by GPs were rarely used—only four patients reported a video consult, and only 58.3% found the website easy to use, especially among those with lower education levels.
- Overall health outcomes were similar between patients with and without care plans, though those without care plans reported better general and physical health. Patients with care plans experienced higher person-centred care, reflecting more individualized and holistic care experiences.
- Financial hardship was linked to poorer physical and mental health, lower well-being, and reduced trust in the healthcare system. Despite this, high ratings for quality and person-centred care suggest healthcare services are effectively addressing the needs of financially vulnerable populations.

Primary care insights:

- All participating primary care practices were capable of exchanging electronic medical records, which were consistently available during consultations.
- Self-management support was mainly provided verbally (85.5%), with additional resources offered through pamphlets, online materials, and goal-setting initiatives.
- Less than half (47.5%) of participating practices were well-prepared to coordinate care effectively. Additionally, Belgium lagged in the involvement of non-physician staff in chronic care management, with participation rates (46.3%) for patients with two or more chronic conditions significantly below the OECD average (83%).

TABLE OF CONTENTS

ABBREVIATIONS

GP	General practitioner
OECD	Organisation for Economic Co-operation and Development
P3CEQ	Person-Centred Coordinated Care Experience Questionnaire
PaRIS	Patient-Reported Indicator Surveys
PR	Participation rate
PREMs	Patient-Reported Experience Measures
PROMIS®	Patient-Reported Outcomes Measurement Information System
PROMs	Patient-Reported Outcome Measures
TTP	Trusted third party
WHO	World Health Organization
PaRIS10	10 key indicators of patient outcomes and experiences

INTRODUCTION

Healthcare systems worldwide are evolving rapidly to meet the challenges posed by aging populations, rising rates of chronic diseases, and the increasing need for patient-centred care approaches[1]. Chronic conditions such as diabetes, cardiovascular disease, and respiratory ailments are on the rise, creating a demand for coordinated, long-term care that can enhance both immediate and long-term quality of life[2–4]. These trends place significant pressure on healthcare infrastructure in OECD countries, including Belgium, which currently allocates 10.9% of its GDP to healthcare—a figure anticipated to grow in response to the country's aging demographic and increasing prevalence of chronic illness[1].
Despite extensive data on healthcare costs, utilization, and broad health outcomes like mortality and morbidity, a crucial gap persists: data that capture the patients' perspective on their care experience. This gap can be filled by Patient-Reported Outcome Measures (PROMs) and Patient-Reported Experience Measures (PREMs), which offer insights into the quality and effectiveness of care as perceived by the patients themselves. However, the use of these measures remains limited[1].

Addressing this data gap, the OECD's Patient-Reported Indicator Surveys (PaRIS) initiative elevates the voice of patients by focusing on their experiences and the outcomes that matter the most to them. PaRIS is the first harmonized international survey that centres on primary care users aged 45 and older with chronic conditions. Moving beyond traditional disease-specific metrics, PaRIS highlights how care quality impacts patients' daily lives and well-being, especially for those with complex, ongoing health needs[5]. For Belgium, PaRIS provides valuable comparative data, allowing the country to evaluate its healthcare system's responsiveness and identify areas for improvement in supporting patient-centred care.
In this report, the ten key indicators from the PaRIS10 Dashboard will be used to assess Belgium's healthcare performance through a patient-centred lens. These indicators provide a structured framework for evaluating patient experiences and outcomes, offering a comprehensive view into aspects of care that directly impact quality of life. Developed in collaboration with patients, primary care professionals, and experts, these indicators will serve as benchmarks throughout the report to highlight Belgium's performance and identify areas for improvement.

The PaRIS10 Dashboard includes five Patient-Reported Outcome Measures (PROMs) that capture essential aspects of health:

- **Physical Health** – Evaluates functional abilities, pain levels, and fatigue.
- **Mental Health** – Assesses life quality, emotional well-being, and social satisfaction.
- **Social Functioning** – Measures engagement in usual social roles and activities.
- **Well-being** – Reflects mood, vitality, and fulfilment in life.
- **General Health** – Provides an overall self-assessment of health status.

In addition, five Patient-Reported Experience Measures (PREMs) offer insight into critical interactions with healthcare services:

- **Confidence to Self-Manage** – Measures patients' ability to independently manage their health.
- **Experienced Care Coordination** – Captures the continuity and coordination of care across providers.
- **Person-centred Care** – Assesses the extent to which care aligns with patient needs and preferences.
- **Experienced Quality of Care** – Rates the overall quality of care received from the patient's perspective.
- **Trust in Health System** – Indicates the level of trust patients place in the healthcare system.

By examining Belgium's healthcare through these indicators, the report will draw on PaRIS findings to provide a nuanced assessment of primary care quality grounded in patient perspectives, emphasizing strengths and uncovering opportunities for targeted improvements.

In Belgium, the growing prevalence of chronic conditions places considerable strain on both patients and healthcare providers, potentially giving rise to fragmented care and inconsistencies intreatment[6,7]. The unique structure of Belgium's healthcare system, with responsibilities shared between federal and regional authorities, presents additional challenges in ensuring coordinated care[8]. Patients frequently receive guidance from multiple providers, often with limited continuity or communication[5]. This fragmentation underscores the need for a cohesive, patient-centred approach to healthcare that aligns treatment with patient needs and goals to improve satisfaction, adherence, and health outcomes[9,10]. Although various regional initiatives have been implemented—such as the Flemish policy on care coordination and the Wallonia-Brussels Federation's patient education programs—a national strategy could further reduce disparities and enhance the quality of care for patients managing multiple chronic conditions[11]. Belgium's Interfederal Plan for Integrated Care was formally endorsed by all Belgian health authorities in 2023. This plan embodies a collective commitment and vision to advancing integrated care throughout the country. Its primary goal is to promote seamless collaboration and coordination among different providers in various settings, and further aims to streamline collaboration across regions, enhancing integrated and well-coordinated care. By aligning with this initiative, nationally integrated policies, informed by PaRIS insights, would provide consistent support across regions, fostering improved patient outcomes and a more resilient healthcare system.

PaRIS data, collected through the PaRIS10 indicators, provide valuable insights into key aspects of patient-centred healthcare, including self-management confidence, care coordination, and trust in the healthcare system. This report will analyse these indicators to assess Belgium's healthcare landscape and identify areas for improvement. By leveraging PaRIS findings, Belgium can enhance its healthcare system to be more inclusive, coordinated, and responsive. This data informs targeted interventions, such as integrating digital health tools, enhancing care coordination, and fostering patient engagement, making the patient experience a core measure of healthcare quality[12]. Belgium stands to benefit from policies that prioritize the patient experience as a core metric of healthcare quality and success, creating a system that not only treats disease but also values and supports individual patient goals.

As Belgium navigates the dual pressures of an aging population and rising chronic disease rates, the PaRIS initiative presents a timely opportunity to strengthen patient-centred care. With guidance from PaRIS insights, Belgium can move toward a cohesive and effective healthcare system that enhances care quality, strengthens coordination, and fosters better health outcomes and well-being for all Belgians.

METHODS

1. Data collection

The main survey of the PaRIS project has been conducted in Belgium between **March 2023 and January 2024**. More details regarding the development of the PaRIS Patient Questionnaire (PaRIS-PQ) and PaRIS Primary Care Practice Questionnaire (PaRIS-PCPQ) and its content can be found in the provided hyperlinks.

1.1. GP PARTICIPATION AND REPRESENTATIVENESS

The INAMI/RIZIV general practitioners register is the most completed sample source, thus this was used to invite all active GPs in Belgium. Active GPs were defined as those meeting a minimum threshold of 500 care services per year (latest data from 31/12/2021). Out of the 11,734 active GPs who were invited by email, 115 filled out their information. Out of the 115 interested GPs, 82 completed the PaRIS Primary Care Practice Questionnaire. Among these, 71 confirmed their participation by signing the data protection agreement for the use of their patients' contact details. From those who accepted to draw and share a patients' sample, 55 provided their patients' sample to the Trusted Third Party (TTP) (Symeta), and 4 decided to participate without sharing their patients' contact details with the TTP. Thus in total, 59 GPs provided a patient sample. Each participating GP received a personalised GP report. An example, in Dutch, is given in the addendum. The report contains demographic information about participating patients, along with insights on lifestyle and health behaviours. It also includes Patient-Reported Outcome Measures (PROMs) and Patient-Reported Experience Measures (PREMs).

Despite the low GP participation rate (<1%), there was good regional representativity; 6 practices for Brussels, 33 practices for Flanders, and 20 practices for Wallonia, closely reflecting the national distribution of GPs in Belgium. Furthermore, almost half of the GP participants (29 GPs) were employed in a multi-specialty group practice, a significant portion (21 GPs) of all participants reported working in a group practice, with most of these (20 GPs) sharing patients and only one working without sharing patients. Lastly, 9 of the respondents indicated that they work as solo GPs. This distribution reflects the variety of practice models in Belgium, though solo practitioners appear underrepresented.

1.2. PATIENT PARTICIPATION AND REPRESENTATIVENESS

The patients' sample was drawn by these participating GPs from the electronic medical record based on the eligible criteria (being 45 years old or older and having at least one consultation during the last 6 months). Based on these criteria, the GPs randomly selected 260 patients, which were then sent to the TTP.

In total 14,603 patients were invited (in some cases less than 260 patients were invited). The average age of the invited patients was 63 years old, with a minimum average of 55 and a maximum average of 71 among practices. The age distribution of the invited patients closely resembled that of the Belgian population aged 45 and older. Data for five practices was unavailable for the latter. The gender distribution of the invited patients was 54.0% women and 46.0% men and is quite close to the gender distribution of the population over the age of 45 in Belgium. A total of **4,687 patient survey responses** were collected, yielding a participation rate (PR) of 31.8%. After excluding 705 incorrect addresses, the adjusted PR stands at 33.4%. Participation rates varied significantly among practices, ranging from 5.8% to 66.8%. Note that 110 of the total patient records were received after the OECD deadline and these

will be included solely in our national report. Hence, small differences in results with the OECD report are possible. Further details on the paradata can be found in the addendum.

Notable differences were observed across different practice types. Solo practices achieved a PR of 33.3% (nine practices), while group practices with own patients reached 31.5% (only one practice) and those with shared patients achieved 38.8% (20 practices). Multidisciplinary group practices showed a lower PR, averaging around 24.4% (29 practices). Regional disparities were also apparent. Flanders recorded the highest PR at 38.3% (33 practices), followed by Wallonia at 24.8% (20 practices), and Brussels at 14.5% (six practices).

2. Data management

2.1. DATA ANALYSIS

Descriptive statistics were first conducted to summarize the characteristics of participating patients, key outcome variables, and questionnaire paradata, as well as to provide an overview of the Primary Care Practice Questionnaire.

Following this, multilevel models were constructed to calculate and analyse our results, which were based on the **hierarchical structure** of the data. Given that patients were clustered within GP practices, a two-level design was implemented, where GP practices represented the first level, with patients nested within these clusters. This approach accounts for the dependency between patients within the same GP practice, ensuring accurate estimation of variance and clustering effects.

When the dependent variable was continuous, linear **mixed-effects models** were constructed. For dichotomous dependent variables, binomial generalized linear mixed-effects models were used. Age and gender were included as standardization variables in all models, along with missingness indicators for these variables. A significant effect of the missingness indicators indicated that the absence of specific patient characteristics was systematic rather than random (OECD flagship report PaRIS[13]; Chapter 7, Box 7.6). No random slopes were included in these models. For details on model specifications, see Equation 2 in Chapter 7, Section 7.7.7 of the OECD flagship report PaRIS[13].

To optimize the representativeness of the results, the **standardization variables** (age and gender) in the models were rescaled to align with the 2023 Belgian population (aged 45+), using data retrieved from STATBEL. A set of six rescaled variables (two for gender and four for age) were created and they sum up to zero for each patient observation. More details regarding the structure and their value can be found in Table A1. More details on this procedure are provided in the OECD report (Chapter 7, Box 7.6[14]). These models also enabled the calculation of the intraclass correlation coefficient (ICC), which represents the proportion of variance accounted at the GP practice level. The ICC helped detect clustering of patient data at the practice level and determined the extent to which variation was explained by provider- and patient-level factors. Estimates were not case-mix adjusted.

Missing data were categorized into: responses patients chose to skip, which were treated as missing (completely) at random, and responses omitted due to conditional logic (e.g., when a question was not asked based on previous answers, such as answering 'no' to a related question), classified as missing not at random. The proportion of missing data was minimal, and its impact on outcomes was deemed negligible. As a result, no imputations were performed, and missing values were excluded from analyses where necessary for the dependent variables, but not for the standardization variables, as missing indicators were included for the latter, as discussed above.

The reliability of constructs was assessed using Cronbach's alpha to evaluate internal consistency.

All statistical analyses were conducted using R version 4.4.1[15] and above.

2.2. FROM QUESTIONNAIRE ITEMS TO VARIABLES

2.2.1. Creating new variables

The raw data collected from the items in the PaRIS Patient Questionnaire (PaRIS-PQ) was transformed into variables through categorization, counting, or combining items. Additionally, scales were constructed based on instrument guidelines. However, no scales were used for the PaRIS Primary Care Practice Questionnaire (PaRIS-PCPQ).

Patients were asked to report the types and number of chronic conditions they had by selecting from a predefined list, with the option to choose multiple conditions and include any others not listed. Based on their responses, two new variables were created. The first variable ranged from 0 to 11, counting only the listed chronic conditions and excluding the 'other' category. The second variable ranged from 0 to 12, including the 'other' category. These counts were further categorized into three additional variables. The first categorized the counts into: 'no chronic conditions', 'one chronic condition', 'two chronic conditions', 'three chronic conditions', 'four chronic conditions', and 'five or more chronic conditions.' The second variable dichotomized the counts into: 'no chronic conditions' and 'one or more chronic conditions'. The third variable categorized the counts into: 'no chronic conditions', 'one chronic condition', 'two or more chronic conditions'.

For the age variable, patients could choose from the following options: '44 years old and younger' (not eligible for the survey and consequently excluded) to '85 years and older', or 'Prefer not to say'. In total, there were 11 answer options. The 'Prefer not to say' option, which was selected by only two respondents, was treated as missing data. The remaining age responses were subsequently categorized into four age groups, consistent with OECD flagship report[13]: 45-54 years old, 55-64 years old, 65-74 years old, and 75 years and older. This process resulted in two age variables: one with nine categories and another one with four categories.

The highest attained education level was categorized into two variables. The first variable grouped education levels into 'no education', 'primary education', 'lower secondary education', 'higher secondary education', and 'higher education.' The second variable combined these into broader categories: 'no education - lower secondary education', 'higher secondary education', and 'higher education.'

Patients were asked to report their weight (kg) and height (cm). This data was then used to calculate the Body Mass Index (BMI). The BMI was categorized according to the WHO classification for adults (consistent with OECD flagship report[13]). Additionally, another variable was created by combining the 'Obesity class I, II, and III' categories into a single 'Obesity' category.

2.2.2. Construction of scales

In questionnaires, scales use multiple items (questions) together to measure complex concepts that cannot be captured by a single question. Each item contributes to understanding the broader concept, e.g. PROMIS Global Physical health. By combining these responses, using instrument guidelines, scales provide a better measure of the underlying idea. Scales are presented for PROMs and PREMs.

2.2.2.1. Patient-reported outcome measures (PROMs)

The PROMIS[16] Global Physical Health scale includes four items on overall physical health, physical function, pain, and fatigue. Each item was recoded to represent a score from 1 to 5. These scores were then summed, resulting in a scale ranging from 4 to 20. To standardize these raw scores, they were converted into T-scores following the guidelines. T-scores have a mean of 50 and a standard deviation (SD) of 10, with a score of 50 representing the average for the U.S. general population. Therefore, a T-score of 60 on this scale indicates that the individual is one standard deviation above the average, reflecting better health compared to the general population. T-score range of 16.2-67.7. A higher score indicates a better physical health.[17] Cronbach's Alpha, a measure of internal consistency or reliability of a scale, was 0.795.

Similarly, the PROMIS[16] Global Mental Health scale includes four items assessing quality of life, mental health, satisfaction with social activities, and emotional problems. This scale also ranges from 4 to 20 after recoding. These scores were standardized using similar guidelines, and the interpretation is analogous to that of the Global Physical Health scale. T-score range of 21.2-67.6. Higher scores indicate better mental health.[17] Cronbach's Alpha was 0.821.

Lastly, the WHO-5 Well-Being Index is a scale that measures people's well-being. It is composed of five items, each rated on a 6-point Likert scale, ranging from 'At no time' (0) to 'All of the time' (5). These raw scores were summed and then multiplied by four, resulting in a scale ranging from 0 to 100. Higher scores indicate better well-being of the patient.[18] Cronbach's Alpha was 0.901.

2.2.2.2. Patient-reported experience measures (PREMs)

The Person-Centred Coordinated Care Experience Questionnaire (P3CEQ)[19,20] consists of two components, a scale for care coordination and another for person-centredness. The care coordination scale consists of five items focusing on joined up care, single named contact, care planning (exist, available, useful and followed up), support to self-manage and information to self-manage.[20] After recoding, the scores for each of these questions ranged from 0 to 3, Likert type or dichotomous scales (0,3). To ensure that the care planning items did not disproportionately influence the overall score, the four care planning items were averaged. The final care coordination score was then calculated by summing these five items, resulting in a scale that ranged from 0 to 15. Higher scores indicate better coordination of care. Cronbach's Alpha was 0.558.

The second component of the P3CEQ, person-centredness, consists of eight items focussing on discuss what is important, involved in decisions, considered whole person, repeating information, care joined up, support to self-manage, information to self-manage and confidence to self-manage.[20] After recoding, the scores for each of these questions ranged from 0 to 3. These eight items were summed, resulting in a scale ranging from 0 to 24. A higher score represents better person-centredness. Cronbach's Alpha was 0.700.

Additionally, a total scale score for the P3CEQ was calculated by summing all the items from both components, resulting in a range from 0 to 30, measuring both care coordination and person-centredness. Cronbach's Alpha was 0.639.

For care coordination and the total P3CEQ score, an alternative version was calculated, based on information provided by the OECD. They argued that for the item 'single named contact', when a patient selected 'I do not receive care from more than one service', the concept of care coordination does not make sense. Therefore, in these cases, all questions regarding coordination of care (joined up care, single named contact, care overall, support to self-manage and information to self-manage) were set to 'question not asked' for these alternative versions of the three scales. The alternative experienced care coordination scale is used in the subsequent analyses. Cronbach's Alpha was 0.568 for care coordination and 0.650 for the total scale.

Scale for confidence in self-management combines five items. Four items were modified from Medicare Patient Engagement Questions, i.e. confidence to follow instructions at home, confidence to change habits or lifestyle, confidence to identify need for medical care and confidence to identify side effects from medication[21]. And one item from the P3CEQ questionnaire, confidence to self-manage. After recoding, these items were averaged resulting in a score ranging from 0 to 3. A higher score indicates better self-management confidence. Thus this scale assesses patients' confidence in self-management, leaving out the last confidence item in our survey, which refers more to digital self-efficacy. Cronbach's Alpha was 0.762.

A category of respondents experiencing financial hardship was identified, defined as those who reported 'always' or 'usually' to at least one of the following questions: "How often in the past 12 months would you say you were worried or stressed about the following things? 1) Having enough money to buy healthy meals? 2) Having enough money to pay your rent or mortgage? 3) Having enough money to pay for other monthly bills, like electricity, heat, and your telephone?". These questions were modified from the 2017 Commonwealth Fund International Health Policy Survey of Older Adults[22]. A higher score indicates greater financial hardship. Cronbach's Alpha was 0.924.

Lastly, a scale was developed by grouping items from the 10-item Porter Novelli scale [23] using factor analysis. Three factors/groups were identified using our data, corresponding with the results from the OECD report[13], which used data from all participating countries. These groups are 'Active engagement/Patient activation', 'Working together with healthcare professional(s)' and 'Health literacy'. Table 1 below presents the corresponding for each factor. The score for each group was calculated by averaging the corresponding items, with scores ranging from 1 to 5. For the first two factors, higher scores indicate better engagement and patient activation; and better collaboration with healthcare professionals (shared decision-making), respectively. For the third factor, a lower score indicates better health literacy; therefore, scores were inverted so that higher values indicate better health literacy. Cronbach's Alpha was 0.740 for 'Active engagement/Patient activation', 0.624 for 'Working together with healthcare professional(s)', and 0.789 for 'Health literacy'.

Table 1 • Porter Novelli scale grouping based on factor analysis, PaRIS Survey, Belgium

10-item Porter Novelli	Group
I rely on health care professionals to tell me everything I need to know to manage my health	Working together with healthcare professional(s)
Most health issues are too complex for me to understand	Health literacy
I actively try to prevent diseases and illnesses	Active engagement/Patient activation
I leave it to health care professionals to make the right decisions about my health	Working together with healthcare professional(s)
It is important to me to be informed about health issues	Active engagement/Patient activation
I need to know about health issues so I can keep myself and my family healthy	Active engagement/Patient activation
I have difficulty understanding a lot of the health information that I read	Health literacy
My health care professionals and I work together to manage my health	Working together with healthcare professional(s)
When I read or hear something that is relevant to my health care, I bring it up with my health care professionals	Working together with healthcare professional(s)
I try to understand my personal health risks	Active engagement/Patient activation

RESULTS

1. PaRIS Patient Questionnaire (PaRIS-PQ)

1.1. SOCIAL-DEMOGRAPHIC FACTORS

Social-demographic factors of patient survey respondents are presented below in Table 2. As previously noted, 59.7% of the surveys were completed online, while 40.3% were submitted in paper format. When considering this and examining socio-demographic factors, differences emerged, presented in Table 3. The availability of paper formats proved essential for the data collection process, particularly among older individuals, those with lower levels of education, and respondents from lower-income brackets.

Table 2 • Social-demographic factors of survey respondents, PaRIS Survey, Belgium

	Number of respondents (n)	Column percentage (%)
Gender (6.2% missing)		
Female	2,420	51.6
Male	1,940	41.4
Other	11	0.2
Prefer not to say	26	0.6
Age categories (years old) (0.5% missing)		
45-54	1,110	23.7
55-64	1,515	32.3
65-74	1,379	29.4
75 +	661	14.1
Highest education level attained (4.1% missing)		
No education, primary or lower secondary education	1,227	26.2
Higher secondary education	1,305	27.8
Higher education	1,965	41.9
Household net income (4.9% missing)		
Up to €1700 a month	785	16.7
Between €1700 and up to €2700 a month	1,322	28.2
€2700 or more a month	1,594	34.0
Prefer not to say	615	13.1
Don't know	140	3.0
Living area (4.1% missing)		
City	990	21.1
Town or suburb	1,100	23.5
Rural area	2,354	50.2
Don't know	51	1.1

Table 3 • Mode of completion (online or paper) with socio-demographic factors (column %(n)). Missing values were excluded. PaRIS Survey, Belgium.

	Online format	Paper format
Gender		
Female	52.7% (1394)	59.2% (1026)
Male	46.6% (1233)	40.8% (707)
Other	0.2% (4)	0.4% (7)
Prefer not to say	1.0% (26)	0.0% (0)
Age categories (years old)		
45-54	24.9% (825)	16.4% (285)
55-64	28.8% (954)	32.2% (561)
65-74	22.5% (745)	36.4% (634)
75+	8.2% (273)	22.3% (388)
Highest education level attained		
No education, primary, or lower secondary	19.3% (506)	41.4% (721)
Higher secondary education	29.2% (766)	30.9% (539)
Higher education	52.8% (1385)	27.7% (580)
Household net income		
Up to €1700 a month	12.9% (340)	25.5% (445)
€1700 - €2700 a month	28.5% (752)	32.7% (570)
€2700 or more a month	43.9% (1159)	25.0% (435)
Prefer not to say	12.2% (322)	16.8% (293)
Don’t know	2.8% (73)	3.8% (67)
Living area		
City	21.4% (568)	24.3% (422)
Town or suburb	25.1% (667)	24.9% (433)
Rural area	52.7% (1398)	55.0% (956)
Don’t know	0.8% (21)	1.7% (30)

1.2. PARIS10 KEY INDICATORS

The PaRIS10 indicators use Patient-Reported Outcome Measures (PROMs) and Patient-Reported Experience Measures (PREMs) to evaluate different aspects of health and care from the patient's perspective. These indicators measure physical health, mental health, social well-being, general health, and patient experiences. They are described in Table 4 below. The data is broken down by number of chronic conditions (none, one, two or more) and key socio-demographic factors such as gender, age category, level of education, or income group (Figures 1-40). Results were considered statistically significant when the 95% confidence intervals did not overlap.

In the addendum, similar figures are presented excluding individuals with high blood pressure, a common and often asymptomatic condition that could affect differences in outcomes among other chronic disease groups (Figures A1–A40). Results were considered statistically significant when the 95% confidence intervals did not overlap.

Table 4 • PaRIS10 indicators use Patient-Reported Outcome Measures (PROMs) and Patient-Reported Experience Measures (PREMs)

Patient-Reported Outcome Measures (PROMs)	
General health	- This indicator is based on the question: *"In general, would you say your health is excellent, very good, good, fair, or poor?",* an item from the PROMIS[16] Global scale. It is calculated as the percentage of patients who reported 'good,' 'very good,' or 'excellent' general health (compared to 'fair' or 'poor').
Well-being	- The WHO-5 Well-Being Index, more details in Methods, ranges from 0 to 100, with a higher score indicating a better well-being of the patient. - Percentage of patients reporting positive outcomes is defined as a score ≥ 50, commonly used as a threshold indicating low risk of clinical depression.
Physical health	- The physical health indicator (using the PROMIS Global scale), as described in Methods, is a T-score metric, where 50 represents the mean and 10 is the standard deviation of the PROMIS reference population. A higher score indicates a better physical health. T-score ranges from 16.2-67.7. - Percentage of patients reporting positive outcomes is defined as score of 42 or higher and is considered to indicate good physical health.
Mental health	- The mental health indicator (using the PROMIS Global scale), as described in Methods, is a T-score metric, where 50 represents the mean and 10 is the standard deviation of the PROMIS reference population. A higher score reflects better mental health. T-score ranges from 21.2-67.6. - Percentage of patients reporting positive outcomes is defined as score of 40 or higher and is considered to indicate good mental health.
Social functioning	- This indicator is based on the question: *"In general, please rate how well you carry out your usual social activities and roles. [further specified in questionnaire]",* an item from the PROMIS Global scale. It is calculated as the percentage of patients who reported 'good', 'very good', or 'excellent' social functioning (compared to 'fair' or 'poor').
Patient-Reported Experience Measures (PREMs)	
Experienced quality of care	- This indicator is based on the question: *"When taking all things into consideration in relation to the care you have received, overall, how do you rate the medical care that you have received in the past 12 months from your primary care centre?"*. It is calculated as the percentage of patients who reported 'good,' 'very good,' or 'excellent' experiences with the quality of medical care in the past 12 months (compared to 'fair', 'poor' or 'not sure').
Confidence to self-manage	- This indicator is based on the question: *"How confident are you that you can manage your own health and wellbeing?".* It is calculated as the percentage of patients who reported being 'confident' or 'very confident' (compared to 'somewhat confident' or 'not confident at all').
Trust in healthcare system	- This indicator is based on the question: *"How strongly do you agree or disagree that the healthcare system can be trusted?"*. It is calculated as the percentage of patients who 'agree' or 'strongly agree' (compared to those who 'neither agree nor disagree', 'disagree', or 'strongly disagree').
Experienced coordination	- The experienced care coordination indicator, outlined in Methods, ranges from 0 to 15. Higher scores indicate better coordination of care. - A positive experience/outcome is defined when the score was ≥ 7.5 and this percentage is calculated.
Person-centred care	- The person-centred care indicator, outlined in Methods, ranges from 0 to 24. Higher scores reflect better person-centredness, i.e. care that is highly adapted to individual needs. - A positive experience/outcome is defined when the score was ≥ 12 and this percentage is calculated.

1.2.1. Patient-Reported Outcome Measures (PROMs)

1.2.1.1. General health

This indicator is based on the question: *"In general, would you say your health is excellent, very good, good, fair, or poor?"*. The percentage of patients who reported 'good,' 'very good,' or 'excellent' general health (compared to 'fair' or 'poor'), was calculated. These responses are used to evaluate and present the proportion of patients perceiving their health as positive, providing an overall measure of a person's health. Among all respondents with at least one chronic condition, this percentage was 72.2% (95% CI: 68.0% - 76.1%). By chronic condition, the percentages were 95.8% (95% CI: 94.0% - 97.1%) for those with no chronic conditions, 85.3% (95% CI: 82.0% - 88.0%) for those with one, and 62.6% (95% CI: 57.7% - 67.4%) for those with two or more chronic conditions. Further stratification by key socio-demographic factors is presented below.

In regards to **gender** (Figure 1), both males and females reported high levels of general health when having no chronic conditions (95.6% for females, 96.4% for males). However, health perceptions declined with an increasing number of chronic conditions, and this trend was the most pronounced among females, who reported lower positive general health (60.8%) compared to males (65.9%) when dealing with two or more chronic conditions (not significant).
When stratifying the data per **age group** (Figure 2), high levels of positive health (over 95%) could be observed across all age groups for individuals without chronic conditions. However, as seen before, positive health perception decreased with the presence of chronic conditions. Interestingly, the lowest level of general health was not found in the oldest age group (75+), where 60.7% reported positive health with two or more chronic conditions. Instead, the lowest positive health perception was seen among participants aged 45-54, where only 57.5% reported (very) good or excellent general health when managing two or more chronic conditions.
Figure 3 shows results in terms of **education levels**. Respondents with higher education levels reported better health overall across all chronic conditions categories, especially when respondents reported two or more chronic conditions (71.4% vs 54.9% for those with high education and no or lower education, respectively). Those with higher education and no chronic conditions reported the highest positive health (96.9%).
Income groups also tended to impact the perceived health (Figure 4). Higher income groups reported better health outcomes across chronic condition levels. High income respondents with no chronic conditions tended to have the highest level of positive health (97.2%). A significant drop in health perceptions could be seen for respondents with two or more chronic conditions, most pronounced in low income group (53.2%), compared to the high-income group (73.0%).

In summary, positive general health decreased with increasing number of chronic conditions across all demographic groups. However, among individuals with two or more chronic conditions, those with higher education and higher income reported better perceived health. This highlights the socioeconomic and educational disparities in health perception among those with chronic health issues.

Figure 1 • Percentage of respondents reporting (very) good or excellent general health (%) by gender and number of chronic conditions, PaRIS Survey, Belgium (n = 4,660)

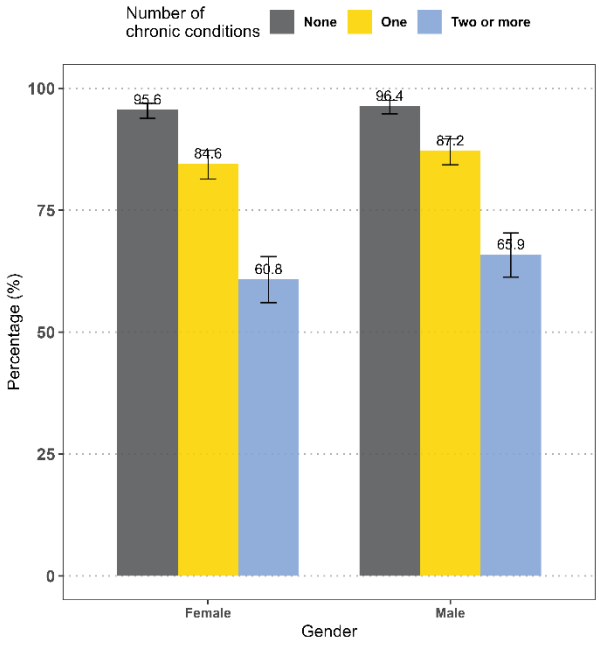


Figure 2 • Percentage of respondents reporting (very) good or excellent general health (%) by age group and number of chronic conditions, PaRIS Survey, Belgium (n = 4,660)

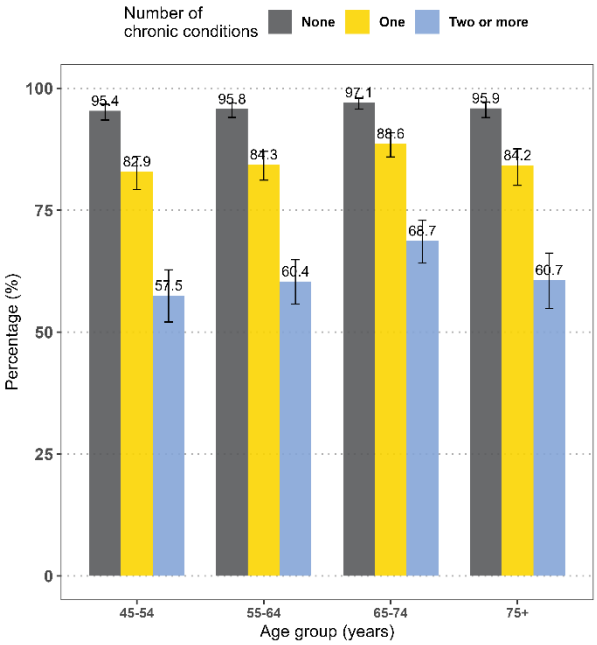


Figure 3 • Percentage of respondents reporting (very) good or excellent general health (%) by education and number of chronic conditions, PaRIS Survey, Belgium (n = 4,660)

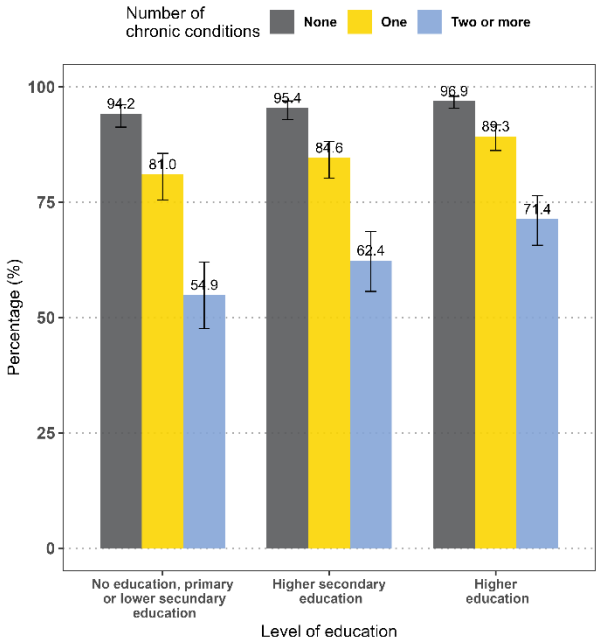
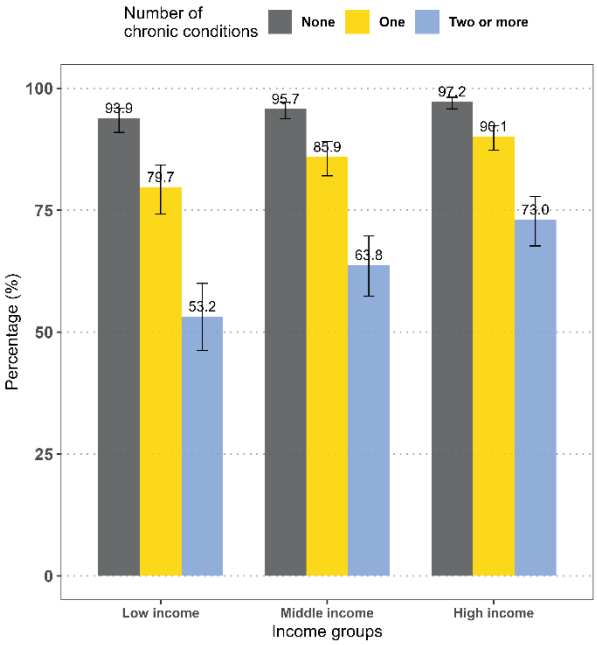


Figure 4 • Percentage of respondents reporting (very) good or excellent general health (%) by income and number of chronic conditions, PaRIS Survey, Belgium (n = 4,660)



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

1.2.1.2. Well-being

The WHO-5 Well-Being Index (composed of five questions), as described in Methods, ranges from 0 to 100, with a higher score indicating a better well-being of the patient. A score lower as 50 is commonly used as a cut-off point for a person being at risk of clinical depression. A score of 60 or higher indicates that the person generally felt positive about their well-being more than half of the time. Among all respondents with at least one chronic condition, the average score was 59.9 (95% CI: 57.9 – 61.9), with more than seven out of ten (71.9%) reporting a score of 50 or higher and six out of ten (62.2%) reporting a score of 60 or higher. By chronic condition, the average score was 67.3 (95% CI: 65.2 – 69.4) for patients without chronic conditions, 65.0 (95% CI: 62.9 – 67.0) for those with one, and 56.2 (95% CI: 54.2 – 58.1) for those with two or more chronic conditions. Further stratification by key socio-demographic factors is presented in Figures 5-8.

When stratifying the data by **gender** (Figure 5), both males (70.0) and females (65.5) reported high levels of well-being when having no chronic conditions, with a slightly better well-being for males. Nevertheless, perceived well-being declined with an increasing number of chronic conditions. This trend was most noticeable in females, reporting a score of 54.1 when dealing with two chronic conditions or more, compared to 58.7 in their male counterparts.
Figure 6 shows the results stratified by **age groups**. Individuals without chronic conditions showed higher levels of perceived well-being, and this across all age groups. This perceived well-being decreased with the increasing number of chronic conditions, and this again across all age groups. The lowest well-being levels were reported by the youngest age group (45-54) across all three categories: 62.7 for those with no chronic conditions, 59.1 for those with one, and 49.5 for those with two or more chronic conditions. In contrast, the 65-74 age group showed the highest well-being levels.
Individuals with higher **education levels** (Figure 7) reported a better well-being compared to individuals with no, primary, or lower secondary education and for those with higher secondary education. These differences, however, were small and not significant. Well-being declined with increasing number of chronic conditions across all education levels.
Similarly, for **income groups** (Figure 8), patients with a higher income reported a better well-being compared to patients with a middle or low income. These differences, however, were small. Well-being decreased with increasing number of chronic conditions across all income levels.

In summary, well-being levels were generally higher among individuals without chronic conditions, with only minor variations across gender, age, education, and income groups. However, when a patient reported two or more chronic conditions, well-being tended to decrease, particularly among females and those in lower income groups. The 65-74 age group tended to report better well-being even when managing multiple chronic conditions.

Figure 5 • Average score for respondents for well-being by gender and number of chronic conditions, PaRIS Survey, Belgium (n = 4,580)

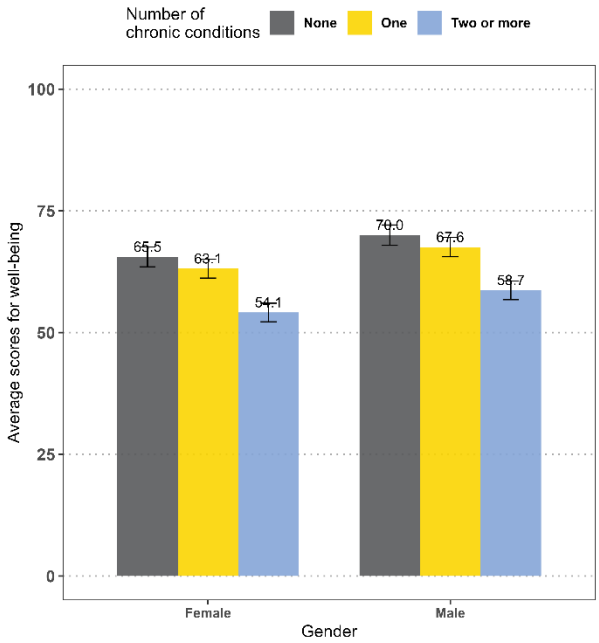


Figure 6 • Average score for respondents for well-being by age group and number of chronic conditions, PaRIS Survey, Belgium (n = 4,580)

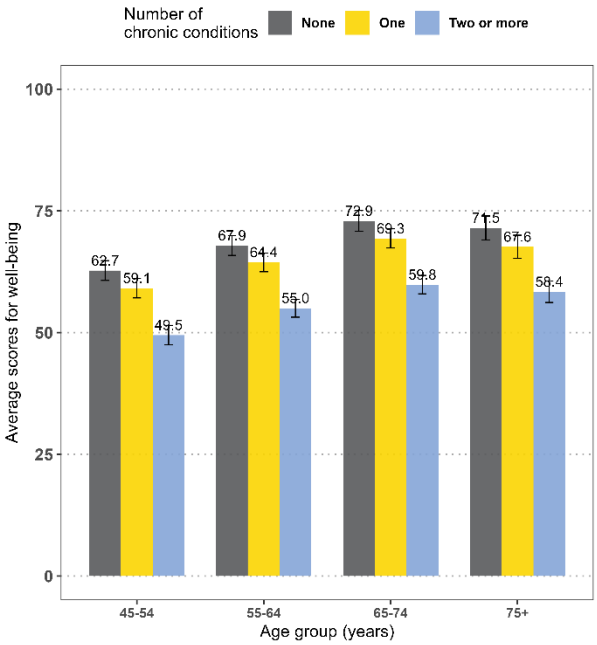


Figure 7 • Average score for respondents for well-being by education and number of chronic conditions, PaRIS Survey, Belgium (n = 4,580)

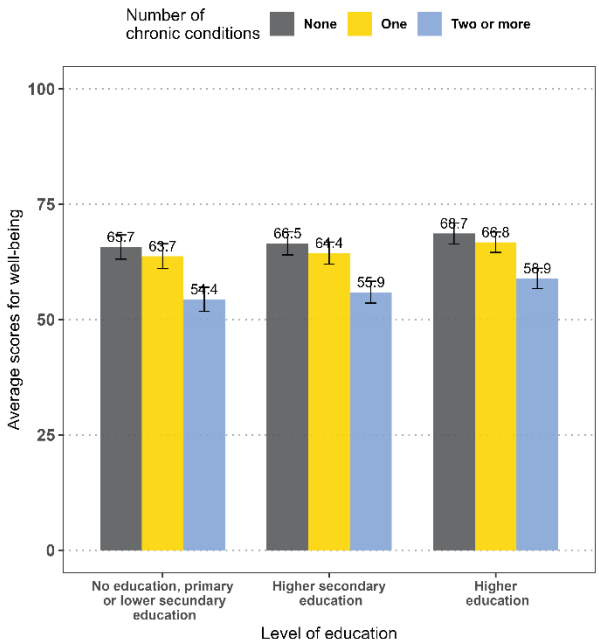
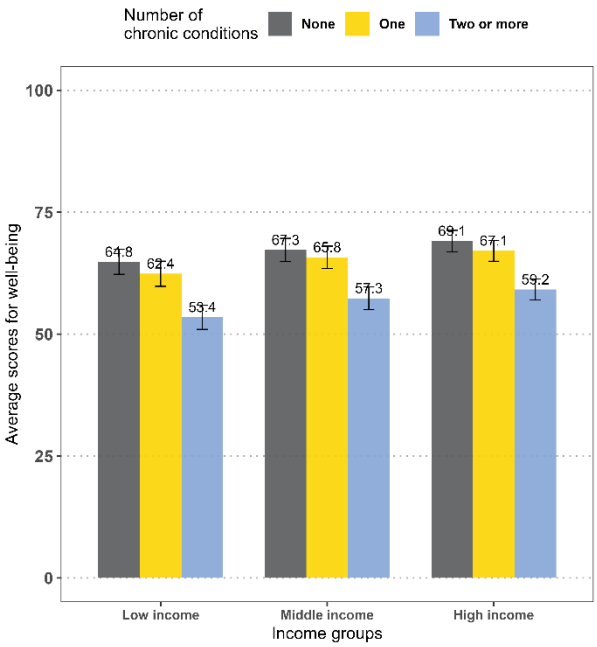


Figure 8 • Average score for respondents for well-being by income group and number of chronic conditions, PaRIS Survey, Belgium (n = 4,580)



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

1.2.1.3. Physical health

The physical health indicator (composed of four questions), as described in Methods, is a T-score metric, where 50 represents the mean and 10 is the standard deviation of the PROMIS reference population. A score of 42 or higher is considered to indicate good physical health. A higher score reflects better physical health. Among all respondents with at least one chronic condition, the average physical health score was 45.0 (95% CI: 44.2 – 45.7), with more than two-thirds reporting good physical health (69.7% scoring ≥42). By chronic condition, the average score was 50.8 (95% CI: 50.0 – 51.6) for patients without a chronic condition, 47.9 (95% CI: 47.2 – 48.7) for those with one, and 42.8 (95% CI: 42.1 – 43.6) for those with two or more chronic conditions. Further stratification by key socio-demographic factors is presented in Figures 9-12.

When examining the data by **gender** (Figure 9), both males (52.0) and females (50.0) reported better physical health when they have no chronic conditions. However, perceived physical health declined as the number of chronic conditions increased. Among those with two or more chronic conditions, females reported a slightly lower average physical health score (42.0) compared to males (44.0).
Figure 10 shows the results stratified by **age groups**. Once again, individuals without chronic conditions reported better self-perceived physical health across all age groups. This perceived physical health decreased with each additional chronic condition in every age group. The lowest levels of physical health were reported by the youngest age group (45-54) across both chronic condition categories: 46.9 for those with one condition and 41.6 for those with two or more chronic conditions. The other age groups showed similar patterns.
Higher **education levels** (Figure 11) corresponded to slightly better physical health scores, regardless of whether individuals were managing none, one, or two or more chronic conditions. Nonetheless, perceived physical health declined as the number of chronic conditions increased across all education levels, with similar trends seen in individuals with no education, primary or lower secondary education, and higher secondary education.
Similarly, high **income groups** (Figure 12) corresponded to more positive self-reported physical health scores, regardless of whether individuals were managing none, one, or two or more chronic conditions. Nonetheless, perceived physical health declined as the number of chronic conditions increased across all education levels, with similar trends seen in individuals with low or middle income.

In summary, physical health generally declined with an increasing number of chronic conditions across gender, age, education, and income groups. Women tended to report slightly lower physical health as the number of chronic conditions increased. Higher education and income levels were associated with better physical health, regardless of the number of chronic conditions.

Figure 9 • Average score for respondents for physical health by gender and number of chronic conditions, PaRIS Survey, Belgium (n = 4,604)

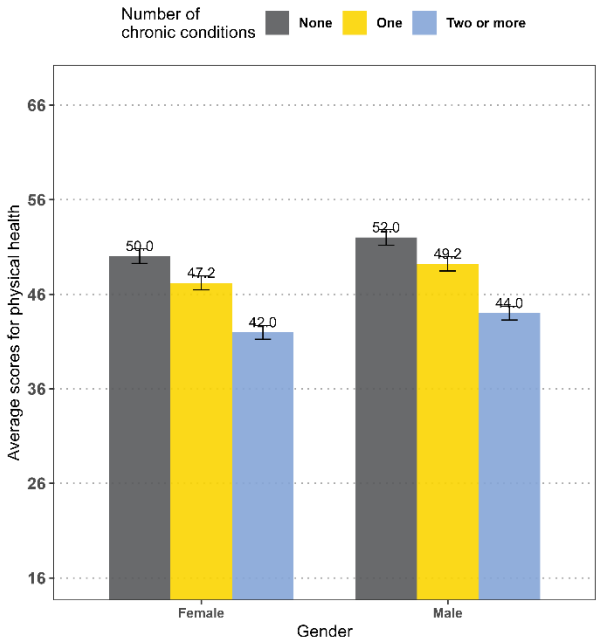


Figure 10 • Average score for respondents for physical health by age group and number of chronic conditions, PaRIS Survey, Belgium (n = 4,604)

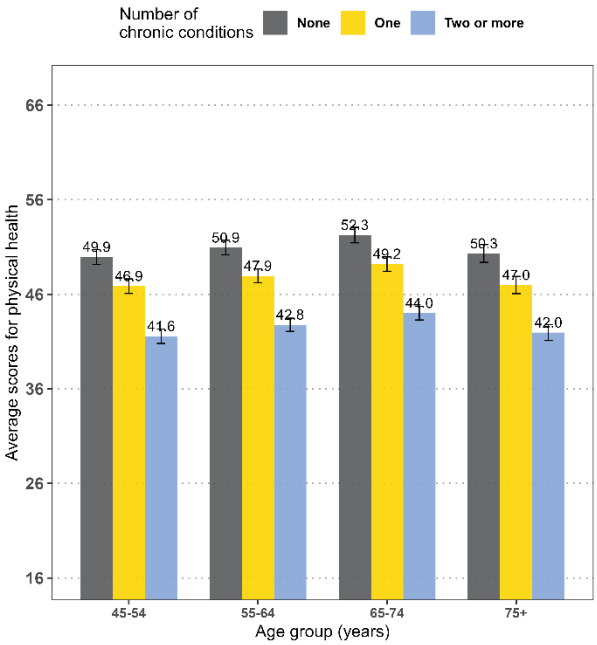


Figure 11 • Average score for respondents for physical health by education and number of chronic conditions, PaRIS Survey, Belgium (n = 4,604)

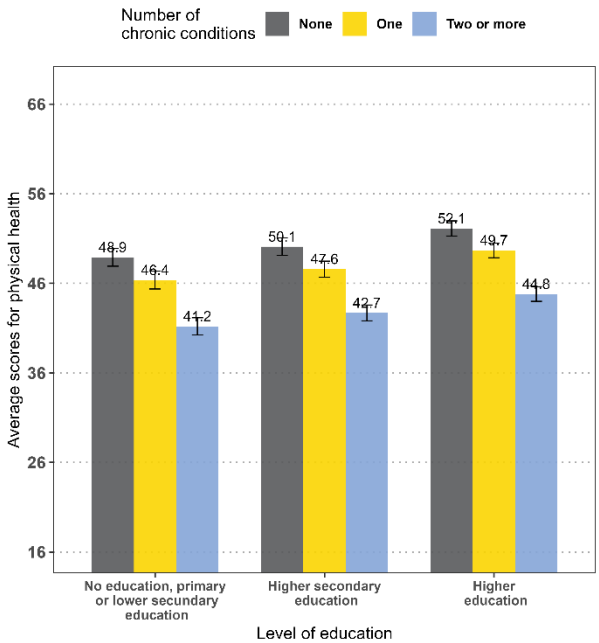
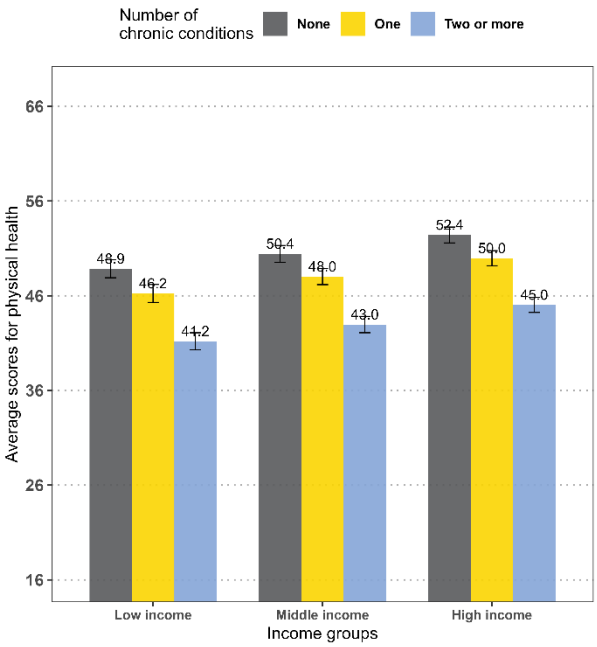


Figure 12 • Average score for respondents for physical health by income group and number of chronic conditions, PaRIS Survey, Belgium (n = 4,604)



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

1.2.1.4. Mental health

The mental health indicator (composed of four questions), as described in Methods, is a T-score metric, where 50 represents the mean and 10 is the standard deviation of the PROMIS reference population. A score of 40 or higher is considered to indicate good mental health. A higher score reflects better mental health. Among all respondents with at least one chronic condition, the average mental health score was 46.3 (95% CI: 45.7 – 47.0), with more than four out of five reporting good mental health (82.7% >= 40). By chronic condition, the average score was 49.1 (95% CI: 48.4 – 49.8) for patients without a chronic condition, 47.9 (95% CI: 47.2 – 48.6) for those with one, and 45.1 (95% CI: 44.4 – 45.7) for those with two or more chronic conditions. Further stratification by key socio-demographic factors is presented in Figures 13-16.

Looking at **gender** differences (Figure 13), both men (50.2) and women (48.5) reported better mental health when they do not have any chronic conditions. Yet, as the number of chronic conditions increased, perceived mental health steadily declined, especially among women.
Figure 14 breaks down mental health by **age group**, showing that individuals without chronic conditions generally reported higher mental health scores across all age groups. As chronic conditions increased, perceived mental health declines across all age groups, with the rate of decline being similar for each group.
Higher **education levels** (Figure 15) were linked to better mental health scores, regardless of the number of chronic conditions. However, across all levels of education, perceived mental health worsened as chronic conditions increased. Those with no education, primary, or lower secondary education reported the lowest average mental health scores across all levels of chronic conditions.
Similarly, higher **income** (Figure 16) was linked to better mental health, regardless of the number of chronic conditions. Across all income brackets, perceived mental health worsened as chronic conditions increased.

In summary, self-reported mental health declined as chronic conditions increased, noticeable among women. While higher education and income are associated with better mental health outcomes, individuals with two or more chronic conditions consistently reported lower mental health across all groups.

Figure 13 • Average score for respondents for mental health by gender and number of chronic conditions, PaRIS Survey, Belgium (n = 3,921)

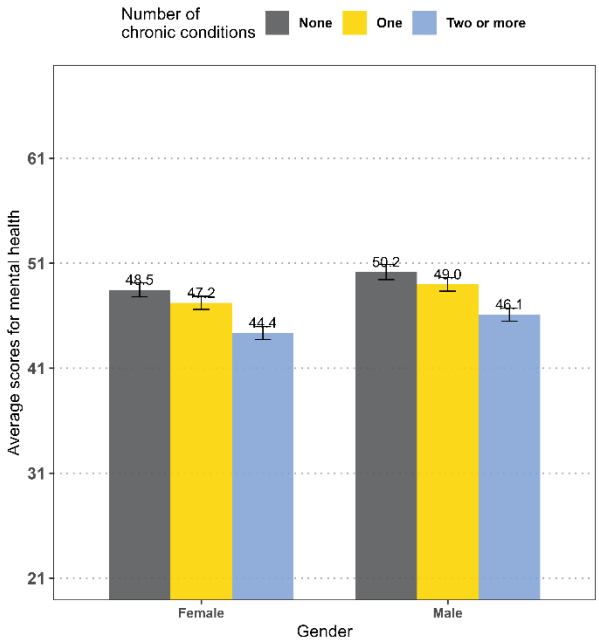


Figure 14 • Average score for respondents for mental health by age group and number of chronic conditions, PaRIS Survey, Belgium (n = 3,921)

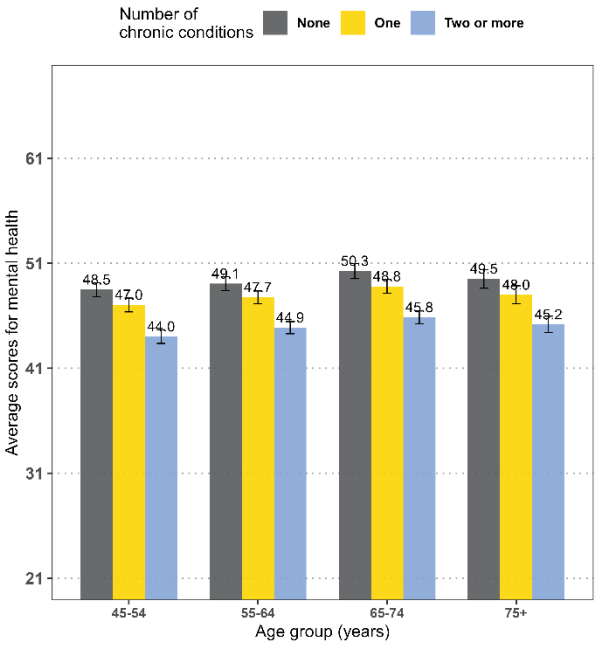


Figure 15 • Average score for respondents for mental health by education and number of chronic conditions, PaRIS Survey, Belgium (n = 3,921)

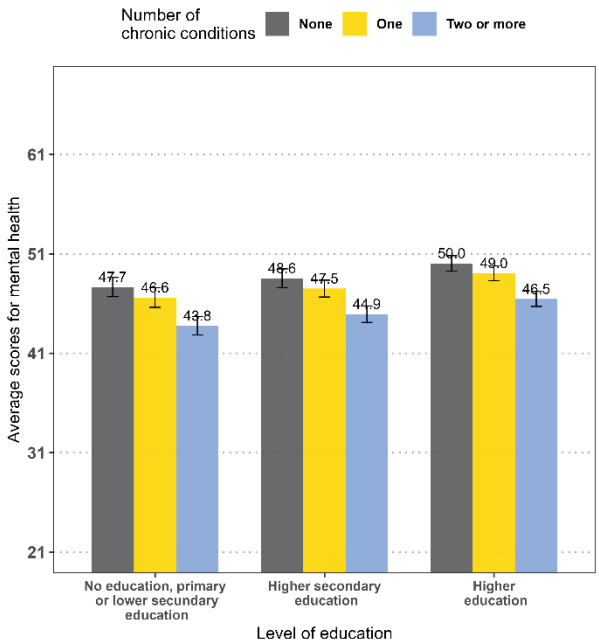
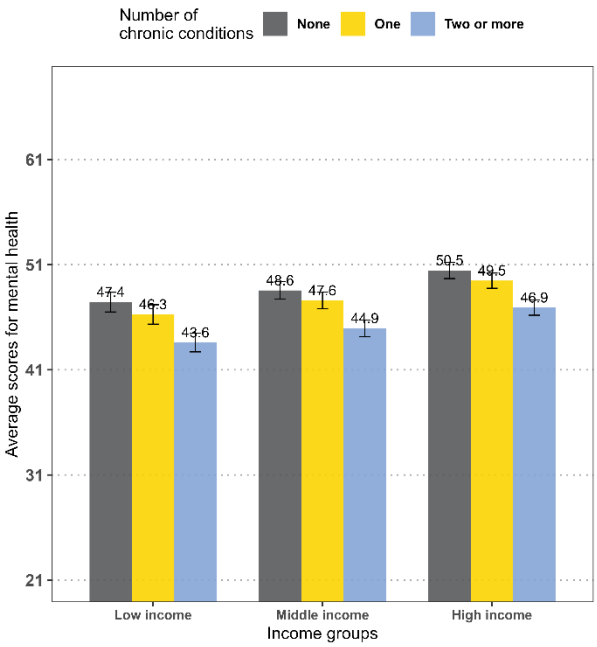


Figure 16 • Average score for respondents for mental health by income group and number of chronic conditions, PaRIS Survey, Belgium (n = 3,921)



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

1.2.1.5. Social functioning

This indicator is based on the question: *"In general, please rate how well you carry out your usual social activities and roles*. [further specified in questionnaire]". The percentage of patients who reported 'good', 'very good', or 'excellent' social functioning (compared to 'fair' or 'poor'), was calculated, shown in Figures 17-20. Among all respondents with at least one chronic condition, the proportion reporting good social functioning was 85.9% (95% CI: 82.5% – 88.8%). By chronic condition, the percentages were 94.8% (95% CI: 92.7% – 96.4%) for those with no chronic conditions, 91.8% (95% CI: 89.3% – 93.8%) for those with one, and 81.5% (95% CI: 77.5% – 85.0%) for those with two or more chronic conditions. Further stratification by key socio-demographic factors is presented below.

Examining **gender** differences (Figure 17), both men (95.4%) and women (94.6%) reported optimal social functioning when they have no chronic conditions. However, social functioning consistently declined with each additional chronic condition, with 80.8% of women maintaining good social functioning when managing two or more chronic conditions, compared to 83.5% in men. These differences however were not significant.
When looking at **age groups** (Figure 18), the highest social functioning scores were found among those without chronic conditions in the middle age ranges. The lowest social functioning scores were consistently seen in each age group among individuals with two or more chronic conditions, with the youngest age group showing the steepest decrease (from 93.7% to 76.0%), the lowest score overall. Social functioning also appears linked to educational attainment (Figure 19).
Higher **education levels** correlated with better social functioning scores, especially for patients with two or more chronic conditions. Nonetheless, across all education levels, social functioning worsened as the number of chronic conditions rose. Those with lower educational levels, such as no education or primary and lower secondary education, reported the lowest social functioning scores across all chronic condition categories, especially in cases of two or more chronic conditions, where scores reach a low of 77.1%.
Income level similarly influenced social functioning scores (Figure 20), higher income correlated with better social functioning scores, especially for patients with two or more chronic conditions. As the number of chronic conditions increased, disparities by income level become more noticeable. Social functioning scores remained relatively close for individuals with none and one chronic condition. For those with two or more chronic conditions, social functioning dropped significantly, especially for the lowest income bracket (73.6%).

Overall, social functioning decreased as chronic conditions increased, with slightly worse social functioning for younger individuals and those with lower income or education levels. However, higher education and income were associated with better social functioning, particularly among individuals with two or more chronic conditions.

Figure 17 • Percentage of respondents reporting (very) good, or excellent ability in social activities and roles (%) by gender and number of chronic conditions, PaRIS Survey, Belgium (n = 4,634)

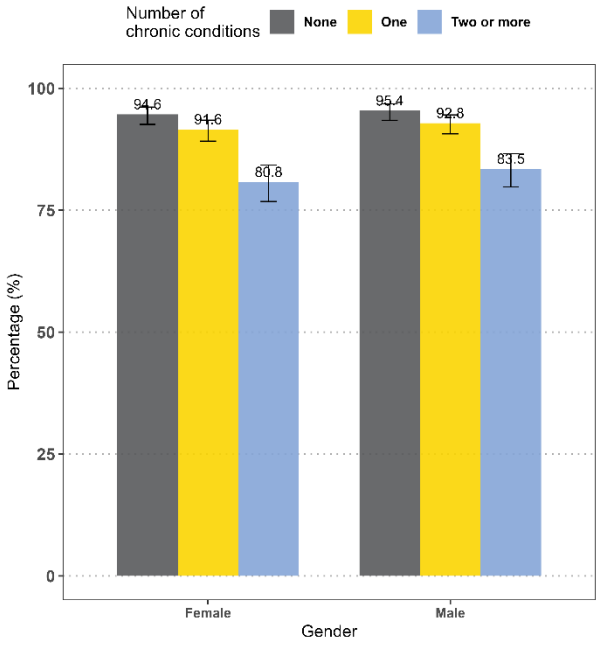


Figure 18 • Percentage of respondents reporting (very) good, or excellent ability in social activities and roles (%) by age group and number of chronic conditions, PaRIS Survey, Belgium (n = 4,634)

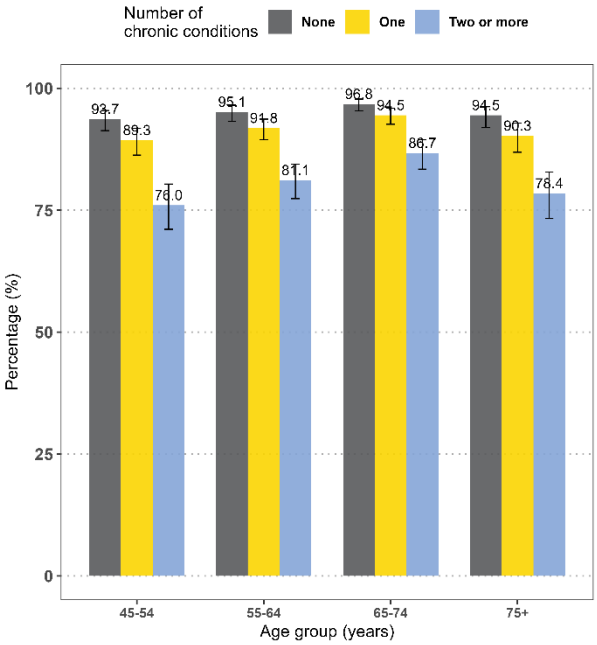


Figure 19 • Percentage of respondents reporting (very) good, or excellent ability in social activities and roles (%) by education and number of chronic conditions, PaRIS Survey, Belgium (n = 4,634)

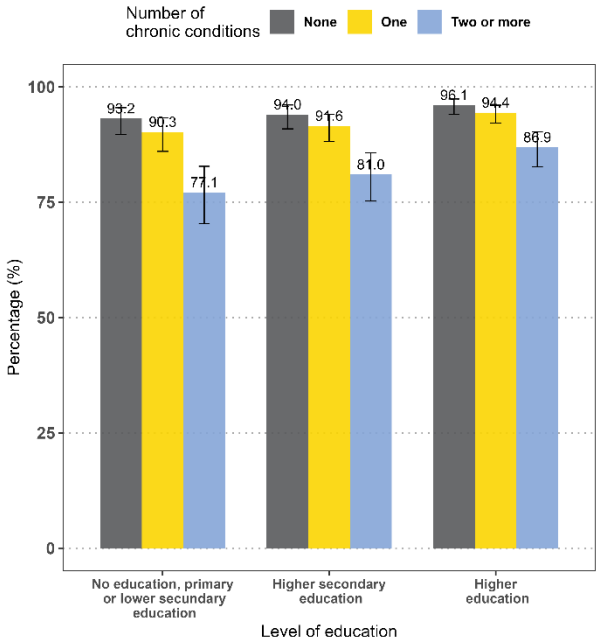
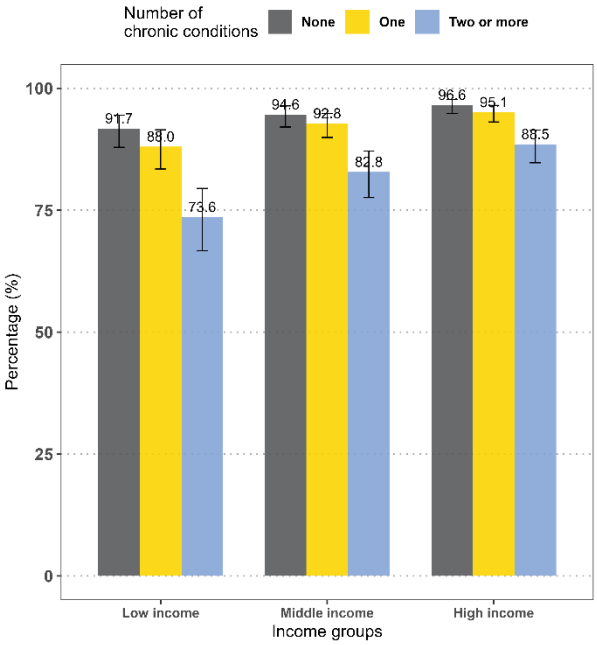


Figure 20 • Percentage of respondents reporting (very) good, or excellent ability in social activities and roles (%) by income and number of chronic conditions, PaRIS Survey, Belgium (n = 4,634)



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

1.2.2. Patient-Reported Experience Measures (PREMs)

1.2.2.1. Experienced quality of medical care

This indicator is based on the question: *"When taking all things into consideration in relation to the care you have received, overall, how do you rate the medical care that you have received in the past 12 months from your primary care centre?".* The percentage of patients who reported 'good,' 'very good,' or 'excellent' experiences with the quality of medical care in the past 12 months (compared to 'fair', 'poor' or 'not sure') was calculated. Among all respondents with at least one chronic condition, the proportion reporting good experiences with medical care was 95.4% (95% CI: 93.1% – 97.0%). By chronic condition, the percentages were 95.8% (95% CI: 93.5% – 97.4%) for those with no chronic conditions, 95.9% (95% CI: 93.7% – 97.4%) for those with one, and 95.1% (95% CI: 92.6% – 96.8%) for those with two or more chronic conditions. Further stratification by key socio-demographic factors is presented in Figures 21-24.

The data suggested that the number of chronic conditions had a negligible effect on perceived quality of medical care across these socio-demographic groups, with little variation observed. This may suggest that socio-demographic factors and the presence of chronic conditions generally had a limited effect on the experienced quality of care. However, one notable exception emerged: respondents aged 45-54 with two or more chronic conditions reported a slightly lower quality of care experienced, at 88.4%, while all other subgroups consistently reported values of 90% or higher, frequently reaching 95%.

Figure 21 • Percentage of respondents reporting medical care in past 12 months as (very) good or excellent (%) by gender and number of chronic conditions, PaRIS Survey, Belgium (n =4,442)

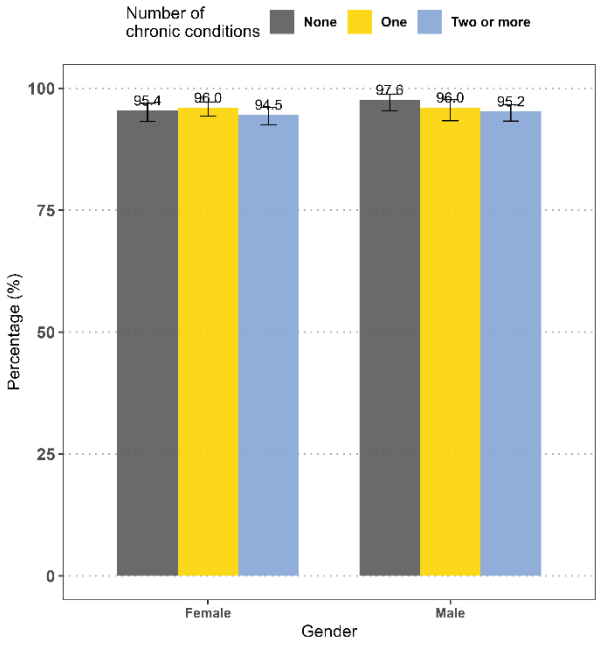


Figure 22 • Percentage of respondents reporting medical care in past 12 months as (very) good or excellent (%) by age group and number of chronic conditions, PaRIS Survey, Belgium (n =4,442)

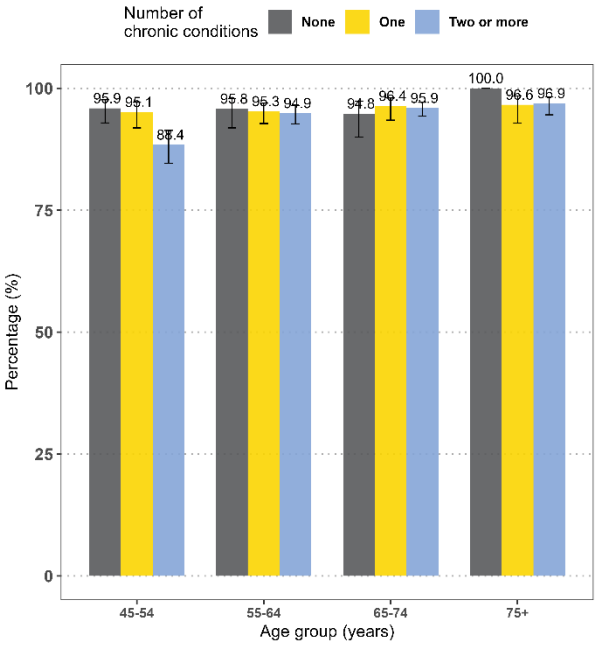


Figure 23 • Percentage of respondents reporting medical care in past 12 months as (very) good or excellent (%) by education and number of chronic conditions, PaRIS Survey, Belgium (n =4,442)

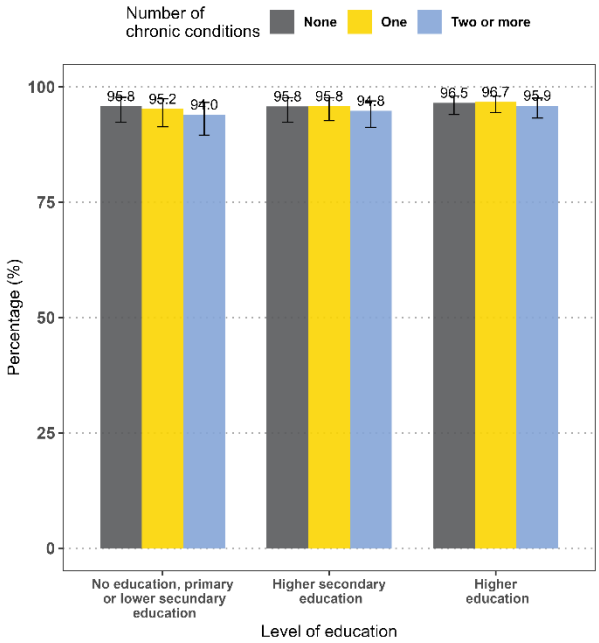
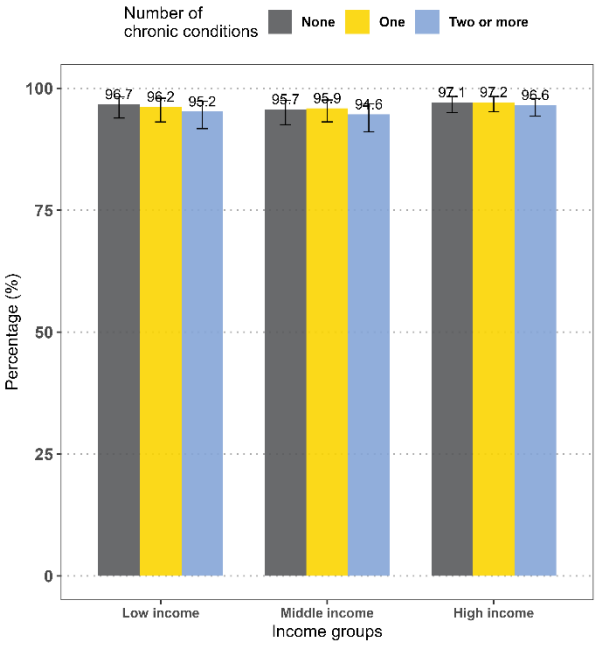


Figure 24 • Percentage of respondents reporting medical care in past 12 months as (very) good or excellent (%) by income and number of chronic conditions, PaRIS Survey, Belgium (n =4,442)



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

1.2.2.2. Confidence in managing own health and wellbeing

This indicator is based on the question: *"How confident are you that you can manage your own health and wellbeing?".* The percentage of patients who reported being 'confident' or 'very confident' (compared to 'somewhat confident' or 'not confident at all') was calculated, shown in Figures 25-28. Among all respondents with at least one chronic condition, the proportion reporting confidence in managing their own health was 63.1% (95% CI: 58.0% – 68.1%). By chronic condition, the percentages were 70.7% (95% CI: 65.6% – 75.4%) for those with no chronic conditions, 67.4% (95% CI: 62.3% – 72.1%) for those with one, and 60.0% (95% CI: 54.8% – 65.1%) for those with two or more chronic conditions. Further stratification by key socio-demographic factors is presented below.

In terms of **gender** (Figure 25), no notable differences were observed between males and females, suggesting that this factor was relatively insignificant in the management of chronic diseases. However, a decreasing trend with increasing number of chronic conditions was observed.
When examining different **age groups** (Figure 26), lowest confidence scores in self-management were found in the youngest (45-54) and oldest (75+) age groups across all three categories. In contrast, the other age groups demonstrated higher confidence in self-management across these categories. These differences between age groups, however, were not significant. Nevertheless, a decreasing trend with increasing number of chronic conditions was observed.
A decline in confidence was also observed among **education** groups (Figure 27). Respondents with higher education levels generally exhibited greater confidence compared to those with lower education levels. For instance, among individuals with two or more chronic conditions and a low level of education, self-management confidence was only 54.5%. This contrasts sharply with respondents with higher secondary education and two or more chronic conditions, who reported greater confidence at 67.5%. These values, however, were not significant.
Similarly, **income levels** (Figure 28), revealed a comparable pattern of decreased confidence. Respondents with higher incomes generally exhibited greater confidence compared to those with lower incomes. This was especially evident among individuals with two or more chronic conditions: 68.2% of high-income respondents expressed confidence, compared to 57.2% and 56.5% for those with middle and low incomes, respectively. These values, however, were not significant.

In summary, confidence in self-managing health declined with an increasing number of chronic conditions, regardless of demographic factors. Although trends showed that younger (45-54) and older (75+) individuals, as well as those with lower education and income, had lower confidence, these differences were not statistically significant.

Figure 25 • Percentage of respondents reporting being (very) confident in managing their own health and well-being (%) by gender and number of chronic conditions, PaRIS Survey, Belgium (n =4,541)

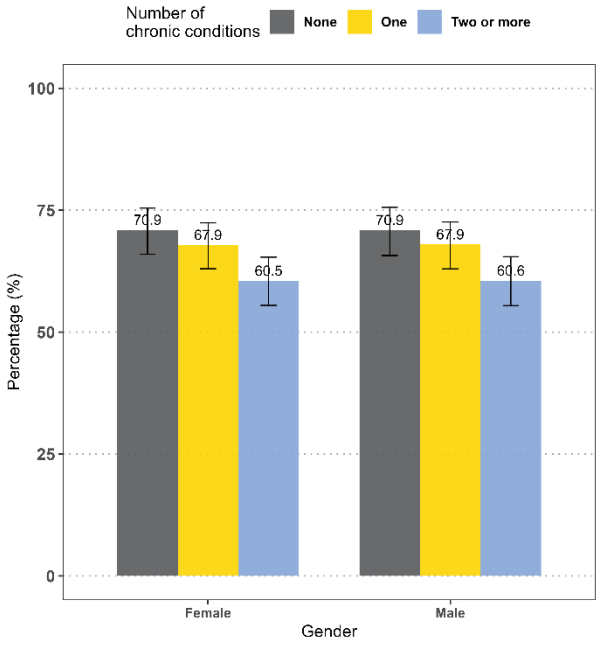


Figure 26 • Percentage of respondents reporting being (very) confident in managing their own health and well-being (%) by age group and number of chronic conditions, PaRIS Survey, Belgium (n =4,541)

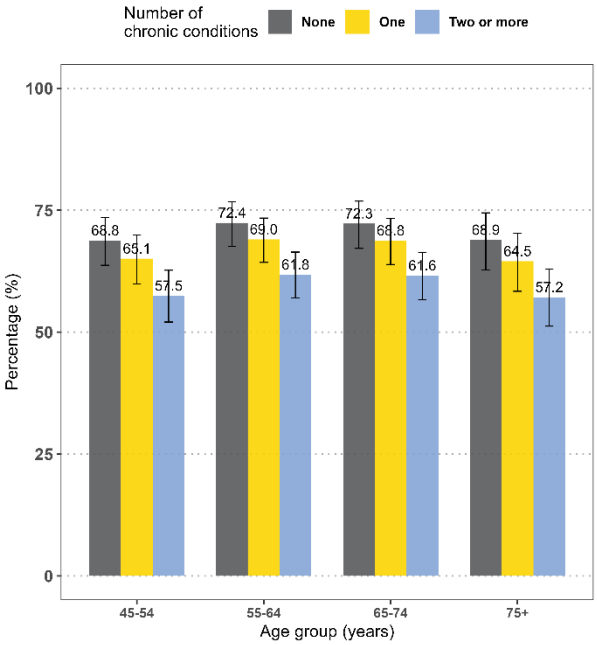


Figure 27 • Percentage of respondents reporting being (very) confident in managing their own health and well-being (%) by education and number of chronic conditions, PaRIS Survey, Belgium (n =4,541)

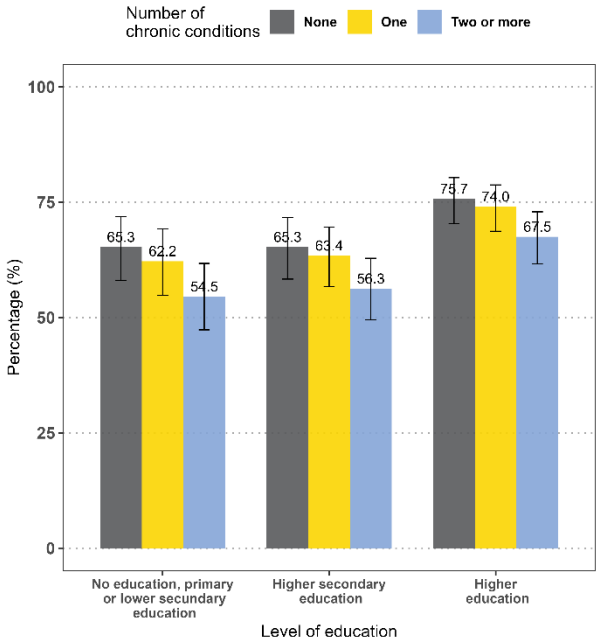
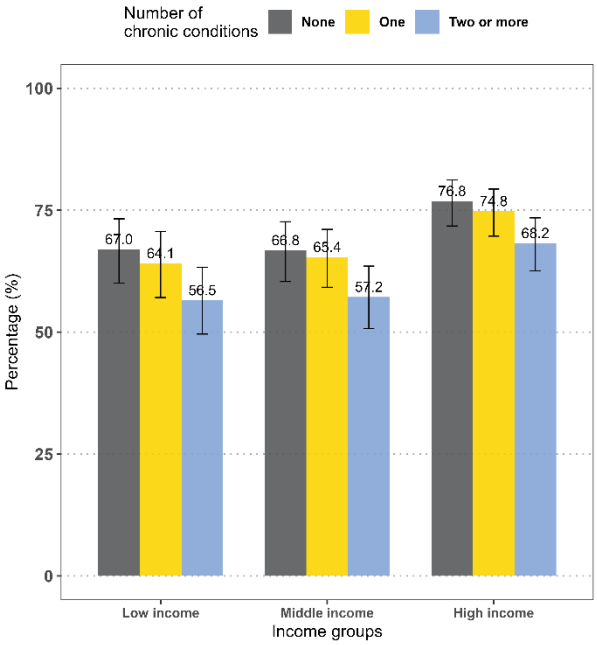


Figure 28 • Percentage of respondents reporting being (very) confident in managing their own health and well-being (%) by income and number of chronic conditions, PaRIS Survey, Belgium (n =4,541)



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

1.2.2.3. Trust in health systems

This indicator is based on the question: *"How strongly do you agree or disagree that the healthcare system can be trusted?".* The percentage of patients who 'agree' or 'strongly agree' (compared to those who 'neither agree nor disagree', 'disagree', or 'strongly disagree') was calculated. Among all respondents with at least one chronic condition, 69.5% (95% CI: 65.5% - 73.1%) agreed or strongly agreed that the healthcare system can be trusted. By chronic condition, the percentages were 69.7% (95% CI: 65.5% - 73.7%) for those with no chronic conditions, 71.2% (95% CI: 67.3% - 74.9%) for those with one, and 68.1% (95% CI: 64.2% - 71.9%) for those with two or more chronic conditions. Further stratification by key socio-demographic factors is presented below.

In regards to **gender** (Figure 29), when it comes to trust in the healthcare system, men consistently reported higher levels of trust than women, regardless of whether they have chronic conditions or not. For example, among those without chronic conditions, 74.5% of men expressed trust in the healthcare system compared to 66.8% of women. This pattern held for patients with one chronic condition (76.1% for men vs. 68.6% for women) and for those with two or more chronic conditions (73.0% for men vs. 64.9% for women).
When stratifying the data per **age group** (Figure 30), the trust in the healthcare system remained relatively stable, with some small variations between age groups and chronic condition categories.
In terms of **education levels** (Figure 31), trust in the healthcare system showed some variation across chronic condition groups, though these differences were not statistically significant. Overall, respondents with higher education tended to report greater trust across all chronic condition groups. For instance, for patients with two or more chronic conditions, 75.7% of individuals with higher education expressed trust in the system, compared to 65.9% of those with higher secondary education and 61.5% of those with low education.
A similar trend was observed across **income levels** (Figure 32). Respondents with higher income generally reported greater trust in the healthcare system across all chronic condition groups. For instance, for patients with one chronic condition, 80.2% of individuals with higher income expressed trust, compared to 70.9% of those with middle income and 64.2% of those with low income.

In summary, trust in the healthcare system varied across demographic groups and the number of chronic conditions, but these differences were small and not statistically significant. Additionally, men generally reported higher trust than women, and higher education and income were associated with greater trust in the healthcare system.

Figure 29 • Percentage agreeing or strongly agreeing that the healthcare system can be trusted (%) by gender and number of chronic conditions, PaRIS Survey, Belgium (n = 4,478)

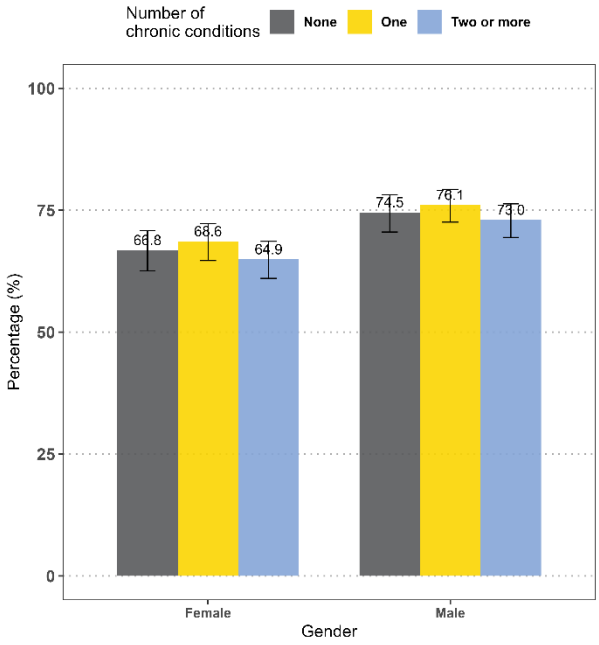


Figure 30 • Percentage agreeing or strongly agreeing that the healthcare system can be trusted (%) by age group and number of chronic conditions, PaRIS Survey, Belgium (n = 4,478)

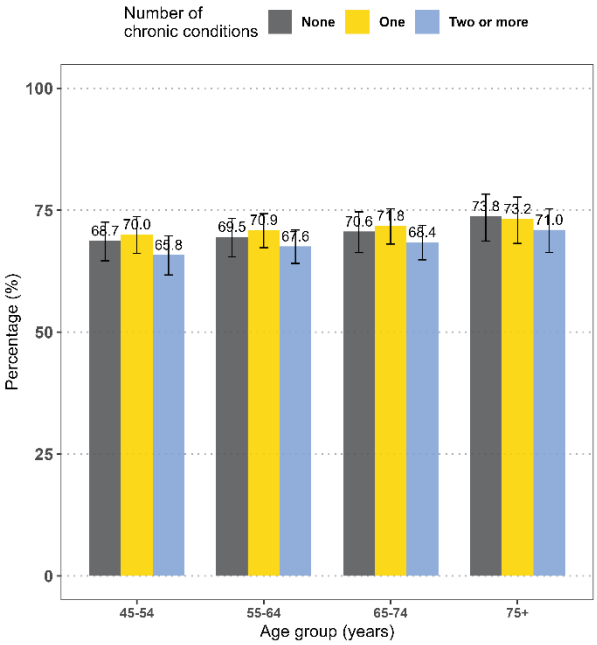


Figure 31 • Percentage agreeing or strongly agreeing that the healthcare system can be trusted (%) by education and number of chronic conditions, PaRIS Survey, Belgium (n = 4,478)

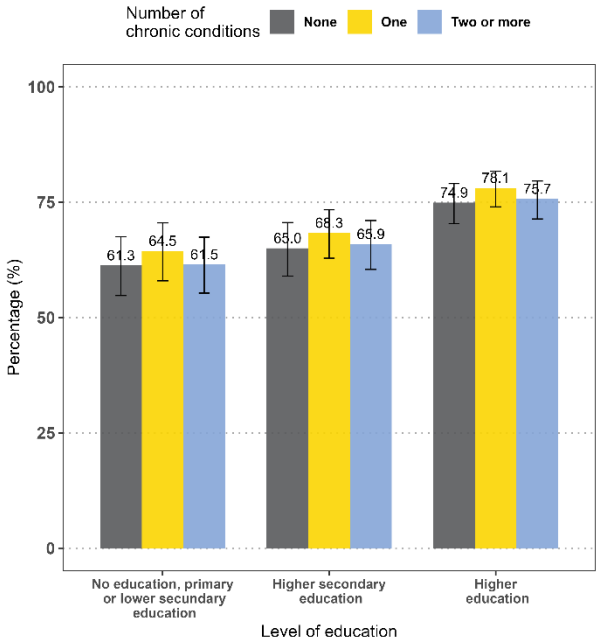
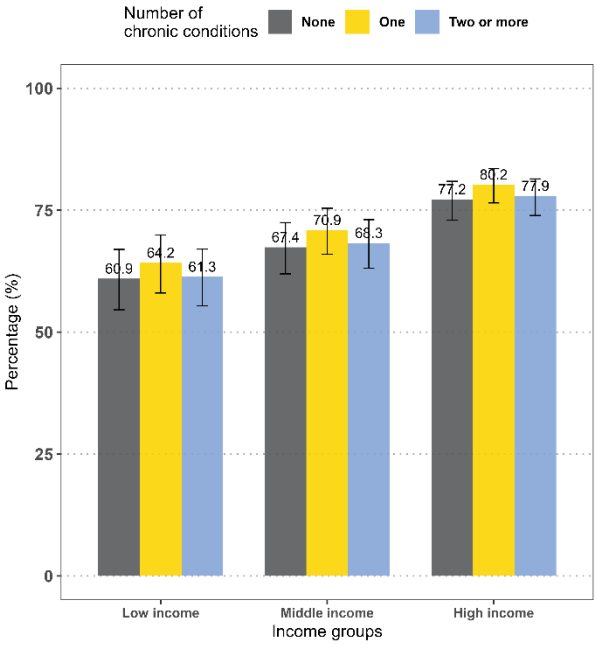


Figure 32 • Percentage agreeing or strongly agreeing that the healthcare system can be trusted (%) by income and number of chronic conditions, PaRIS Survey, Belgium (n = 4,478)



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

1.2.2.4. Experienced coordination of care

The care coordination scale (composed of five questions), as previously described in Methods, ranges from 0 to 15. Higher scores indicate better coordination of care. A score of 7.5 or higher represents an average response of 50% or more across the five questions included in the scale, while a score of 10 or higher corresponds to an average response of 66.6% or more. Data was not asked for persons without chronic conditions. Among respondents with at least one chronic condition, the average score was 9.1 (95% CI: 8.7 - 9.5), and about two-thirds (67.7%) reported score higher as 7.5. However, the PaRIS Primary Care Practice Questionnaire (PaRIS-PCPQ) showed that only 47.5% of practices felt well-prepared to coordinate care effectively. By chronic condition count, the average score was 8.7 (95% CI: 8.3 - 9.1) for those with one chronic condition and 9.4 (95% CI: 9.0 - 9.8) for those with two or more chronic conditions. Further stratification by key socio-demographic factors is presented in Figures 33-36.

The data suggest that individuals with more chronic conditions tend to report just slightly better care coordination. Socio-demographic factors, however, showed minimal impact on care coordination scores, except for age. A small but consistent increase in care coordination was observed with increasing age.

Figure 33 • Average scores for experienced care coordination by gender and number of chronic conditions, PaRIS Survey, Belgium (n = 2,496)

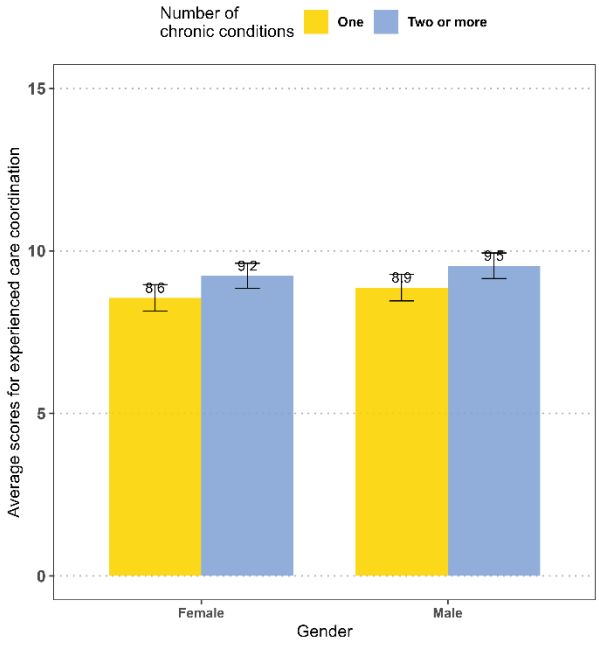


Figure 34 • Average scores for experienced care coordination by age group and number of chronic conditions, PaRIS Survey, Belgium (n = 2,496)

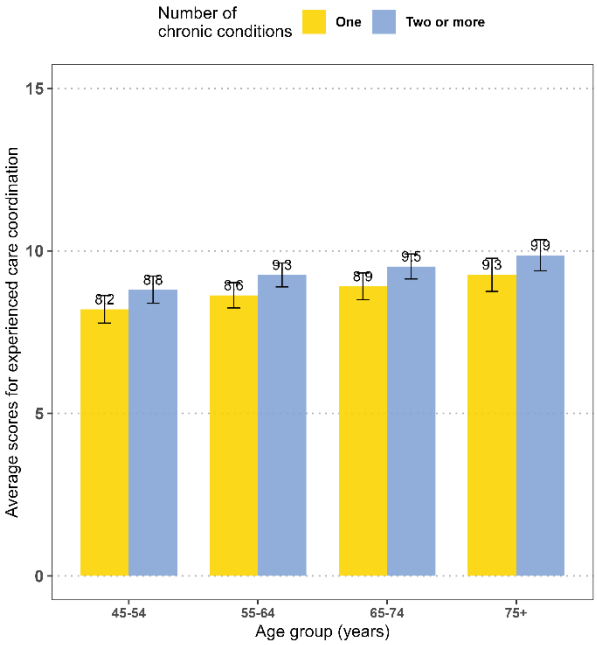


Figure 35 • Average scores for experienced care coordination by education and number of chronic conditions, PaRIS Survey, Belgium (n = 2,496)

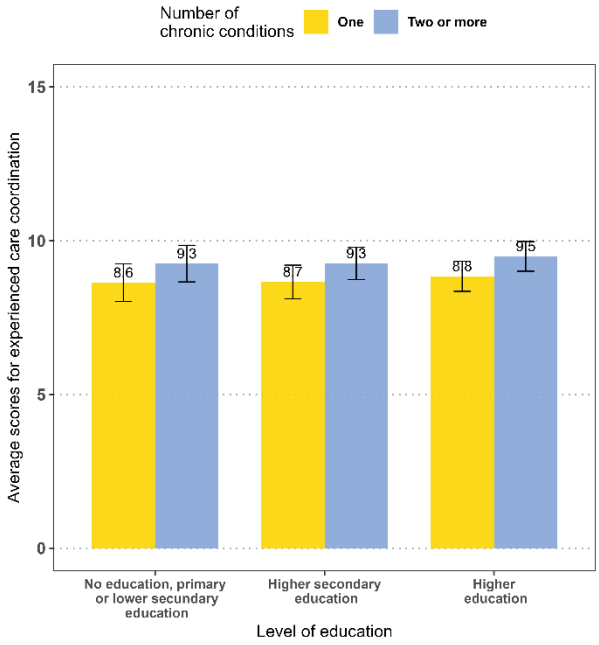
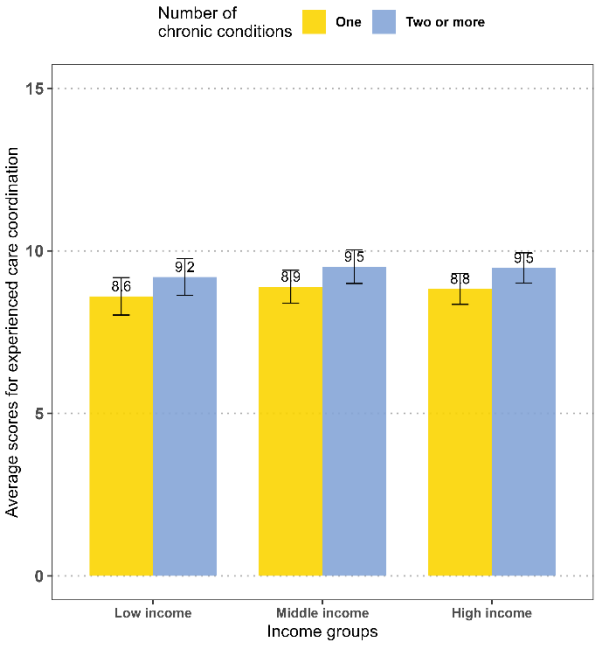


Figure 36 • Average scores for experienced care coordination by income and number of chronic conditions, PaRIS Survey, Belgium (n = 2,496)



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

1.2.2.5. Person-centred care

The person-centred care indicator (composed of eight questions), as previously described in Methods, ranges from 0 to 24. A higher score indicates better person-centredness, i.e. people who found care to be highly person-centred. A score of 12, representing an average response of at least 50% across the eight questions, and a score of 16, representing an average of 66.6%. Data was not asked for persons without chronic conditions. Among respondents with at least one chronic condition, the average score was 17.9 (95% CI: 17.5 - 18.3), more than nine out of ten (92.7%) reported a score higher as 12. By chronic condition count, the average score was 17.9 (95% CI: 17.5 - 18.3) for those with one chronic condition and 17.8 (95% CI: 17.4 - 18.3) for those with two or more chronic conditions. Further stratification by key socio-demographic factors is presented in Figures 37-40.

These data suggest that the number of chronic conditions had little impact on perceptions of person-centred care across socio-demographic groups. Scores consistently stayed around 18, above the threshold of 16, which reflects that most respondents feel (very) confident in the person-centred nature of their care. The minimal variation indicated that socio-demographic factors and chronic conditions have little impact on how people view the person-centredness of their care.

Figure 37 • Average scores for person-centredness by gender and number of chronic conditions, PaRIS Survey, Belgium (n = 2,647)

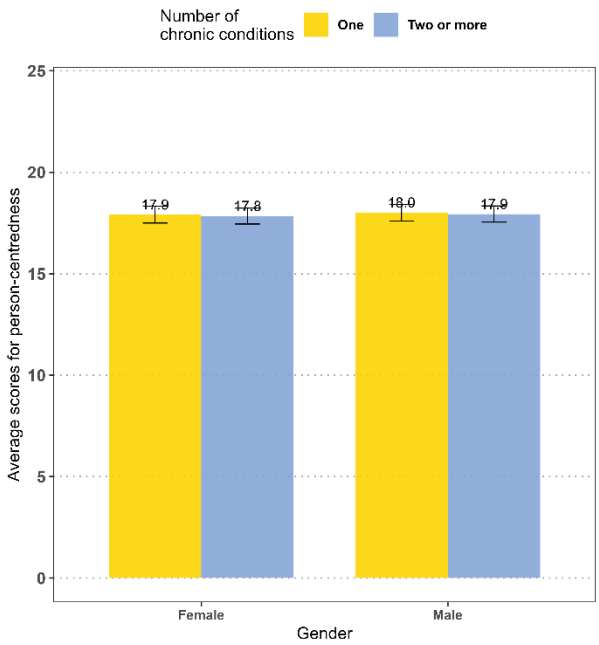


Figure 38 • Average scores for person-centredness by age group and number of chronic conditions, PaRIS Survey, Belgium (n = 2,647)

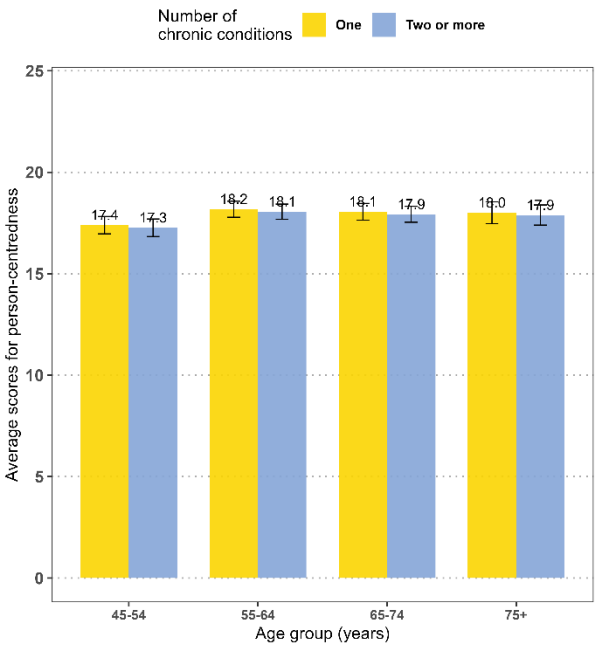


Figure 39 • Average scores for person-centredness by education and number of chronic conditions, PaRIS Survey, Belgium (n = 2,647)

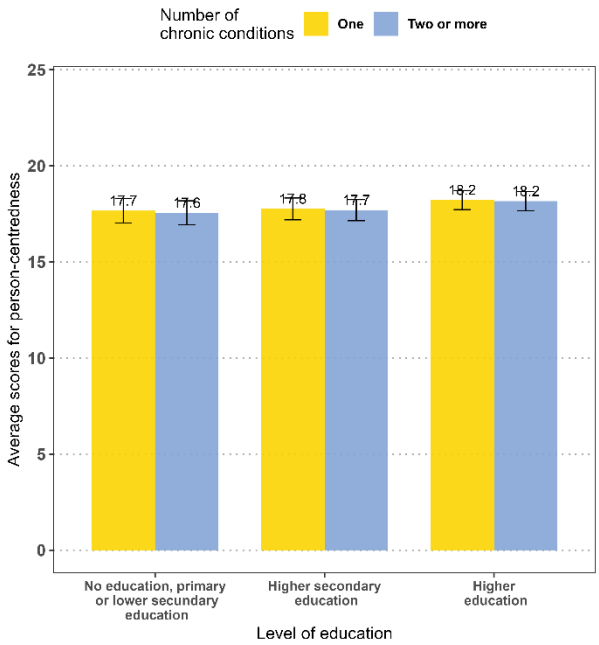
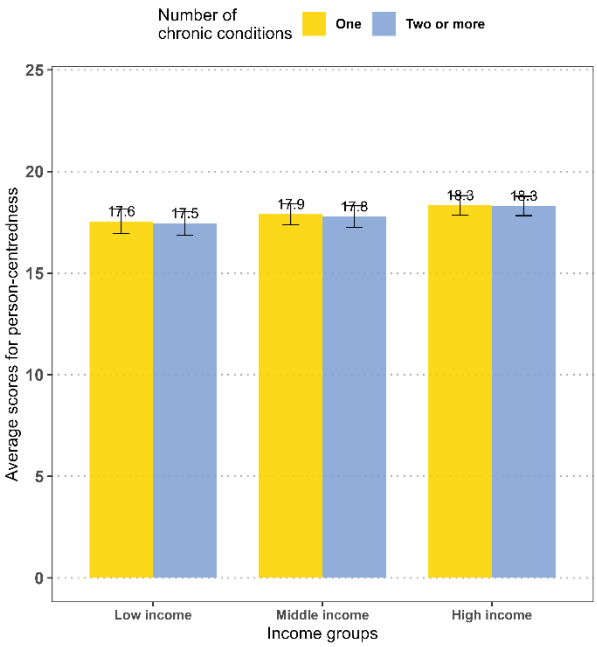


Figure 40 • Average scores for person-centredness by income and number of chronic conditions, PaRIS Survey, Belgium (n = 2,647)



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

1.3. HEATMAPS PARIS10 INDICATORS

Three heatmaps are presented below, Table 5, Table 6 and Table 7.

The first heatmap (Table 5) presents the PaRIS 10 indicators stratified by chronic condition. Some key findings are presented below:

- In terms of **patient-reported outcome measures (PROMs),** the baseline group, consisting of patients without chronic conditions, as expected, reported the highest values across all PROMs, serving as a reference group. Patients who reported having high blood pressure consistently scored among the highest across all indicators, suggesting that this condition may have a lower perceived impact on overall health and functioning compared to other chronic conditions. In contrast, patients with Alzheimer's disease or other causes of dementia – though representing a relatively small subset of participants – consistently reported the lowest scores across all indicators, reflecting the significant impact of this condition on general health, well-being, physical health, mental health, and social functioning.
  Regarding well-being and mental health, mental health scores were notably low among patients with depression or anxiety, but also among those with Alzheimer's disease or other cause of dementia; or neurological conditions. Well-being scores followed a similar pattern, with the lowest percentages of patients achieving positive thresholds seen in conditions like Alzheimer's disease or other cause of dementia; and depression.

- In terms of **patient-reported experience measures (PREMs)**, patients with high blood pressure consistently reported positive experiences, although they do not always rank the highest. For cancer (diagnosis or treatment in the last 5 years) patients, this group had a positive perception of experienced quality of medical care in the past 12 months (97%) and the highest trust in the healthcare system (75%). This could reflect well organized care for cancer patients. Regarding, patients suffering from Alzheimer's or other dementia patients, despite scoring relatively well in care coordination (10.9 out of 15), these patients exhibited the lowest confidence in self-management (30%).

The second and third heatmap (Table 6 and Table 7) show the PaRIS 10 PROMs and PREMs opposed to one another and vice versa. Some key findings are presented below:

- Positive PROMs, such as better general health (rated as good, very good, or excellent), well-being (≥50), and mental health (≥40), consistently aligned with improved PREMs, including confidence in self-management (rated as confident or very confident) and person-centred care (≥12), and vice versa.
- Improvements in PROMs were linked to substantial increases in confidence in self-management (38%-52%) and trust in health systems (22%-34%), indicating their sensitivity to patient health outcomes. Percentages and scores (where available) were compared.
- Percentages for the experienced quality of medical care over the past 12 months and person-centred care remained high regardless of PROM groupings.
- General health, well-being, and physical health were closely linked with the PREMs. Improvements in PREMs, particularly in quality of care and person-centred care, showed substantial increases in general health, well-being, and physical health. Percentages and scores (where available) were compared.

Table 5 • PaRIS10 indicators by chronic condition, PaRIS Survey, Belgium

	Patient-reported outcome measures (PROMs)					Patient-reported experience measures (PREMs)				
Chronic condition	**General health (%)**	**Well-being (/100)**	**Physical health (16.2-67.7)**	**Mental health (21.2-67.6)**	**Social functioning (%)**	**Experienced quality of care (%)**	**Confidence to self-manage (%)**	**Trust in healthcare system (%)**	**Experienced coordination (/15)**	**Person-centred care (/24)**
Positive Outcomes	Good, very good, excellent	≥ 50	≥ 42	≥ 40	Good, very good, excellent	Good, very good, excellent	Confident, very confident	Agree, strongly agree	≥ 7.5	≥ 12
High blood pressure (n = 1,713)	74%	61 (75%)	45 (72%)	47 (85%)	89%	97%	65%	72%	9.4 (70%)	18.0 (93%)
Cardiovascular or heart condition (n = 722)	63%	60 (72%)	43 (61%)	46 (84%)	85%	95%	60%	69%	9.4 (70%)	17.9 (93%)
Diabetes (type 1 or 2) (n = 522)	62%	58 (68%)	43 (60%)	46 (83%)	82%	95%	64%	69%	10.1 (78%)	18.1 (94%)
Arthritis or ongoing problem with back or joints (n = 1,423)	63%	56 (66%)	42 (57%)	45 (79%)	83%	95%	59%	65%	8.8 (64%)	17.4 (91%)
Breathing condition (e.g., asthma or COPD) (n = 517)	59%	55 (62%)	42 (53%)	45 (77%)	82%	94%	57%	68%	9.3 (68%)	17.6 (91%)
Alzheimer's disease or other cause of dementia (n = **53**) **	35%	39 (18%)	37 (24%)	36 (24%)	46%	90%	30%	61%	10.9 (93%)	16.4 (90%)
Depression, anxiety, or other mental health condition (n = 418)	59%	43 (37%)	42 (53%)	40 (50%)	71%	95%	53%	63%	8.8 (67%)	17.3 (91%)
Neurological condition (e.g., epilepsy or migraine) (n = 262)	50%	49 (54%)	41 (49%)	42 (66%)	72%	94%	54%	64%	8.9 (66%)	17.2 (90%)
Chronic kidney disease (n = 125)	46%	55 (57%)	41 (46%)	45 (74%)	74%	95%	63%	59%	9.5 (72%)	17.6 (88%)
Chronic liver disease (n = **55**) **	58%	52 (51%)	42 (51%)	41 (62%)	80%	96%	61%	58%	9.1 (64%)	17.3 (91%)
Cancer (diagnosis or treatment in the last 5 years) (n = 323)	59%	59 (71%)	44 (63%)	46 (84%)	86%	97%	58%	75%	9.7 (74%)	18.1 (95%)
Other long-term problem(s) (n = 853) *	61%	55 (63%)	43 (61%)	45 (77%)	82%	95%	61%	67%	9.1 (68%)	17.7 (92%)
No chronic conditions (Baseline) (n = 958)	96%	67 (85%)	51 (93%)	49 (94%)	95%	96%	70%	70%	Not asked	Not asked

See Table 4 for more explanation regarding the PaRIS10 indicators.
For all indicators, percentages reflect the proportion of individuals reporting a positive outcome or experience. Furthermore, for five indicators the average scale score is shown.
All results were age-gender standardised. Missing data were omitted.
Colours are relative per column.
Higher scores consistently indicate better outcomes.
*Most common "Other long-term problem(s)" were: high cholesterol, thyroiditis, fibromyalgia, prostate, burnout, IBS, other gastrointestinal issues, allergies, gout, osteoporosis, etc.
** Only a small number of patients in our data had Alzheimer's disease or other causes of dementia; or chronic liver disease.

Table 6 • PaRIS10 PREMs dichotomised by PaRIS10 PROMs, PaRIS Survey, Belgium

Patient-reported outcome measures (PROMs)	Group	Experienced quality of care (%)	Confidence in self-management (%)	Trust in health systems (%)	Experienced coordination (/15)	Person-centred care (/24)
Positive Outcomes	/	Good, very good, excellent	Confident, very confident	Agree, strongly agree	≥ 7.5	≥ 12
General health (%) (n = 1,066)	Fair, poor	91%	50%	59%	8.7 (63%)	16.8 (88%)
General health (%) (n = 3,594)	Good, very good, excellent	96%	69%	72%	9.2 (70%)	18.3 (95%)
Well-being (/100) (n = 3,426)	< 50	91%	47%	57%	8.5 (61%)	16.5 (87%)
Well-being (/100) (n = 1,154)	≥ 50	97%	71%	73%	9.3 (70%)	18.4 (95%)
Physical health (16.2-67.7) (n = 3,444)	< 42	91%	47%	59%	8.7 (62%)	16.5 (87%)
Physical health (16.2-67.7) (n = 1,160)	≥ 42	97%	71%	73%	9.2 (70%)	18.4 (95%)
Mental health (21.2-67.6) (n = 3,345)	< 40	92%	48%	53%	8.2 (56%)	16.0 (84%)
Mental health (21.2-67.6) (n = 576)	≥ 40	97%	70%	71%	9.3 (70%)	18.2 (94%)
Social functioning (%) (n = 585)	Fair, poor	89%	44%	56%	8.2 (59%)	16.0 (85%)
Social functioning (%) (n = 4,049)	Good, very good, excellent	96%	67%	71%	9.2 (69%)	18.2 (94%)

Note: See Table 4 for more explanation regarding the PaRIS10 indicators.
For all indicators, percentages reflect the proportion of individuals reporting a positive outcome or experience. Furthermore, for five indicators the average scale score is shown.
All results were age-gender standardised. Missing data were omitted.
Colours are relative per column.
Higher scores consistently indicate better outcomes.

Table 7 • PaRIS10 PROMs dichotomised by PaRIS10 PREMs, PaRIS Survey, Belgium

Patient-reported experience measures (PREMs)	Group	General health (%)	Well-being (/100)	Physical health (16.2-67.7)	Mental health (21.2-67.6)	Social functioning (%)
Positive Outcomes	**/**	Good, very good, excellent	≥ 50	≥ 42	≥ 40	Good, very good, excellent
Experienced quality of care (%) (n = 220)	Fair, poor, not sure	58%	50 (50%)	41 (51%)	43 (70%)	73%
Experienced quality of care (%) (n = 4,222)	Good, very good, excellent	78%	62 (76%)	46 (76%)	47 (86%)	89%
Confidence in self-management (%) (n = 1,537)	Somewhat confident, not confident at all	68%	54 (61%)	43 (61%)	44 (77%)	81%
Confidence in self-management (%) (n = 3,004)	Confident, very confident	82%	66 (82%)	48 (82%)	48 (89%)	92%
Trust in health systems (%) (n = 1,383)	Neither agree nor disagree, disagree, strongly disagree	70%	56 (65%)	44 (67%)	45 (78%)	83%
Trust in health systems (%) (n = 3,095)	Agree, strongly agree	81%	64 (79%)	47 (79%)	48 (89%)	90%
Experienced coordination (/15)	< 7.5	67%	57 (68%)	44 (65%)	45 (77%)	81%
Experienced coordination (/15)	≥ 7.5	73%	62 (76%)	45 (73%)	47 (85%)	87%
Person-centred care (/24) (n = 195)	< 12	55%	50 (54%)	41 (49%)	42 (64%)	71%
Person-centred care (/24) (n = 2,452)	≥ 12	74%	62 (76%)	46 (74%)	47 (85%)	87%

Note: See Table 4 for more explanation regarding the PaRIS10 indicators.
For all indicators, percentages reflect the proportion of individuals reporting a positive outcome or experience. Furthermore, for five indicators the average scale score is shown.
All results were age-gender standardised. Missing data were omitted.
Colours are relative per column.
Higher scores consistently indicate better outcomes.

1.4. (DIGITAL) HEALTH LITERACY

The concept of **health literacy** is assessed by combining two questions from the 10-item Porter Novelli scale, using PaRIS data.[23] More information can be found in Methods. A higher score indicates a better health literacy, ranging from 1 to 5. Stratification by key socio-demographic factors is presented in Figures 41-44. Results were considered statistically significant when the 95% confidence intervals did not overlap.

Health literacy was lower among older patients (75+), particularly those with two or more chronic conditions. A clear socioeconomic gradient was observed, with lower scores among individuals with lower education and income levels. Patients with higher education and income had the highest health literacy, regardless of chronic conditions. While health literacy declined slightly with an increasing number of chronic conditions, this effect was less pronounced than differences by education and income. Gender differences were minimal, with similar scores for men and women across all chronic condition groups.

Figure 41 • Average scores for the 5-point health literacy index by gender and number of chronic conditions, PaRIS Survey, Belgium (n = 4,555)

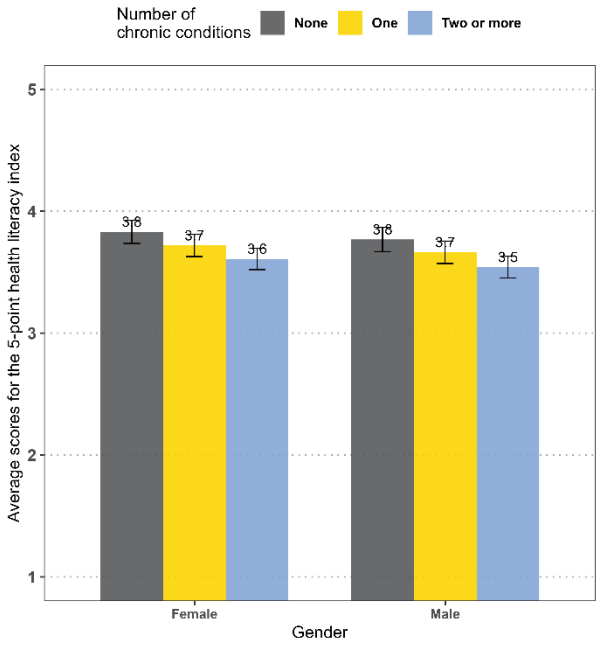


Figure 42 • Average scores for the 5-point health literacy index by age group and number of chronic conditions, PaRIS Survey, Belgium (n = 4,555)

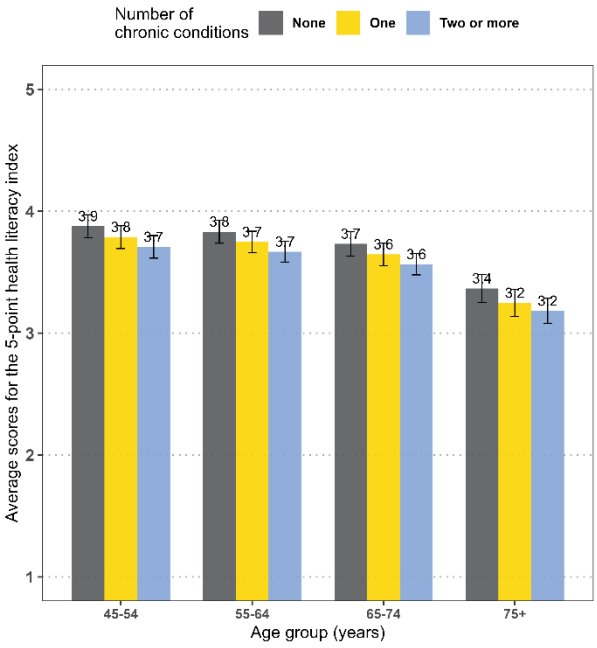


Figure 43 • Average scores for the 5-point health literacy index by education and number of chronic conditions, PaRIS Survey, Belgium (n = 4,555)

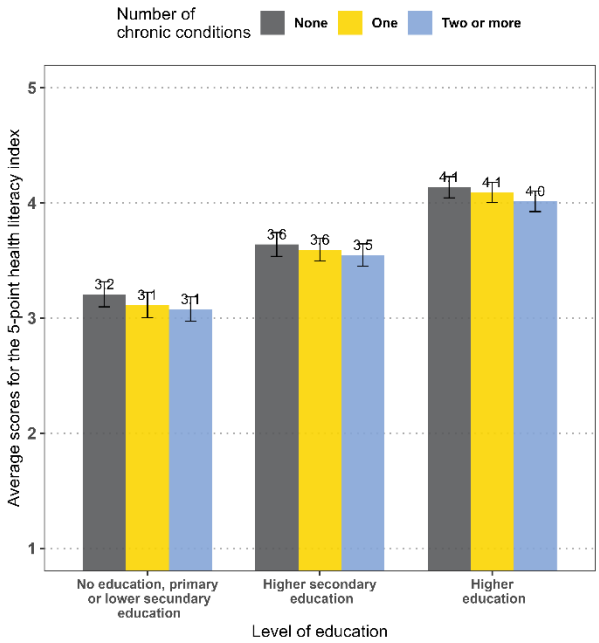
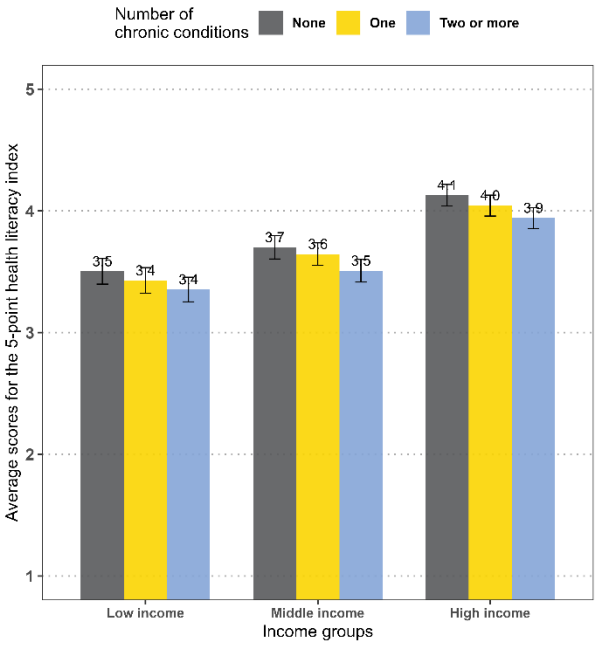


Figure 44 • Average scores for the 5-point health literacy index by income and number of chronic conditions, PaRIS Survey, Belgium (n = 4,555)



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

With the increasing digitalization of healthcare, **digital health literacy** is becoming an essential area of focus in its own right. While health literacy encompasses the ability to understand and use health information effectively, digital health literacy specifically relates to navigating and utilizing online health resources. A key question in this context is how confident patients feel when accessing and interpreting health information on the internet (*"How confident are you in using information from the Internet to make health decisions?").* This remains a significant concern, as only 8% of patients with chronic conditions reported feeling confident in using online health information. When stratified by socio-demographic factors, significant differences were observed for age and gender. Confidence was highest among patients aged 45-54, at 13.0%, but declined steadily with age: 9.4% for those 55-64, 6.2% for 65-74, and just 4.0% for those 75 and older. Gender differences were observed as well, with 9.2% of males reporting confidence in using digital health information, compared to 7.6% of females.

1.5. DIGITAL TOOLS

The use of digital tools in primary care settings is growing rapidly. A recent assessment explored the availability and use of online services provided by primary care centres, such as websites, smartphone apps, and video consultations. These tools are designed to improve patient access to healthcare, but their effectiveness depends on patients' ability to use them confidently and effectively.

Among the participating GP practices, 89.5% reported offering phone consultations, 80.7% provided video consultations, and 75.4% used other remote options such as email, text messaging, or secure messaging through patient platforms.

58.3% of patients agreed that their primary care practice website is easy to use. However, patients with lower levels of education were less likely to find the website user-friendly compared to those with higher education, showing a 20.9% difference in perception.

Compared to face-to-face visits, telephone consultations received significantly lower scores for perceived quality of care and person-centredness. Due to the limited number of video consultations (reported only four times), no definitive conclusions could be made. Home visits were associated with significantly lower scores in general health, mental well-being, confidence in self-management, and person-centred care. Other remote forms of care also showed significantly lower ratings in general health. These results are presented in Table 8 below.

Table 8 • PaRIS10 indicators by type of care received at their last consultation, PaRIS Survey, Belgium

Type of Care	General health (%)	Well-being (/100)	Physical health (16.2-67.7)	Mental health (21.2-67.6)	Social functioning (%)	Experienced quality of care (%)	Confidence to self-manage (%)	Trust in healthcare system (%)	Experienced coordination (/15)	Person-centred care (/24)
Positive Outcomes	Good, very good, excellent	≥ 50	≥ 42	≥ 40	Good, very good, excellent	Good, very good, excellent	Confident, very confident	Agree, strongly agree	≥ 7.5	≥ 12
Face-to-face consultation (n = 4,227)	78.6	62.0	46.4	47.1	89.1	96.0	65.2	69.8	9.2	18.0
Telephone consultation (n = 62)	68.0	57.1	44.0	45.7	84.4	86.0	63.5	59.4	8.2	16.0
Video consultation **(n = 4)**	100.0	69.2	52.5	52.1	100.0	100.0	67.4	51.0	7.5	17.3
Home visit (n = 120)	52.9	51.7	39.4	43.0	54.2	92.8	49.2	68.9	9.6	16.5
Other (n = 61)	50.3	56.7	42.3	45.6	76.0	93.9	59.7	61.7	8.4	17.1

Note: See Table 4 for more explanation regarding the PaRIS10 indicators.
All results were age-gender standardised. Missing data were omitted.
GREEN means confidence intervals (CIs) do not overlap and the value differs significantly ($p < 0.05$) from 'Face-to-face consultation'.

1.6. CARE PLANS

A care plan is defined in the PaRIS Patient Questionnaire (PaRIS-PQ) as: *"A written agreement between an individual and their healthcare professional outlining the type of care to be provided over an extended period, how the care will be delivered, and the individual's responsibilities in managing their care".*
Respondents with at least one chronic condition were asked, *"Do you have a care plan that takes into account all your health and wellbeing needs?"* The response options were 'Yes,' 'No,' or 'Not sure.' For the analysis below, the responses were dichotomized, with 'No' and 'Not sure' grouped together as a single category.
In our data, **28.0% of respondents with at least one chronic condition reported of having a care plan**. All scores below were age and gender standardized. Results were considered statistically significant when the 95% confidence intervals did not overlap.

When it comes to **general health**, 74.9% (95% CI: 70.9%-78.5%) of patients without a care plan rated their health as good, very good, or excellent, compared to 65.6% (95% CI: 60.3%-70.7%) of those with a care plan. In terms of **physical health**, patients without a care plan reported a higher average score of 45.7 (95% CI: 44.9-46.5) compared to 43.3 (95% CI: 42.3-44.2) among those with a care plan.

Social functioning was comparable between the groups, with 86.4% (95% CI: 83.1%-89.3%) of patients without a care plan reporting the ability to carry out usual social activities and roles effectively, similar to the 85.3% (95% CI: 81.0%-88.7%) observed in patients with a care plan. **Mental health** scores were also closely aligned, averaging 46.4 (95% CI: 45.7-47.1) for patients without a care plan and 46.0 (95% CI: 45.2-46.9) for those with a care plan. Similarly, **well-being** measured by the WHO-5 indicator was comparable between the groups, with an average score of 60.0 (95% CI: 57.8-62.2) for those without a care plan and 59.3 (95% CI: 56.8-61.8) for those with a care plan.

Experienced quality of care remained high in both groups, with nearly all patients rating their care as good, very good, or excellent, as evidenced by similar percentages among patients with a care plan (97.1%, 95% CI: 94.8%-98.3%) and those without (94.8%, 95% CI: 92.1%-96.6%). **Confidence in self-management** showed no substantial difference, with 63.2% (95% CI: 57.9%-68.2%) of patients without a care plan feeling confident or very confident in managing their own health, compared to 63.6% (95% CI: 57.6%-69.3%) of those with a care plan. **Trust in the healthcare system** was also similar, with 73.8% (95% CI: 69.1%-78.1%) of patients with a care plan agreeing or strongly agreeing that the system could be trusted, compared to 68.0% (95% CI: 63.9%-71.9%) of those without.

Furthermore, **person-centred care** scores were notably higher among patients with a care plan, averaging 19.0 (95% CI: 18.5-19.5) versus 17.4 (95% CI: 17.1-17.8) for those without, reflecting the added focus on individualized and holistic care.

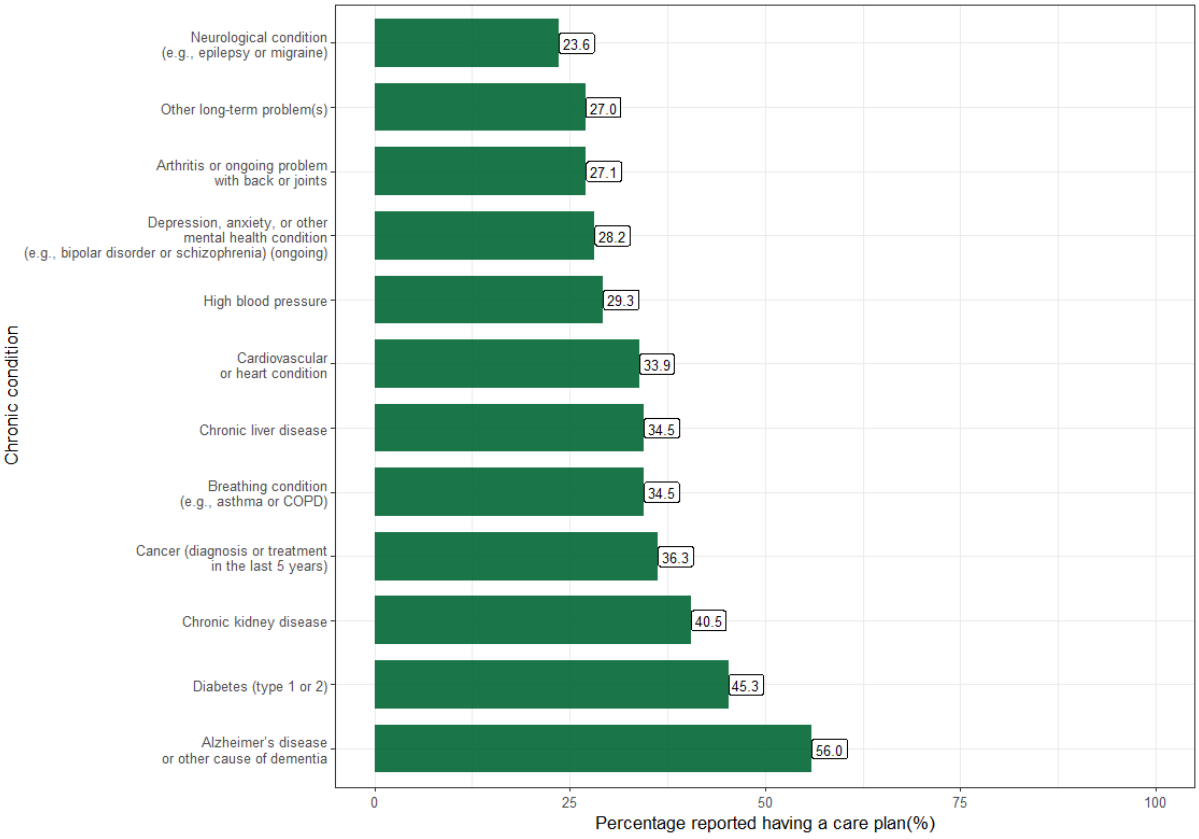
Note that the scale for **experienced care coordination** was not included in this analysis as it is composed of five questions on of which is the one addressed in this section "Do you have a care plan that takes into account all your health and wellbeing needs?".

These results show that, overall, there were no substantial differences between patients with and without care plans in terms of social functioning, mental health, well-being, confidence in self-management, or trust in the healthcare system. Both groups reported similarly high ratings of care quality, with nearly all patients rating their care as good, very good, or excellent. However, patients without a care plan reported better general health and physical health compared to those with a care plan. Conversely, patients with care plans reported higher person-centred care scores, suggesting that care plans may contribute to more individualized and holistic care experiences.

Examining the question of having a care plan across chronic conditions revealed considerable variation (Figure 45). While conditions such as dementia, diabetes, and kidney disease showed relatively higher rates of care planning, others such as neurological, arthritis, and mental health conditions had much

lower rates. Notably, no chronic condition type exceeds 56%, suggesting that care planning may not be a standard approach in Belgium. This variation may reflect differences in how care plans are used and defined across different health conditions in Belgium.

Figure 45 • Percentage of patients reported having a care plan by chronic condition, PaRIS Survey, Belgium (n = 3,414)



Lastly, a separate logistic regression model was constructed using the care plan variable as the dependent variable and including covariates selected via stepwise AIC, distinct from the analysis of the PaRIS10 indicators. This model showed that the **likelihood of having a care plan is significantly associated with age, the number of chronic conditions, and education level**. Compared to the reference group (individuals aged 45–54), older age groups had progressively higher odds of having a care plan. Although the 55–64 age group (OR = 1.25, 95% CI: 0.96–1.62) was not statistically significant, individuals in the 65–74 age group (OR = 1.59, 95% CI: 1.23–2.07) and those aged 75 and older (OR = 2.46, 95% CI: 1.83–3.33) showed substantially increased odds. Each additional chronic condition increased the odds by 11% (OR = 1.11, 95% CI: 1.03–1.20). In terms of education, respondents with higher secondary education had 28% lower odds (OR = 0.72, 95% CI: 0.58–0.90) and those with higher education had 50% lower odds (OR = 0.50, 95% CI: 0.41–0.62) of having a care plan compared to individuals with 'no education, primary education, or lower secondary education'. There was no significant association for gender (OR = 1.10, 95% CI: 0.92–1.31) or BMI (OR = 1.02, 95% CI: 1.00–1.04).

1.7. FINANCIAL HARDSHIP

The impact of financial hardship on PREMs and PROMs was also explored. A category of respondents experiencing financial hardship was identified, defined as those who reported 'always' or 'usually' to at least one of the following questions: "*How often in the past 12 months would you say you were worried or stressed about the following things? 1) Having enough money to buy healthy meals? 2) Having enough money to pay your rent or mortgage? 3) Having enough money to pay for other monthly bills, like electricity, heat, and your telephone?".* The results presented below include all respondents, both with and without chronic conditions.
In our study, **25.9% experienced financial hardship**. All scores below were age and gender standardized. Results were considered statistically significant when the 95% confidence intervals did not overlap.

Regarding **general health**, 79.8% (95% CI: 76.5%-82.8%) of individuals without financial hardship rated their health as good, very good, or excellent, compared to 71.0% (95% CI: 66.2%-75.4%) among those with financial hardship. For **physical health**, the average score for individuals without financial hardship was 46.9 (95% CI: 46.1-47.8), significantly higher than the 44.0 (95% CI: 43.1-44.9) reported by those with financial difficulties. A similar gap was observed in **mental health**, with scores of 47.5 (95% CI: 46.9-48.1) and 45.4 (95% CI: 44.6-46.1) for those without and with financial hardship, respectively.
The **well-being** of individuals without financial hardship was also markedly higher, with an average WHO-5 score of 63.0 (95% CI: 61.0-65.0) compared to 57.3 (95% CI: 55.0-59.5) for those experiencing financial difficulties. Similarly, in **social functioning**, 90.2% (95% CI: 87.8%-92.2%) of those without financial hardship reported being able to carry out their usual roles effectively, a higher proportion than the 81.8% (95% CI: 77.4%-85.5%) observed in those experiencing financial hardship.

Trust in the healthcare system was notably lower among those experiencing financial hardship. Only 61.4% (95% CI: 56.8%-65.8%) of this group reported trust in the system, compared to 72.0% (95% CI: 68.6%-75.1%) among those without financial concerns.
Confidence in managing one's health was comparable between groups, with 61.5% (95% CI: 55.8%-67.0%) of individuals facing financial hardship feeling confident or very confident, compared to 65.9% (95% CI: 61.1%-70.4%) among those without. Similarly, the **experienced quality of care** remained high across both groups, with 94.9% (95% CI: 92.1%-96.7%) of individuals with financial hardship rating their care as good, very good, or excellent, compared to 95.8% (95% CI: 93.8%-97.1%) among those without. Scores for **person-centred care** were also closely aligned, averaging 18.1 (95% CI: 17.7-18.4) for those without financial hardship and 17.5 (95% CI: 17.0-18.0) for those with. Similarly, **experienced care coordination** scores were nearly identical, averaging 9.2 (95% CI: 8.8-9.6) for individuals without financial hardship and 9.0 (95% CI: 8.5-9.4) for those with. These findings suggest that financial hardship might not have a substantial impact on these outcomes.

In summary, financial hardship can here be associated with poorer physical and mental health, lower well-being, reduced trust in the healthcare system, and diminished overall health and social functioning. However, the high ratings for quality and person-centred care could suggest that healthcare services may be effectively addressing the needs of financially vulnerable populations.

To better understand the underlying factors associated with financial hardship, a separate logistic regression model was constructed. Unlike the analyses of the PaRIS10 indicators, this model used financial hardship as the dependent variable and included covariates selected through stepwise AIC. In this model, several factors were influential. All older **age groups**, relative to the 45–54 reference group, showed significantly reduced odds of experiencing financial hardship. Specifically, individuals aged 55–64 (OR = 0.67, 95% CI: 0.55–0.82), 65–74 (OR = 0.67, 95% CI: 0.55–0.83), and those aged 75 and older (OR = 0.61, 95% CI: 0.47–0.79) were less likely to report financial hardship. Each additional **chronic condition** increased the odds of financial hardship by approximately 12% (OR = 1.12, 95% CI: 1.06–1.19). Education also played a role; while higher secondary education was not statistically significant (OR = 0.85, 95% CI: 0.70–1.04), individuals with **higher education** had 39% lower odds (OR = 0.61, 95% CI: 0.50–0.74) compared to those with 'no education, primary education, or lower secondary

education'. **Net household income** is as expected also an influential factor. Respondents in the middle income' category had 38% lower odds (OR = 0.62, 95% CI: 0.50–0.76), while those in the 'high income' category had 60% lower odds (OR = 0.40, 95% CI: 0.32–0.50) of experiencing financial hardship. Gender (OR = 0.99, 95% CI: 0.84–1.15) and BMI (OR = 1.02, 95% CI: 1.00–1.04) were not significant predictors of financial hardship.

1.7.1. Verhoogde tegenmoetkoming (VT)/bénéficiaire de l'intervention majorée (BIM)

In certain cases, patients may qualify for increased healthcare reimbursement (VT/BIM), which reduces costs for services such as doctor visits, hospital stays, and medications. Patients were asked whether they were beneficiaries of this increased intervention: 582 answered 'Yes', 3,362 answered 'No', 492 said 'Don't know', 45 selected 'Prefer not to say', and 206 did not respond. Only those who answered 'Yes' or 'No' were included in the analysis.

Patients eligible for increased healthcare reimbursement reported significantly poorer outcomes on PROMs. Compared to non-beneficiaries, they had lower scores in general health (55.2% vs. 83.4%), well-being (52.9 vs. 63.8), physical health (41.2 vs. 47.6), mental health (43.5 vs. 47.7), and social functioning (74.4% vs. 91.2%). These results are further presented in Table 9 below.

Table 9 • PaRIS10 indicators by VT/BIM, PaRIS Survey, Belgium

VT/BIM	General health (%)	Well-being (/100)	Physical health (16.2-67.7)	Mental health (21.2-67.6)	Social functioning (%)
Positive Outcomes	Good, very good, excellent	≥ 50	≥ 42	≥ 40	Good, very good, excellent
NO (n = 3,362)	83.4	63.8	47.6	47.7	91.2
YES (n = 582)	55.2	52.9	41.2	43.5	74.4
VT/BIM	**Experienced quality of care (%)**	**Confidence to self-manage (%)**	**Trust in healthcare system (%)**	**Experienced coordination (/15)**	**Person-centred care (/24)**
Positive Outcomes	Good, very good, excellent	Confident, very confident	Agree, strongly agree	≥ 7.5	≥ 12
NO (n = 3,362)	96.3	68.2	71.4	9.1	18.1
YES (n = 582)	94.3	57.9	63.3	9.3	17.6

Note: See Table 4 for more explanation regarding the PaRIS10 indicators.
All results were age-gender standardised. Missing data were omitted.
GREEN means confidence intervals (CIs) do not overlap and the value differs significantly ($p < 0.05$) from 'NO'

2. PaRIS Primary Care Practice Questionnaire (PaRIS-PCPQ)

The PaRIS Primary Care Practice Questionnaire (PaRIS-PCPQ) comprised 29 questions categorized into three broad themes. Data from the 59 participating GP practices was used. Some survey questions permitted multiple selections, which is reflected in totals exceeding 100% for those items.

2.1. PRACTICE CHARACTERISTICS

One of these categories focused on practice characteristics, which included questions on the type of practice and physician payment methods. Table 10 provides an overview of these aspects, stratified by the number of reported chronic conditions among patients.

Table 10 • Provider questionnaire merged with the patient survey and stratified by the number of reported chronic conditions (column%(n)). Missing values were excluded. PaRIS Survey, Belgium

	Number of chronic conditions		
	None	**One**	**Two or more**
Practice type			
Solo practice	13.4% (121)	17.3% (244)	17.4% (334)
Group practice*	50.6% (457)	46.5% (656)	43.2% (827)
Multi-specialty group practice	36.0% (325)	36.2% (511)	39.4% (754)
Total	100.0% (903)	100.0% (1,411)	100.0% (1,915)
How physicians are paid:**			
Fee for service	49.2% (537)	47.5% (819)	44.6% (1,045)
Sessional fees	2.9% (32)	2.3% (40)	2.8% (66)
Fixed salaries	12.5% (136)	14.8% (255)	18.1% (425)
Pay for performance	12.4% (135)	12.4% (214)	10.7% (250)
Capitation fee	17.3% (189)	15.7% (271)	17.0% (399)
Other	5.8% (63)	7.2% (124)	6.8% (160)
Total	100.0% (1,092)	100.0% (1,723)	100.0% (2,345)

*Group practices with own and shared patients where combined into one category.
** GPs could select multiple payment types, so the total number of responses exceeds the number of records.

For **practice type** within our sample, group practices were the most common type across all patient groups, although their prevalence decreased as the number of chronic conditions increased (50.6% for patients with no chronic conditions vs. 43.2% for those with two or more). Multi-specialty group practices showed an increasing trend, being more common among patients with multiple chronic conditions (36.0% for patients with no chronic conditions vs. 39.4% for those with two or more).
Solo practices were the least common practice type across all groups, accounting for approximately 13% of patients with no chronic conditions and around 17% for those with chronic conditions.

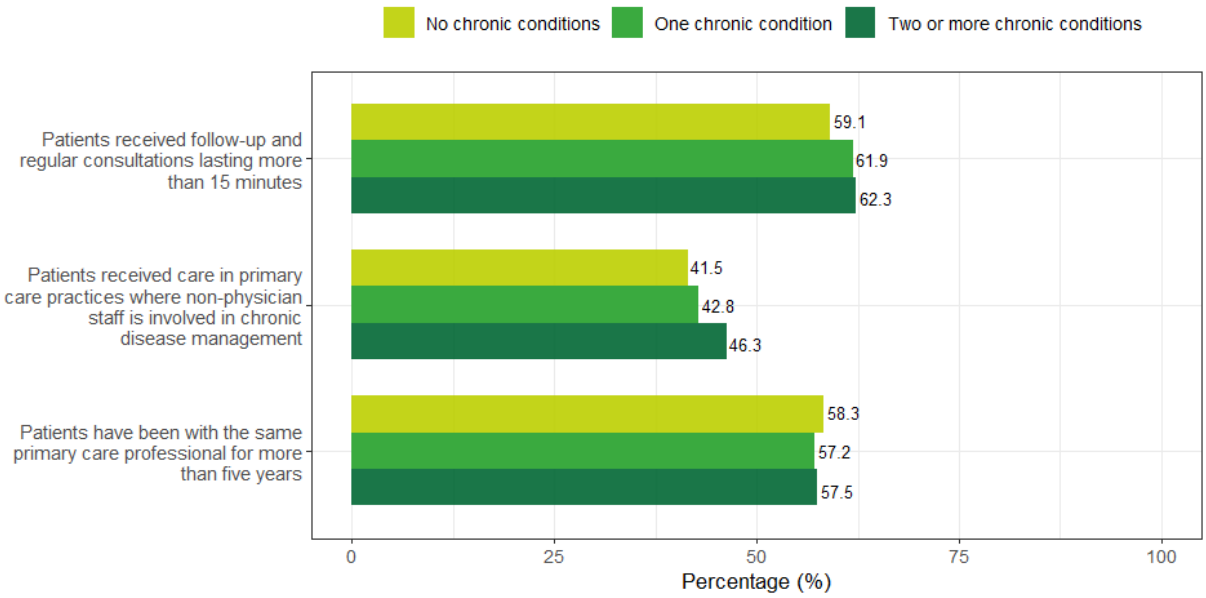
When considering the **physician payment methods** within our sample, fee for service was the most frequent payment model, but its prevalence declined slightly among physicians treating patients with multiple chronic conditions (49.2% for patients with no chronic conditions vs. 44.6% for those with two or more).
Fixed salaries were more frequently used for physicians managing patients with chronic conditions. Sessional fees, pay-for-performance and capitation fees remained relatively stable across the groups.
Additional insights into primary care practice characteristics can be observed in Figure 46, which illustrates key GP-related metrics based on patients' chronic condition status.

In terms of **consultation time**, the proportion of patients receiving follow-up and regular consultations lasting more than 15 minutes increased slightly with the number of chronic conditions, rising from 59.1% for those with no chronic conditions to 62.3% for those with two or more.

69.5% of GP practices reported having **involvement of non-physician staff in chronic disease management**. Regarding this involvement, patients with more chronic conditions were more likely to receive care in primary care settings where non-physician staff played a role, with 41.5% of those without chronic conditions experiencing this type of care compared to 46.3% of those with two or more chronic conditions.

For **continuity of care**, around 57-58% had been with the same primary care professional for more than five years, with only minimal differences based on chronic condition status.

Figure 46 • Percentage of respondents with varying number of chronic conditions and associated GP metrics, PaRIS Survey, Belgium



2.2. PRACTICE ORGANIZATION

The second category focussed on the organization of the practice, which included questions on the organisation, availability and exchange of medical records.

All participating primary care practices were capable of exchanging electronic medical records and medical records were always available during consultations. For our participating practices, the **information most commonly recorded in patients' medical records** includes 'diagnosis' (100%) and 'prescribed medications' (100%), which were universally documented. Close behind were 'clinical parameters' (98.3%), 'test results' (98.3%), and 'reasons for consultation' (98.5%), indicating a strong emphasis on medical assessments and test findings. Following these, 'smoking habit' (94.7%) and 'family medical history' (89.5%) were frequently included, reflecting the importance of lifestyle and hereditary factors in patient care. 'Weight and height' (89.5%) also appear in a significant proportion of records. Further down, 'substance use' (87.7%) and 'employment situation' (52.6%) were documented at moderate levels, showing some attention to social determinants of health. 'Living situation' (45.6%) and 'other information' (40.5%) were recorded less often. At the lower end, 'ethnicity' (21.1%) was the least frequently included.

Healthcare practices demonstrate a high capability for **electronic information exchange with professionals outside their practice**. Specifically, 93.2% of participating practices can electronically

exchange patient clinical summaries. Additionally, 88.1% of participating practices have the ability to exchange laboratory and diagnostic test results. Furthermore, 93.2% of participating practices can exchange electronic medical records.

2.3. CHRONIC CARE MANAGEMENT

The third category focused on the management of chronic care and the follow-up of patients in the practice.

Self-management support to patients with chronic conditions is mostly provided through verbal information during or after the consultation (85.5%). Additional methods of self-management support include the distribution of information through pamphlets, booklets, or internet/web-based resources (51.3%), explicit goal setting and action planning with members of the practice team (31.2%), referral to self-management classes or educators (16.9%), and support from members of the practice team trained in patient empowerment and problem-solving methodologies (6.9%). A small percentage of general practitioners (3.8%) reported that self-management support is not provided in any of these ways.

Shifting focus to data from the patient questionnaire, only 14.6% of patients with chronic conditions 'always' or 'often' have their **self-management goals recorded in their medical records.** Similarly, only 15.6% of patients with chronic conditions 'always' or 'often' receive written instructions (either electronically or on paper) about how to manage their own care at home.

The impact of care plans on patient outcomes and experiences was previously discussed in Part 1.6. However, a related question was posed to healthcare providers regarding the **development of care plans** within their practices. The extent to which patient care plans are developed varies based on patient needs and conditions. Most notably, over half (52.5%) of providers do not routinely create care plans. Among those who do, 15.3% develop care plans for all patients with chronic conditions, while a larger share (23.7%) focus only on specific chronic conditions. Additionally, 11.9% of care plans address specialized needs, such as nutritional or complex care requirements, and just 1.7% are created for other patient groups. Another 1.7% of GP respondents were unsure about their practice’s approach to care plan development.

The ability of primary care practices to **coordinate care with other health and social care providers** varies based on patient needs, with less than half reporting readiness in most areas. Only 47.5% of practices feel well-prepared to coordinate care for patients with chronic conditions, while even fewer (27.1%) are equipped to support those with severe mental health issues such as depression, bipolar disorder, or schizophrenia. Readiness drops further for patients dealing with addiction or substance misuse, with just 18.6% of practices reporting adequate coordination. Coordinating community-based social services—such as housing, meals, and transportation—is an area where only 35.6% of practices feel well-prepared. Notably, only 15.3% of practices are well-equipped to coordinate translation services for patients requiring language support. However, there are strengths in certain areas, with a higher proportion of practices prepared for palliative (69.5%) and long-term care coordination (61.0%).

When **referring patients to another specialist**, only 26.3% of practices reported that they 'always' or 'often' write electronic referral letters (including details on provisional diagnoses and possible test results) whereas a much larger percentage (93.0%) 'always' or 'often' use paper referral letters. In contrast, after a follow-up visit, 93.0% of practices indicated that they 'always' or 'often' receive timely electronic referral information from specialists, yet only 25.0% 'always' or 'often' reported receiving timely information through paper referral letters.

3. Practice- and patient-level variation

The intraclass correlation (ICC) was calculated to assess variation in the ten PaRIS key indicators, to determine the extent to which variation was explained by provider- and patient-level factors. Results indicate that patient-level characteristics account for most of the variation, while provider-level characteristics contribute only a small proportion. However, the influence of provider-level factors varies across indicators, being more substantial for some than others.

For instance, experienced quality of medical care showed the highest proportion of variation attributable to provider-level characteristics at 12.76%. This is followed by physical health (8.07%), confidence in self-management (7.43%) and well-being (7.38%). Indicators such as experienced care coordination (4.38%), social functioning (4.09%), general health (3.90%), and person-centred care (2.33%) showed lower proportions of provider-level variation. Mental health accounted for even less at 1.94%, and trust in the healthcare system demonstrated the smallest contribution from provider-level factors, with only 0.41%.

These findings highlight that while patient-level factors dominated in explaining variation, provider-level characteristics could play a more significant role in specific areas, such as experienced quality of care and physical health. This variation emphasized the importance of adjusting interventions to address both patient and provider contributions to outcomes and experiences, particularly where provider influence is more pronounced.

4. Belgium in an international context

Belgium's performance in the OECD PaRIS survey presents a mixed picture, with strengths and challenges in certain PROMs and PREMs. The survey included 19 countries, but only 17 were used for comparison[f1]. Table 4 provides a detailed comparison of the PaRIS10 indicators.

Regarding **PROMs,** Belgium ranked 11th for both physical and mental health, positioning it close to the OECD PaRIS average (within one comparative interval, meaning no statistically significant difference). Similarly, Belgium placed 9th for well-being and social functioning. However, general health showed a relatively stronger performance, ranking 6th, though still near the average.

While PROMs were closer to the average, Belgium excelled in several **PREMs**. It ranked 3rd for person-centred care and experienced quality of medical care, performing significantly better than the OECD PaRIS average (statistically higher by at least one comparative interval). Confidence to self-manage was ranked 7th, while trust in the healthcare system and experienced care coordination both ranked 6th, all of which were close to the OECD average.

In addition to the overall report, specific country notes were released by the OECD, presenting the most interesting finding for Belgium in the international context, as well as identifying both best and worst results.
For Belgium, one of the most notable findings was that around two-thirds of patients with two or more chronic conditions receive follow-up and regular consultations lasting more than 15 minutes, which is substantially higher than the OECD PaRIS average of 47%. This highlights a strong commitment to continuity and quality of care for patients with complex health needs.
On the other hand, only 46.3% of these patients were treated in primary care settings where non-physician staff actively participate in chronic disease management, compared to the OECD average of 83%. This points to a key area where Belgium lags behind in terms of team-based, coordinated care.
Belgium stands out positively in terms of digital infrastructure: all participating primary care practices reported the ability to exchange electronic medical records, and records were always available during consultations, far above the OECD average of 57%. However, digital health literacy remains a significant challenge, with just 8% of patients with chronic conditions feeling confident in using online health information, well below the OECD average of 19%.

These international comparisons help identify and share best practices, contributing to ongoing healthcare improvements across countries.
In summary, Belgium performs well in areas such as patient follow-up and digital infrastructure, but shows room for improvement in digital health literacy and the integration of non-physician staff into chronic care pathways. However, methodological differences between countries—such as France's use of a different recruitment approach—can complicate direct comparisons and limit definitive conclusions. Future analyses that account for these variations could offer deeper insights into the relative strengths and areas for development within Belgium's primary care system.

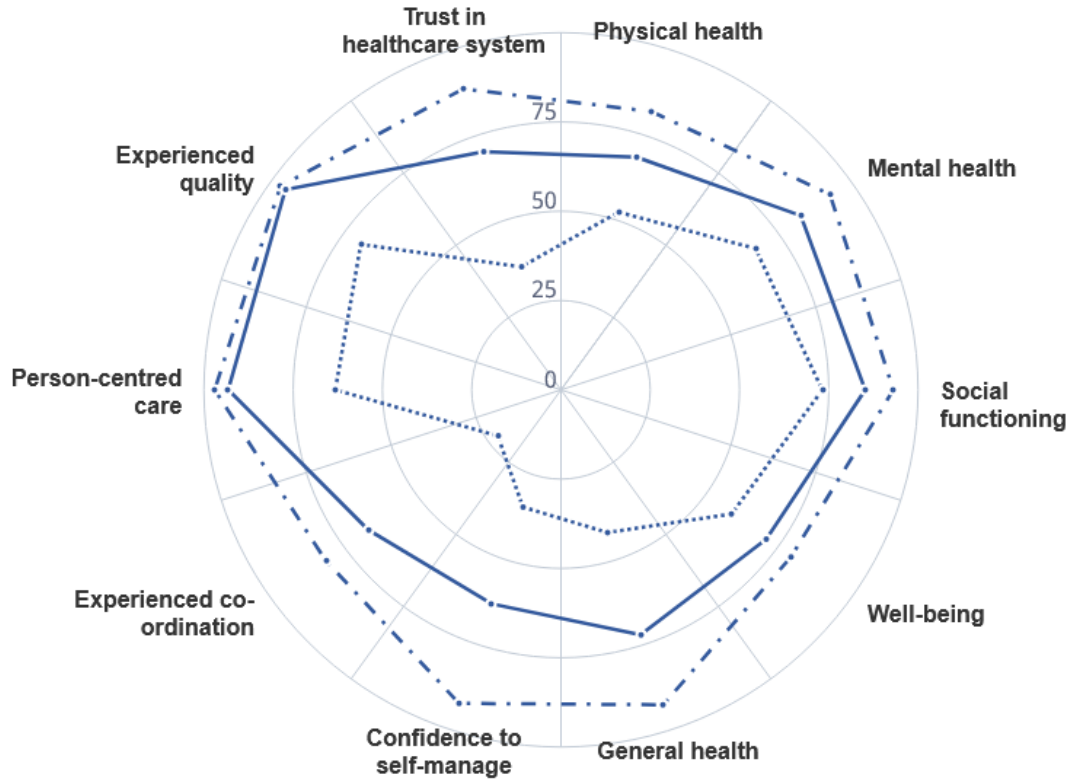
For a visual representation of Belgium, see Figure 47 below, extracted from the country notes.[24] More details can also be found in the OECD report.[13]

[f1] Italy and the United States were excluded due to differences in data collection methods. Italy's data referred to patients in outpatient specialist settings in selected regions, while the U.S. sample was limited to individuals aged 65 and older.

Figure 47 • **PaRIS 10 Key Indicators of Belgium, extracted from the country notes (n = 4,577)**[24]

Figure 1. PaRIS 10 Key Indicators

Percentage of people with one or more chronic conditions reporting positive outcomes or experiences



Note: For all indicators, percentage values are shown, measuring the percentage of people reporting a positive outcome or experience (for example, patients reporting being in good, very good or excellent general health). See Table 1, for more information on the cutoffs for positive responses and the scales used. Highest (lowest) represents the highest (lowest) values found for each indicator among 17 PaRIS countries.

Source: OECD PaRIS 2024 Database.

DISCUSSION

This study represents a ground-breaking step in assessing patient-centred care in Belgium. However, several important limitations should be taken into account to accurately interpret the findings and improve future research cycles. In addition, key findings and considerations are outlined below to support further analysis and policy development

Representativeness of general practitioners

The representativeness of participating GPs may be influenced by selection bias. Given that participation required additional administrative efforts, solo practitioners—who typically have a higher workload—were underrepresented. Additionally, the study may have attracted GPs who were already engaged with patient-centred care and quality improvement initiatives, potentially skewing the results. However, the next cycle might be easier to encourage participation as it will be more than just an idea, it will be a fully developed concept. Additionally, we received positive feedback on the practice specific reports we provided for each GP (in addendum), which offered a clear overview of areas where practices performed well in comparison to the Belgian average. These reports served as a valuable tool to highlight strengths and can act as an incentive for broader participation in the future.

Representativeness of patients

The representativeness of the patient sample is also subject to limitations. Due to a lack of data on non-participants, it is unclear how selection bias may have influenced the results. While efforts were made to include diverse populations—such as translating the survey into some minority languages—the use of these translations remained limited, potentially excluding significant groups such as Turkish- and Arabic-speaking communities. Furthermore, the study relied on written responses, inherently excluding illiterate individuals. As the inclusion criteria required patients to have had at least one GP consultation in the past six months, individuals with chronic conditions necessitating less frequent contact with primary care may have been excluded, potentially leading to underrepresentation of this group—either due to limited current engagement with primary care services or the specific nature of their condition. These gaps indicate that certain vulnerable populations may not have been adequately represented, necessitating additional strategies for broader inclusion in future studies.

Key findings and considerations

Several notable findings emerged from the study:

- Gender paradox: Women generally live longer than men but do not necessarily report better health. This trend was reflected in the study, as women tended to score lower on PROMs, though these differences were not always statistically significant. Additionally, small differences were observed in PREMs, particularly regarding trust in the healthcare system.
- Influence of socioeconomic factors: Income and educational level were found to impact both PROMs and PREMs. Individuals with higher income and education levels generally reported better general, physical, mental, and social health, and greater well-being. Trust in the healthcare system was more strongly linked to income education as well. These findings highlight the importance of addressing socioeconomic disparities in healthcare access and experience.
- Heatmap findings: Patients without chronic conditions reported the best outcomes, while those with Alzheimer's/dementia had the lowest scores across all health and most experience measures. Depression and anxiety were also linked to poor mental health and well-being. In contrast, cancer patients reported high care quality (97%) and the strongest trust in the healthcare system (75%).

Better health outcomes were strongly associated with greater confidence in self-management and higher trust in the healthcare system, highlighting the close link between patient-reported health and care experience.

- (Digital) health literacy: Health literacy revealed a clear socioeconomic gradient. Patients with higher education and income reported higher health literacy, regardless of chronic condition. It declined slightly with the number of chronic conditions and more noticeably with age, particularly low in patients 75+.
  Digital health literacy was notably low, especially among older adults. Only 8% of patients with chronic conditions felt confident using online health information. Confidence peaked at 13.0% for those aged 45–54 but dropped sharply to 4.0% for those 75+.
- Digital tools: While digital tools are increasingly integrated into primary care, their effectiveness largely depends on patients' ability to use them. A large majority of practices reported offering phone consultations (89.5%), with slightly fewer providing video consultations (80.7%) and other remote methods such as email, SMS, or secure platforms (75.4%). Despite this widespread availability, only 58.3% of patients found practice websites easy to use, with a notable gap between those with higher and lower education levels (20.9%). Remote consultations, especially phone calls and home visits, were linked to lower scores in perceived care quality, confidence in self-management, and both general and mental health.
- Care plans: Results regarding care plans were not particularly strong, suggesting possible confusion among respondents about what a care plan entails. Notably, no chronic condition exceeds 56%, indicating that care planning may not be a standard practice. These variations suggest potential gaps in care planning for certain conditions and highlight the need for a more consistent approach in Belgium. However, given the potential of care plans as a tool for patient self-management, further efforts should be made to clarify their purpose and assess their effectiveness.
- Practice type and payment system: Due to the small sample size, in-depth analyses by practice type and financial model were challenging. However, preliminary findings suggest that physicians treating patients with multiple chronic conditions may be more likely to work in multi-specialty group practices and receive fixed salaries or capitation payments rather than relying solely on a fee-for-service model. Future studies with larger samples could explore this trend more rigorously.
- GP support for self-management: A discrepancy was observed between the presence of self-management goals in patient records and the actual support provided by GPs. This highlights a potential gap in the implementation of self-management strategies, warranting further investigation.
- Care coordination: Primary care practices report low readiness for coordinating care across various needs: 47.5% for chronic conditions, 27.1% for severe mental health issues, and 18.6% for addiction. Social service coordination is better at 35.6%, while translation services are a major gap at 15.3%. However, practices are more prepared for palliative (69.5%) and long-term care (61.0%). To address these gaps, interviewing GPs and exploring opportunities such as targeted studies or training programs could help increase their confidence and knowledge in care coordination.
- Financial hardship and health outcomes: Financial hardship was associated with poorer physical and mental health outcomes, this includes those eligible for increased healthcare reimbursement. While healthcare services may be addressing the needs of financially vulnerable patients to some extent, targeted interventions are still needed to mitigate the broader health and social impacts of financial insecurity
- Limitations of representativeness of patient-reported data: It is important to note that all results in this study are based solely on patient-reported data and are not supported by objective clinical outcomes. This reliance on subjective measures may influence the interpretation of the findings, emphasizing the need for future research to integrate clinical data for a more comprehensive understanding of patient-centred care.

Implications for future research and policy

These findings emphasize the need for a nuanced approach to patient-centred care that goes beyond medical diagnoses. General health, well-being, and physical health—as captured by PROMs—were found to be closely linked to patient experiences (PREMs). This reinforces the importance of integrating patient perspectives into healthcare evaluation and decision-making. The results of the PaRIS Survey can serve as a foundation for new policy initiatives. This will enable the development of effective policies aimed at achieving patient-centred and integrated care.

While this study provides valuable insights, certain improvements should be considered for the next research cycle (confirmed by the OECD). Addressing selection bias in GP and patient participation, expanding translation efforts to reach more minority populations, and exploring alternative survey modes to include illiterate individuals will enhance the representativeness of future findings. Additionally, acknowledging the limitations of the current study will help refine methodologies and improve the generalizability of patient-centred care assessments in Belgium.

By critically evaluating these aspects and implementing targeted strategies, future research can better inform policies that enhance healthcare accessibility, trust, and quality for all patients, regardless of socioeconomic or demographic background.

CONCLUSION

This study represents a significant milestone as the first international and national initiative to evaluate the quality of care from the patient's perspective using Patient-Reported Experience Measures (PREMs) and Patient-Reported Outcome Measures (PROMs) in primary care.
By shifting the focus from "*What's the matter?*" to "*What matters to you?*", this study goes beyond quantitative evaluation to provide meaningful insights into how patients truly experience care. This patient-centred approach offers valuable guidance for improving healthcare quality based on what matters most to those receiving care in Belgium.

REFERENCES

1. OECD. *Health at a Glance 2023: OECD Indicators*. OECD; 2023. doi:10.1787/7a7afb35-en

2. Reig-Garcia G, Cámara-Liebana D, Suñer-Soler R, et al. Assessment of Standardized Care Plans for People with Chronic Diseases in Primary Care Settings. *Nurs Rep*. 2024;14(2):801-815. doi:10.3390/nursrep14020062

3. Cramm JM, Nieboer AP. Relational coordination promotes quality of chronic care delivery in Dutch disease-management programs. *Health Care Manage Rev*. 2012;37(4):301-309. doi:10.1097/HMR.0b013e3182355ea4

4. Jowsey T, Dennis S, Yen L, Mofizul Islam M, Parkinson A, Dawda P. Time to manage: patient strategies for coping with an absence of care coordination and continuity. *Sociol Health Illn*. 2016;38(6):854-873. doi:10.1111/1467-9566.12404

5. OECD. *Measuring What Matters: The Patient-Reported Indicator Surveys*. OECD Publishing; 2019. doi:10.1787/2148719d-en

6. van Merode T, van de Ven K, van den Akker M. Patients with multimorbidity and their treatment burden in different daily life domains: a qualitative study in primary care in the Netherlands and Belgium. *J Comorb*. 2018;8(1):9-15. doi:10.15256/joc.2018.8.119

7. Martens M, Danhieux K, Van Belle S, et al. Integration or Fragmentation of Health Care? Examining Policies and Politics in a Belgian Case Study. *Int J Health Policy Manag*. 2022;11(9):1668-1681. doi:10.34172/ijhpm.2021.58

8. De Maeseneer J, Galle A. Belgium's Healthcare System: The Way Forward to Address the Challenges of the 21st Century; Comment on "Integration or Fragmentation of Health Care? Examining Policies and Politics in a Belgian Case Study." *International Journal of Health Policy and Management*. 2023;12(Issue 1):1-4. doi:10.34172/ijhpm.2022.7070

9. Jamieson Gilmore K, Corazza I, Coletta L, Allin S. The uses of Patient Reported Experience Measures in health systems: A systematic narrative review. *Health Policy*. 2023;128:1-10. doi:10.1016/j.healthpol.2022.07.008

10. Maertens de Noordhout C, Devos C, Adriaenssens J, Bouckaert N, Ricour C, Gerkens S. Health system performance assessment: care for people living with chronic conditions.

11. Nolte E, Knai C, Saltman R. *Assessing Chronic Disease Management in European Health Systems. Concepts and Approaches*.; 2014.

12. van den Berg M, others. *PaRIS Field Trial Report: Technical Report on the International PaRIS Survey of People Living with Chronic Conditions*. OECD Publishing; 2024. doi:10.1787/e5725c75-en

13. OECD. *Does Healthcare Deliver?: Results from the Patient-Reported Indicator Surveys (PaRIS)*. OECD Publishing; 2025. doi:10.1787/c8af05a5-en

14. Groenewegen P, Spreeuwenberg P, Timans R, et al. Data analysis plan of the OECD PaRIS survey: leveraging a multi-level approach to analyse data collected from people living with chronic conditions and their primary care practices in 20 countries. *BMC Research Notes*. 2024;17(1):157. doi:10.1186/s13104-024-06815-7

15. R Core Team. *R: A Language and Environment for Statistical Computing*. R Foundation for Statistical Computing; 2024. https://www.R-project.org/

16. Cella D, Yount S, Rothrock N, et al. The Patient-Reported Outcomes Measurement Information System (PROMIS): Progress of an NIH Roadmap Cooperative Group During its First Two Years. *Medical Care*. 2007;45(5):S3. doi:10.1097/01.mlr.0000258615.42478.55

17. Hays RD, Bjorner JB, Revicki DA, Spritzer KL, Cella D. Development of physical and mental health summary scores from the patient-reported outcomes measurement information system (PROMIS) global items. *Qual Life Res*. 2009;18(7):873-880. doi:10.1007/s11136-009-9496-9

18. Bonsignore M, Barkow K, Jessen F, Heun PDR. Validity of the Five-item WHO Well-Being Index (WHO–5) in an elderly population. *European archives of psychiatry and clinical neuroscience*. 2001;251 Suppl 2:II27-31. doi:10.1007/BF03035123

19. Sugavanam T, Fosh B, Close J, Byng R, Horrell J, Lloyd H. Codesigning a Measure of Person-Centred Coordinated Care to Capture the Experience of the Patient: The Development of the P3CEQ. *Journal of Patient Experience*. 2018;5(3):201-211. doi:10.1177/2374373517748642

20. Lloyd H, Fosh B, Close J, Byng R. Validation of the Person Centred Coordinated Care Experience Questionnaire. *International journal for quality in health care : journal of the International Society for Quality in Health Care*. 2018;31. doi:10.1093/intqhc/mzy212

21. Parker J, Regan J, Petroski J. Beneficiary Activation in the Medicare Population. *MMRR*. 2014;4(4):E1-E14. doi:10.5600/mmrr.004.04.b02

22. 2017 Commonwealth Fund International Health Policy Survey of Older Adults. November 15, 2017. Accessed July 31, 2024. https://www.commonwealthfund.org/publications/surveys/2017/nov/2017-commonwealth-fund-international-health-policy-survey-older

23. Maibach E, Weber D, Massett H, Hancock G, Price S. Understanding Consumers' Health Information Preferences Development and Validation of a Brief Screening Instrument. *Journal of health communication*. 2007;11:717-736. doi:10.1080/10810730600934633

24. OECD. Does Healthcare Deliver? Results from the Patient-Reported Indicator Surveys (PaRIS): Belgium. 2025. https://www.oecd.org/en/publications/does-healthcare-deliver-results-from-the-patient-reported-indicator-surveys-paris_748c8b9a-en/belgium_d4ba0ccc-en.html

LIST OF TABLES

LIST OF FIGURES

ADDENDUM

A1. Rescaling standardization variables

Table A1 • Rescaling standardization variables according to Groenewegen et al., 2024. PaRIS Survey, Belgium

MALE	FEMALE	45-54	55-64	65-74	75+	MALE_std	FEMALE_std	age_std1	age_std2	age_std3	age_std4
1	0	**1**	0	0	0	0.522	-0.522	0.717	-0.289	-0.226	-0.202
1	0	0	**1**	0	0	0.522	-0.522	-0.283	0.711	-0.226	-0.202
1	0	0	0	**1**	0	0.522	-0.522	-0.283	-0.289	0.774	-0.202
1	0	0	0	0	**1**	0.522	-0.522	-0.283	-0.289	-0.226	0.798
0	**1**	**1**	0	0	0	-0.478	0.478	0.717	-0.289	-0.226	-0.202
0	**1**	0	**1**	0	0	-0.478	0.478	-0.283	0.711	-0.226	-0.202
0	**1**	0	0	**1**	0	-0.478	0.478	-0.283	-0.289	0.774	-0.202
0	**1**	0	0	0	**1**	-0.478	0.478	-0.283	-0.289	-0.226	0.798

A2. Questionnaire paradata

A total of 4,687 patient survey responses were collected. Of these received surveys, 2,799 (59.7%) were completed online, and 1,888 (40.3%) were completed on paper. Note that among the 1,888 paper records, 110 were not sent to the OECD for their flagship report because they were received after the submission deadline; however, these 110 records are still included in our total counts/data. A total of 3,197 respondents used the Dutch version of the questionnaire, 1,462 used the French version, and a limited number used other languages, including English (19), Italian (4), Arabic (3), Turkish (1), and Spanish (1).

The average survey completion time for patients completing the questionnaire online was 26.9 minutes. Data for paper completions were not available. When analysed by practice, averaged completion times ranged from a minimum average of 21.3 minutes to a maximum average of 43.6 minutes. By gender, the average time was 27.7 minutes for females and 27.4 minutes for males. Completion times by age category were as follows: 25.4 minutes for those aged 45-54 years old, 26.3 minutes for 55-64 years old, 27.4 minutes for 65-74 years old, and 32.1 minutes for those 75 years and older. By education level, the times were 32.2 minutes for respondents with no education, primary education, or lower secondary education; 28.5 minutes for those with higher secondary education; and 25.6 minutes for those with higher education. Finally, completion times by income were 31.4 minutes for low income respondents, 28.0 minutes for middle income patients, and 25.9 minutes for high income respondents. Note that these data are subject to bias, as only online survey completions were considered and available.

In 88.9% of cases, the person invited completed the survey themselves. Additionally, 2.5% were completed by a friend or relative on behalf of the invited person, 2.9% were completed jointly, and 0.9% with help from a healthcare professional or care worker. In 4.9% of cases, no information was provided on who completed the questionnaire.

A3. GP Report

On the following page, you will find an example of the GP report sent individually to each participating GP. Each GP received a personalized report. This example is fictional and combines data from five GP practices to ensure anonymity. It includes the front page and core content but excludes the back page.

The example is in Dutch. The report contains demographic information about participating patients, along with insights on lifestyle and health behaviours. It also includes Patient-Reported Outcome Measures (PROMs) and Patient-Reported Experience Measures (PREMs).

GEZONDHEIDSZORGONDERZOEK

RAPPORT
PARIS

Rapport van de geaggregeerde en geanonimiseerde resultaten van uw patiënten

D. ANNAERT[1] • R. EKELSON[1] • A. VAN VYVE[1] • R. DE SCHREYE[1]

[1] Sciensano, Gezondheidszorgonderzoek, Brussel

April 2024 • Brussel • België

VOORBEELD RAPPORT: data van vijf willekeurige huisartsenpraktijken gecombineerd

Nogmaals van harte bedankt voor uw deelname aan PaRIS

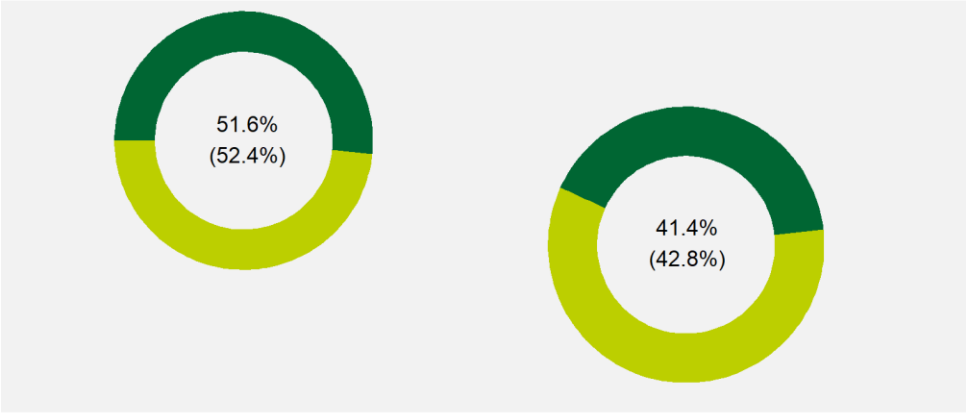
Een project van:

Onze partners:

DEMOGRAFISCHE GEGEVENS

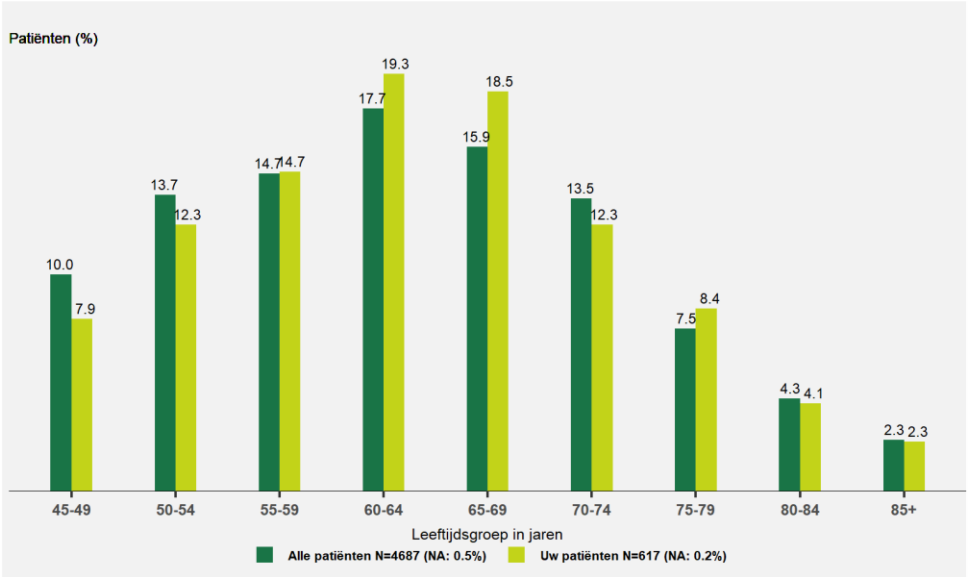
Demografie van de deelnemende patiënten aan PaRIS in uw praktijk en in België wordt weergegeven in de bijgevoegde figuren. Geslacht en leeftijd worden beschreven in de eerste twee figuren, terwijl de derde figuur het aantal chronische aandoeningen per patiënt weergeeft. 80% van de deelnemende patiënten rapporteerde dat ze minstens één chronische aandoening hadden. 48% meldde dat ze meer dan één chronische aandoening hadden.

FIGUUR 1 | Geslacht van alle patiënten (uw patiënten)

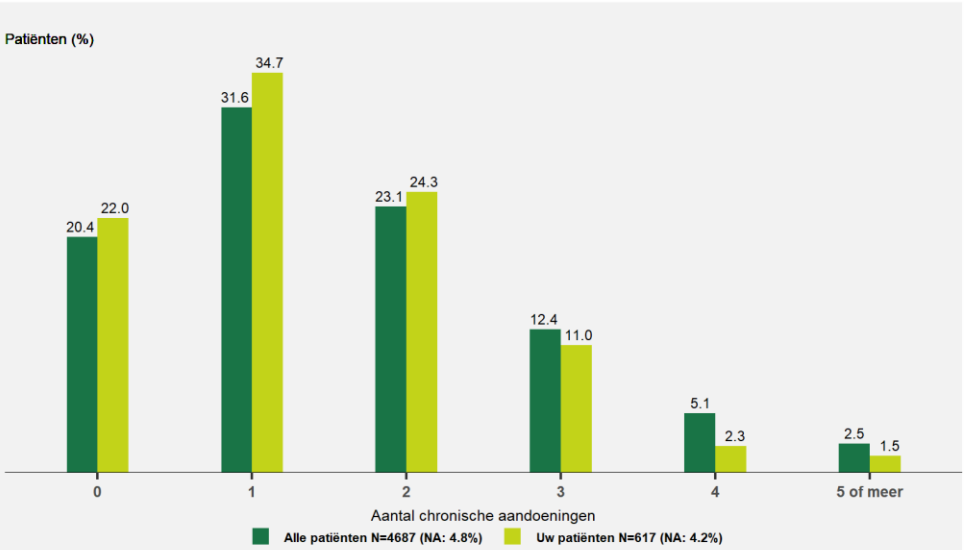


Alle patiënten: 0.8% duiden anders aan of zeggen liever niet wat hun geslacht is en 6.2% waren NA.
Uw patiënten: 1% duiden anders aan of zeggen liever niet wat hun geslacht is en 3.9% waren NA.

FIGUUR 2 | Leeftijd van alle en uw patiënten

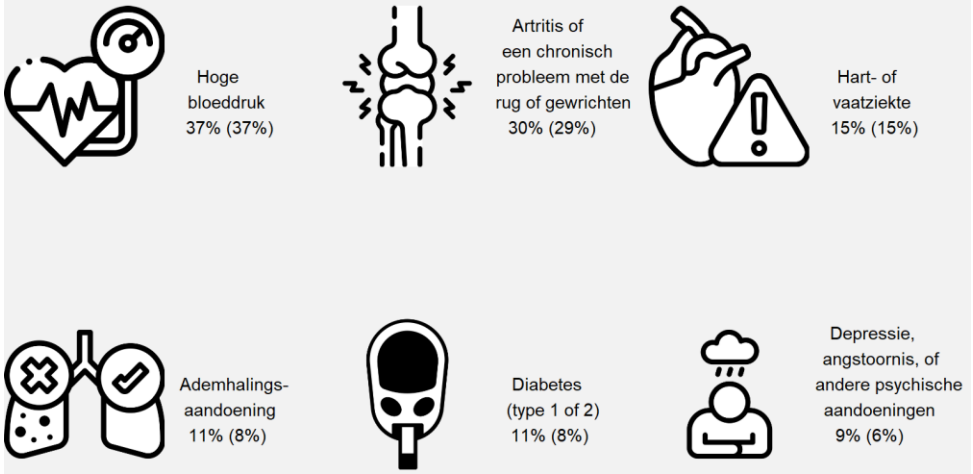


FIGUUR 3 | Aantal chronische aandoeningen



Meest gerapporteerde chronische aandoeningen - nationale data

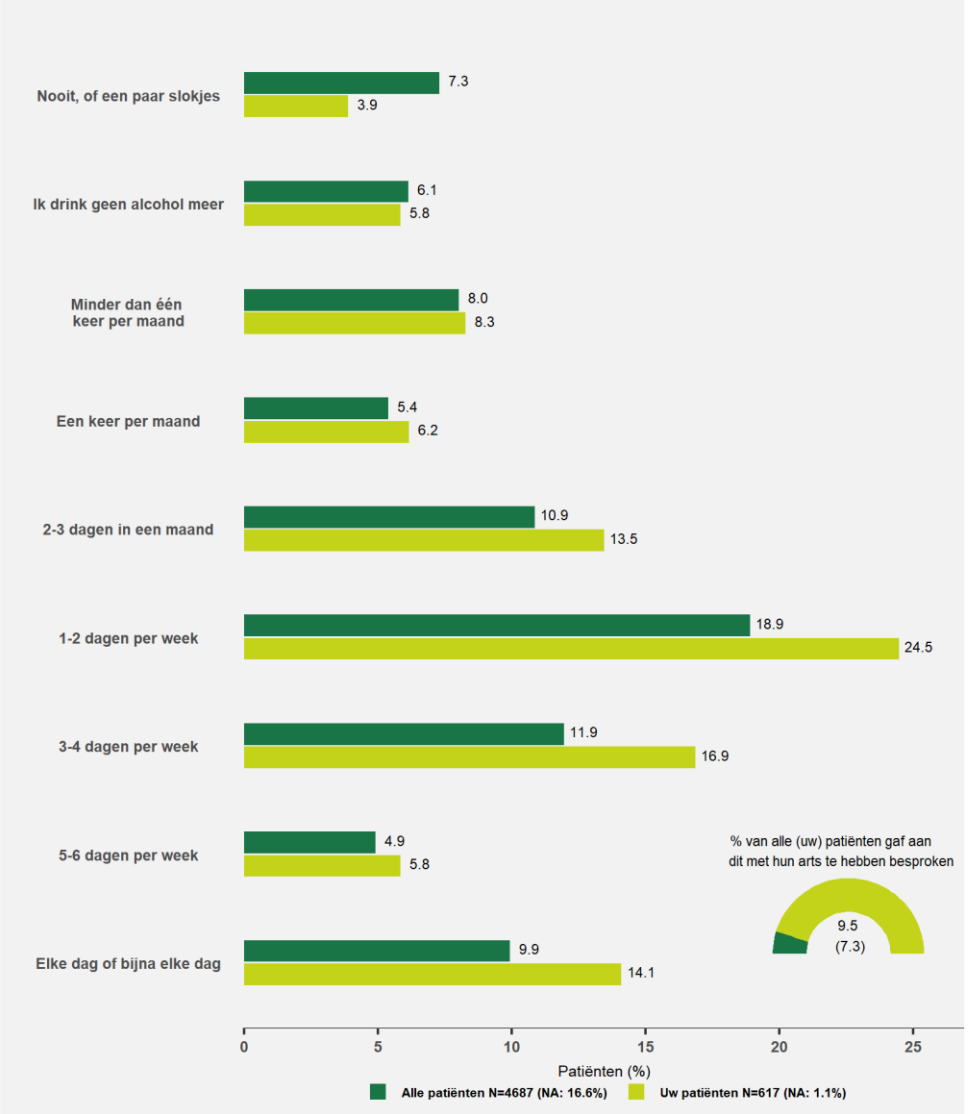
Alle patiënten (uw patiënten)



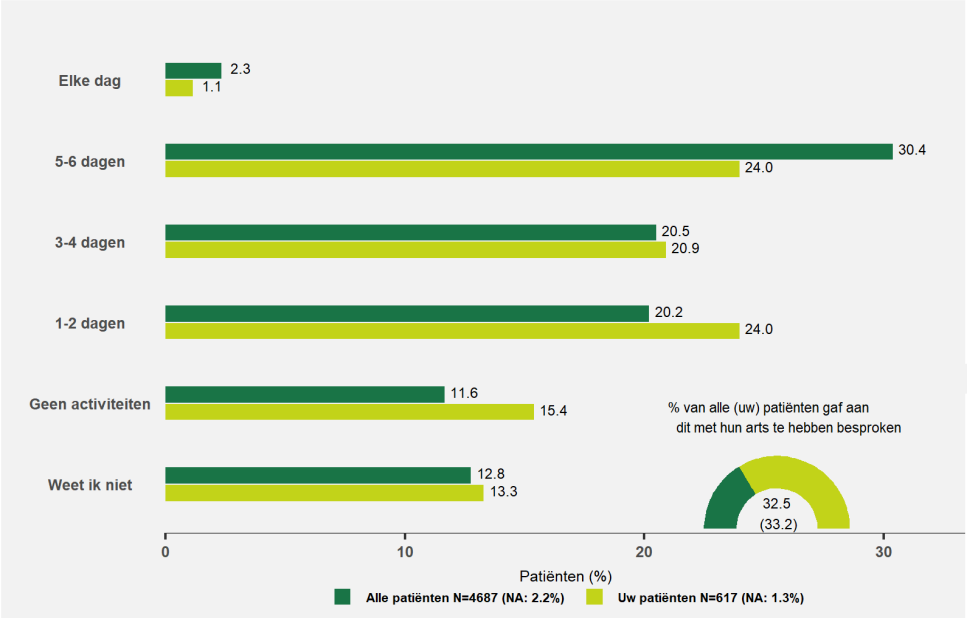
GEZONDHEIDSGEDRAG EN LEVENSSTIJL

De levensstijl en het gezondheidsgedrag van mensen hebben een significante invloed op hun gezondheidstoestand. Onderstaande figuren tonen het belangrijkste gezondheidsgedrag van uw patiënten (lichaamsbeweging, alcohol- en tabaksgebruik) en het ontvangen preventieadvies, zoals gerapporteerd door de deelnemers.

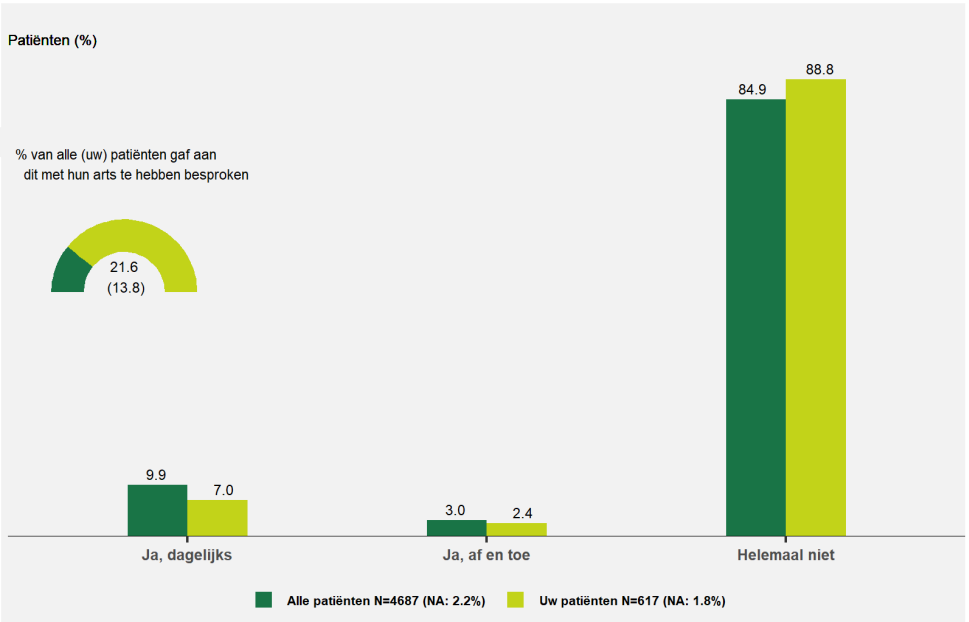
FIGUUR 4 | Hoe vaak hebt u in de afgelopen 12 maanden een alcoholische drank gedronken?



FIGUUR 5 | Hoeveel dagen hebt u vorige week minstens 30 minuten aan intensieve of matige activiteit gedaan?



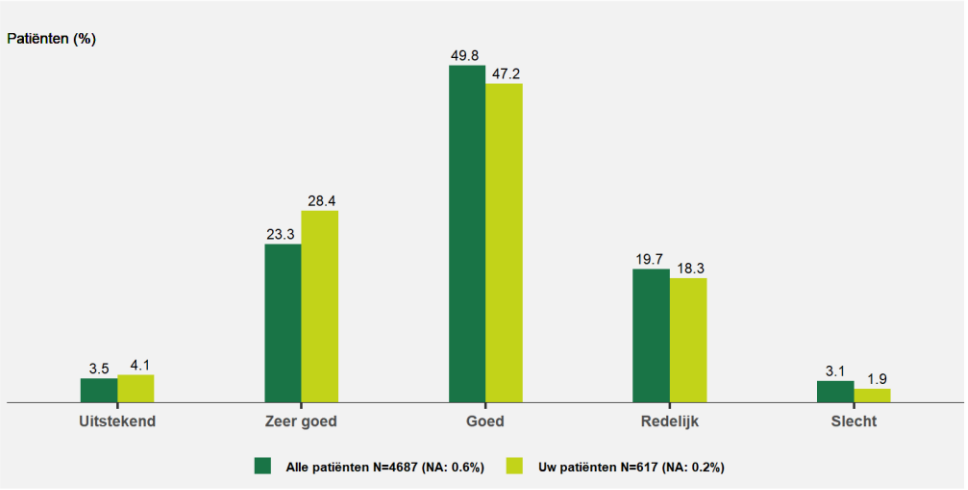
FIGUUR 6 | Rookt u tabaksproducten?



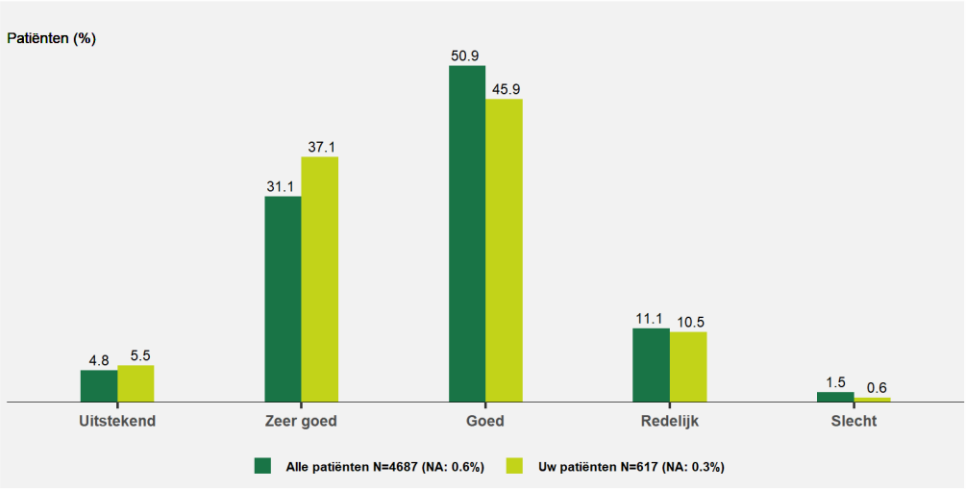
PROMs

PROMs (Patient Reported Outcomes Measurement) zijn meetinstrumenten die de persoonlijke beoordelingen van patiënten vastleggen met betrekking tot de impact van ziekte of zorg op hun algehele gezondheid en welzijn. Dit omvat aspecten zoals levenskwaliteit, symptomen en het vermogen om dagelijkse taken uit te voeren. De resultaten van PROMs worden beschouwd als veranderingen in de gezondheidstoestand, kennis of gedrag die direct kunnen worden toegeschreven aan eerdere gezondheidszorg. De figuren die volgen tonen de beoordeling van de algehele gezondheid en het welzijn door uw patiënten, samen met die van de volledige groep deelnemers in België.

FIGUUR 7 | Hoe vindt u over het algemeen uw gezondheid?



FIGUUR 8 | Hoe vindt u over het algemeen uw kwaliteit van leven?

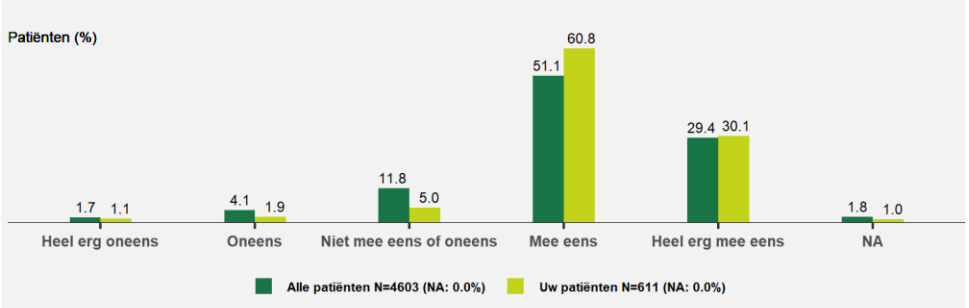


PREMs

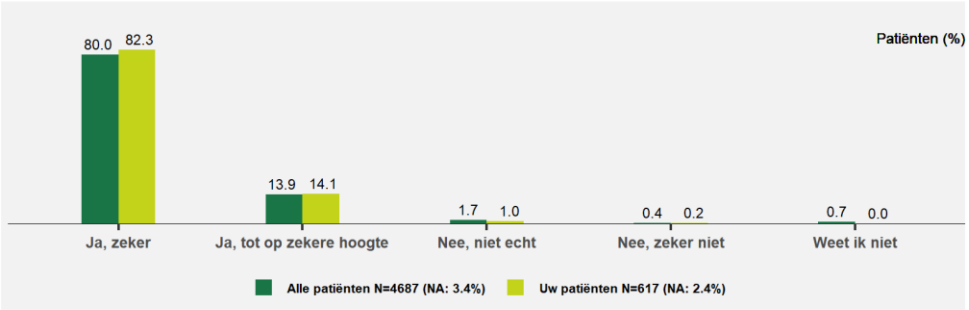
PREMs (Patient Reported Experience Measurement) worden ingezet om de ervaring van patiënten tijdens het ontvangen van zorg vast te leggen. Het doel is om het effect van het zorgproces op de beleving van de patiënt te onderzoeken, in plaats van de uitkomsten van de zorg zelf. Bij het meten van PREMs is het van belang om, zoals bij PROMs, rekening te houden met het feit dat de antwoorden van patiënten worden beïnvloed door hun verwachtingen, voorkeuren, persoonlijkheid en eerdere ervaringen. De PREMs die besproken worden, worden opgedeeld in volgende categorieën: communicatie, patiëntgerichte zorg, gedeelde besluitvorming, gezondheidgeletterheid, patiënttevredenheid, en doelgerichte zorg. Deze categorieën zijn vaak van toepassing op meerdere vragen.

COMMUNICATIE

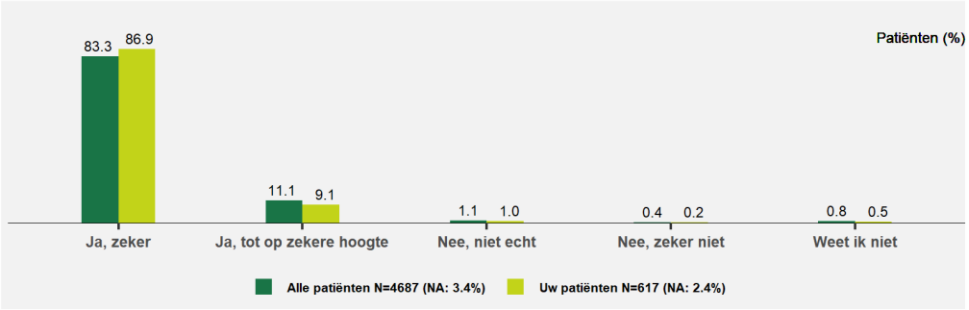
FIGUUR 9 | Ik vertrouw erop dat zorgverleners me alle nodige informatie geven om aan mijn gezondheid te werken.



FIGUUR 10 | Heeft de zorgverlener tijdens uw laatste consultatie voldoende tijd met u doorgebracht?

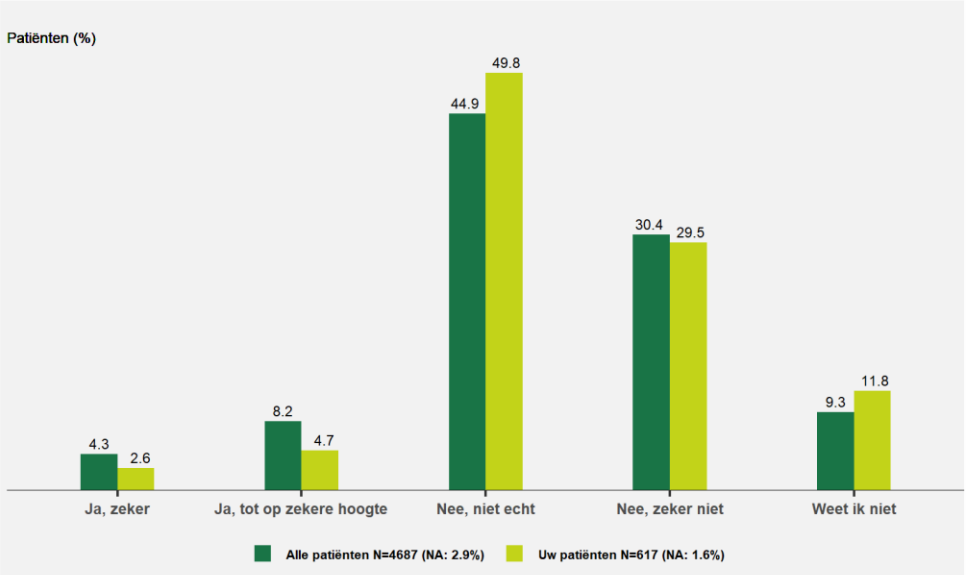


FIGUUR 11 | Heeft deze zorgverlener zaken op een begrijpelijke manier uitgelegd?

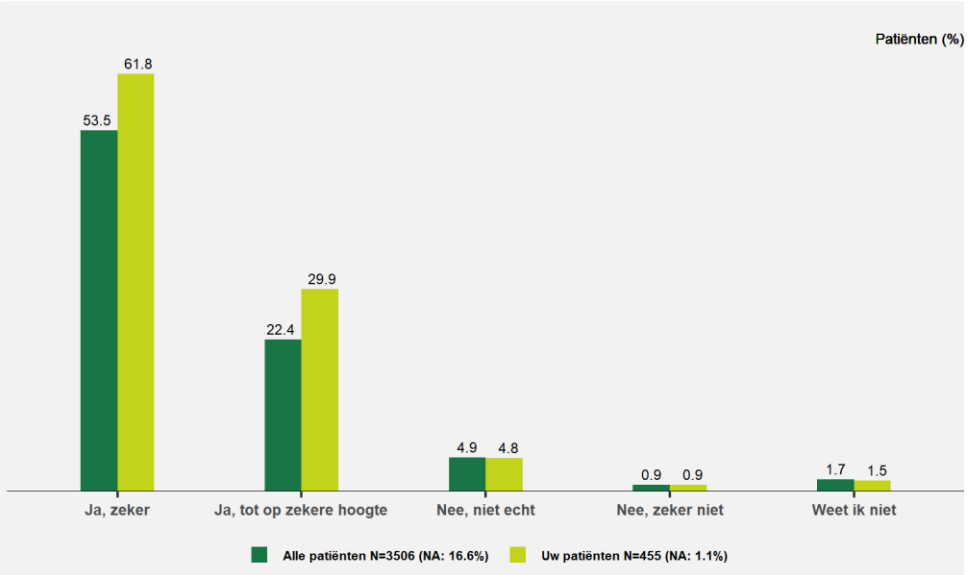


PATIËNTGERICHTE ZORG

FIGUUR 12 | Is het wel eens voorgekomen dat u informatie moest herhalen die in uw zorgdossier had moeten staan?

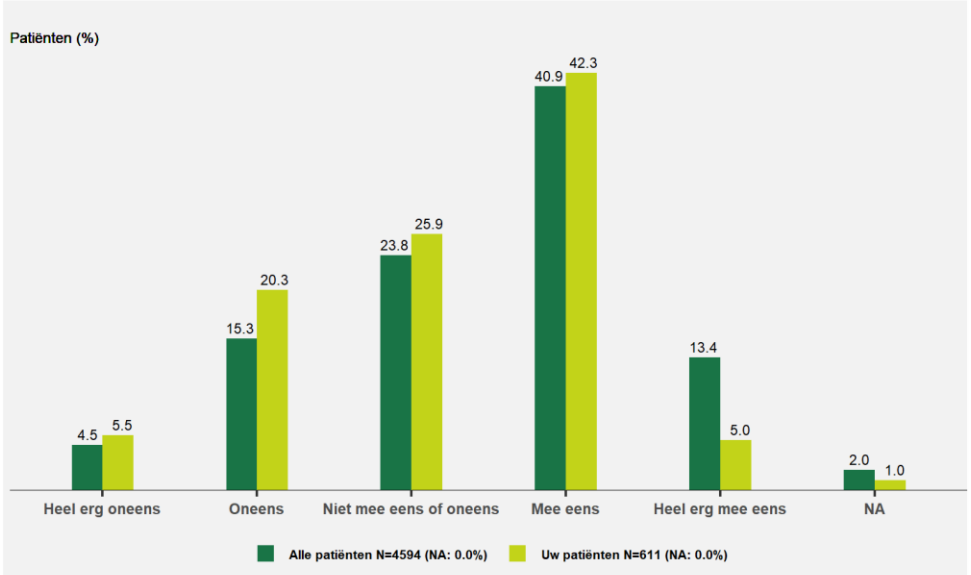


FIGUUR 13 | Is er aandacht voor u als persoon en niet alleen voor uw ziekte of aandoening?

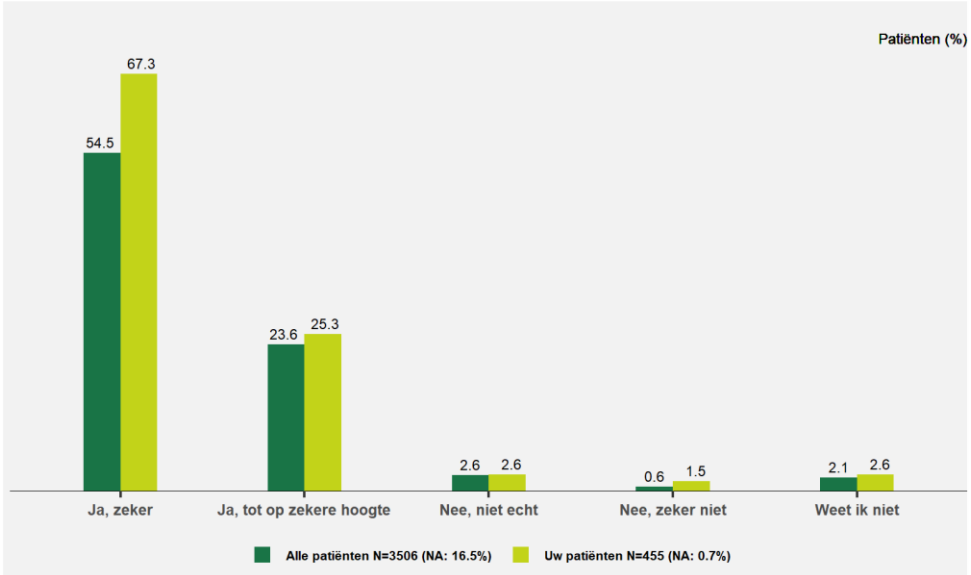


GEDEELDE BESLUITVORMING

FIGUUR 14 | Ik laat het aan zorgverleners over om de juiste keuzes te maken over mijn gezondheid.

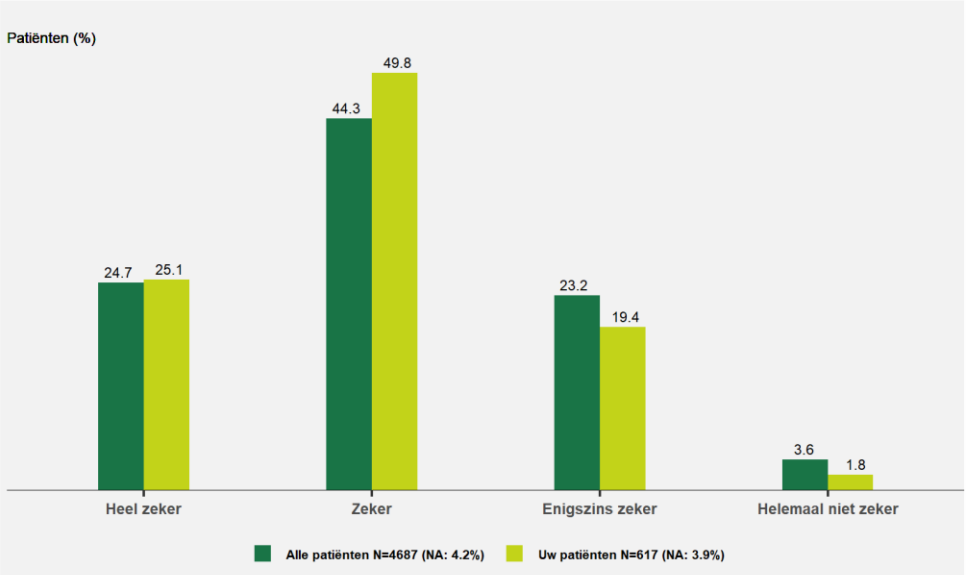


FIGUUR 15 | Wordt u voldoende betrokken bij beslissingen over uw zorg?

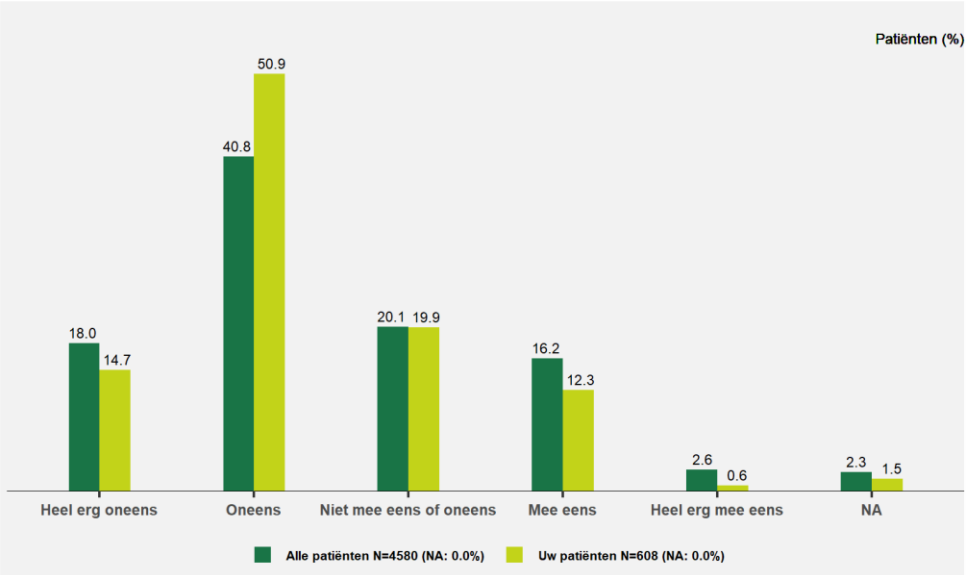


GEZONDHEIDGELETTERDHEID

FIGUUR 16 | Hoe zeker bent u ervan dat u de instructies kunt volgen over hoe u thuis voor uzelf moet zorgen?

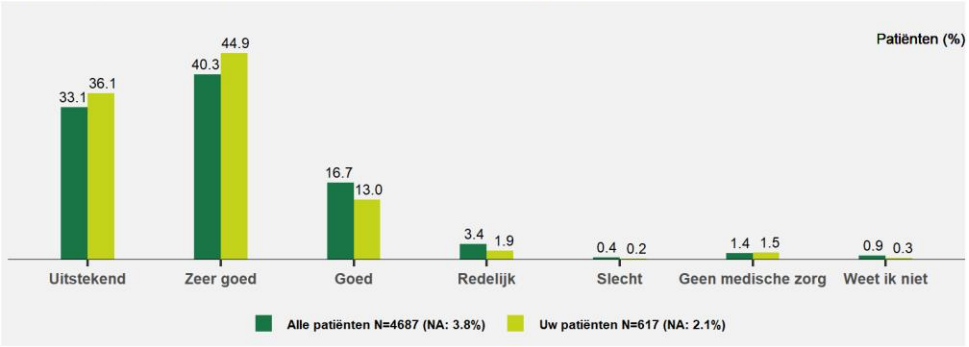


FIGUUR 17 | Ik heb vaak moeite met het begrijpen van de informatie over gezondheid die ik lees.

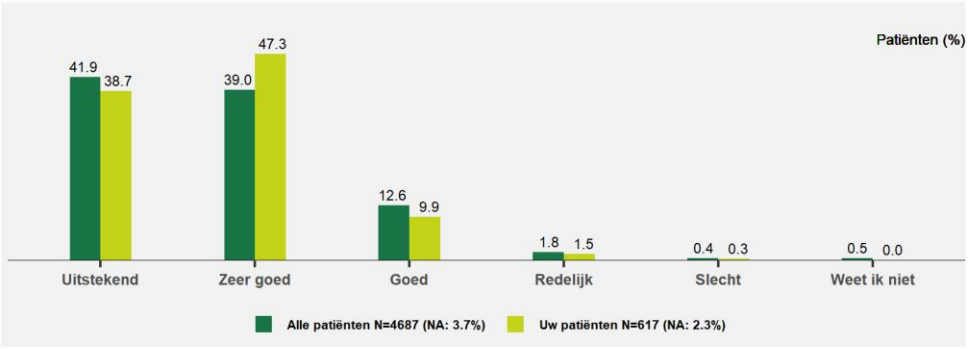


PATIËNTTEVREDENHEID

FIGUUR 18 | Hoe beoordeelt u de medische zorg die u in het afgelopen jaar hebt ontvangen?

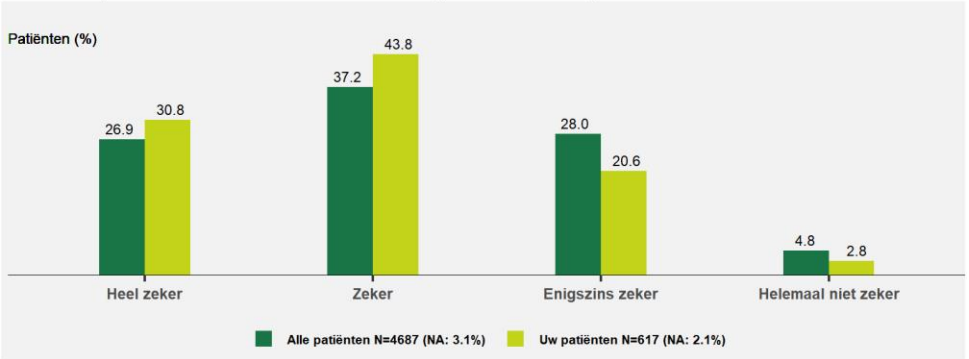


FIGUUR 19 | Hoe zou u de kwaliteit van uw laatste consultatie beoordelen?



DOELGERICHTE ZORG

FIGUUR 20 | Hoe zeker bent u ervan dat uzelf aan uw gezondheid en welzijn kunt werken?



A4. PaRIS10 indicators

General health is based on the question: "In general, would you say your health is excellent, very good, good, fair, or poor?". The percentage of patients who reported 'good,' 'very good,' or 'excellent' general health (compared to 'fair' or 'poor') was calculated. Among respondents with at least one chronic condition, this percentage was 70.5% (95% CI: 65.0% - 75.6%). By chronic condition, the percentages were 95.8% (95% CI: 93.8% - 97.2%) for those with no chronic conditions, 81.5% (95% CI: 76.9% - 85.4%) for those with one, and 55.4% (95% CI: 48.7% - 62.0%) for those with two or more chronic conditions.

The **WHO-5 Well-Being Index** ranges from 0 to 100, with a higher score indicating better well-being. A score below 50 is commonly used as a cut-off for clinical depression risk. A score of 60 or higher indicates the person felt positive well-being more than half the time. Among respondents with at least one chronic condition, the average score was 58.7 (95% CI: 56.4 - 61.0). By chronic condition, the average score was 67.9 (95% CI: 65.7 - 70.1) for patients without chronic conditions, 63.6 (95% CI: 61.4 - 65.9) for those with one, and 52.0 (95% CI: 49.6 - 54.3) for those with two or more chronic conditions.

The **physical health indicator**, a T-score metric, uses a mean of 50 and a standard deviation of 10, based on the PROMIS reference population. Ranging from 16.2-67.7. A score of 42 or higher is considered good physical health. Among respondents with at least one chronic condition, the average physical health score was 44.6 (95% CI: 43.8 - 45.5). By chronic condition, the average score was 51.0 (95% CI: 50.1 - 51.8) for patients without chronic conditions, 47.0 (95% CI: 46.2 - 47.9) for those with one, and 41.4 (95% CI: 40.4 - 42.3) for those with two or more chronic conditions.

The **mental health indicator**, also a T-score metric, uses a mean of 50 and a standard deviation of 10. Ranging from 21.2-67.6. A score of 40 or higher is considered good mental health. Among respondents with at least one chronic condition, the average mental health score was 45.9 (95% CI: 45.1 - 46.8). By chronic condition, the average score was 49.2 (95% CI: 48.4 - 50.0) for patients without chronic conditions, 47.4 (95% CI: 46.6 - 48.2) for those with one, and 43.8 (95% CI: 43.0 - 44.7) for those with two or more chronic conditions.

Social functioning is based on the question: "In general, please rate how well you carry out your usual social activities and roles." The percentage of patients who reported 'good,' 'very good,' or 'excellent' social functioning was calculated. Among respondents with at least one chronic condition, 74.9% (95% CI: 68.5% - 80.5%) reported good social functioning. By chronic condition, the percentages were 94.8% (95% CI: 92.5% - 96.5%) for those with no chronic conditions, 90.1% (95% CI: 86.6% - 92.8%) for those with one, and 74.9% (95% CI: 68.5% - 80.5%) for those with two or more chronic conditions.

Experienced quality of medical care is based on the question: "When taking all things into consideration in relation to the care you have received, overall, how do you rate the medical care that you have received in the past 12 months from your primary care centre?". The percentage of patients who reported 'good,' 'very good,' or 'excellent' experiences with the quality of medical care in the past 12 months (compared to 'fair', 'poor' or 'not sure') was calculated. Among all respondents with at least one chronic condition, the proportion reporting good experiences with medical care was 94.4% (95% CI: 90.9% – 96.6%). By chronic condition, the percentages were 95.9% (95% CI: 93.3% – 97.6%) for those with no chronic conditions, 95.3% (95% CI: 92.3% – 97.2%) for those with one, and 93.2% (95% CI: 89.1% – 95.9%) for those with two or more chronic conditions.

Confidence to self-manage is based on the question: "How confident are you that you can manage your own health and wellbeing?". The percentage of patients who reported being 'confident' or 'very confident' (compared to 'somewhat confident' or 'not confident at all') was calculated. Among all respondents with at least one chronic condition, the proportion reporting confidence in managing their own health was 61.1% (95% CI: 54.7% – 67.3%). By chronic condition, the percentages were 71.1%

(95% CI: 65.5% – 76.2%) for those with no chronic conditions, 64.5% (95% CI: 58.3% – 70.4%) for those with one, and 56.5% (95% CI: 49.8% – 63.0%) for those with two or more chronic conditions.

Trust in the healthcare system is based on the question: “How strongly do you agree or disagree that the healthcare system can be trusted?”. The percentage of patients who ‘agree’ or ‘strongly agree’ (compared to those who ‘neither agree nor disagree,’ ‘disagree,’ or ‘strongly disagree’) was calculated. Among all respondents, 67.0% (95% CI: 61.7% – 71.9%) agreed or strongly agreed that the healthcare system can be trusted. By chronic condition, the percentages were 69.7% (95% CI: 65.0% – 74.1%) for those with no chronic conditions, 68.7% (95% CI: 63.7% – 73.4%) for those with one, and 64.5% (95% CI: 59.0% – 69.7%) for those with two or more chronic conditions.

The **care coordination** indicator, as previously described in the Methods, ranges from 0 to 15. Higher scores indicate better coordination of care. A score of 7.5 or higher represents an average response of 50% or more across the five questions included in the scale, while a score of 10 or higher corresponds to an average response of 66.6% or more. Data was not asked for persons without chronic conditions. Among respondents with at least one chronic condition, the average score was 8.8 (95% CI: 8.2 – 9.3). By chronic condition count, the average score was 8.6 (95% CI: 8.0 – 9.1) for those with one chronic condition and 9.1 (95% CI: 8.5 – 9.6) for those with two or more chronic conditions.

The **person-centred care** indicator, as previously described in the Methods, ranges from 0 to 24. A higher score indicates better person-centredness, i.e., people who found care to be highly person-centred. A score of 12, representing an average response of at least 50% across the eight questions, and a score of 16, representing an average of 66.6%. Data was not asked for persons without chronic conditions. Among respondents with at least one chronic condition, the average score was 17.7 (95% CI: 17.1 – 18.2). By chronic condition count, the average score was 17.8 (95% CI: 17.3 – 18.4) for those with one chronic condition and 17.5 (95% CI: 16.9 – 18.0) for those with two or more chronic conditions.

Figure A1 • Percentage of respondents reporting (very) good or excellent general health (%) by gender and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

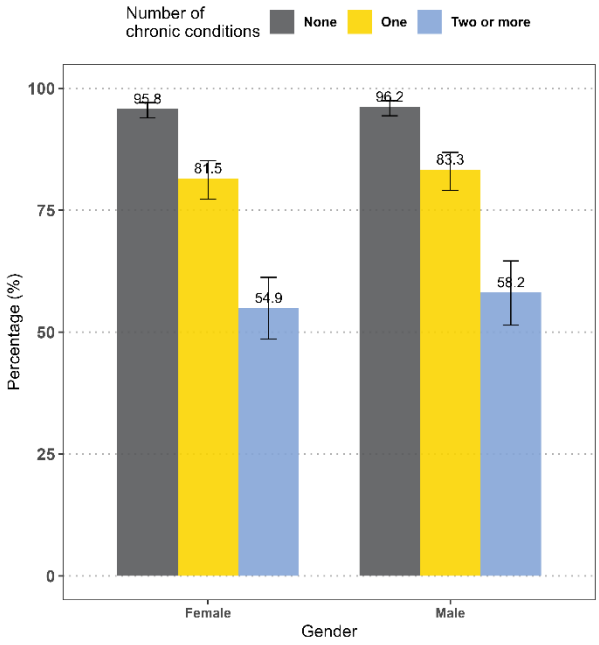


Figure A2 • Percentage of respondents reporting (very) good or excellent general health (%) by age group and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

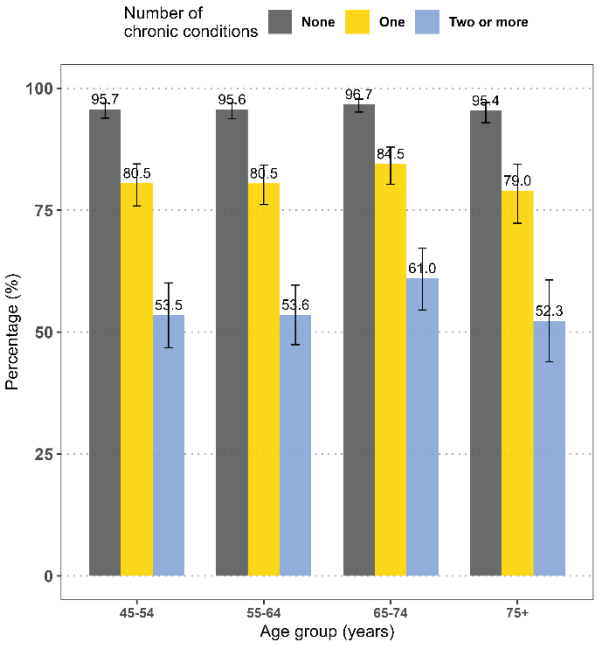


Figure A3 • Percentage of respondents reporting (very) good or excellent general health (%) by education and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

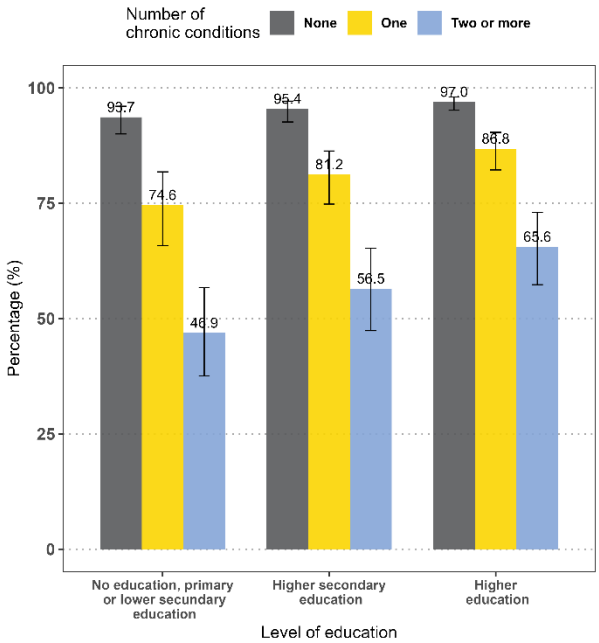
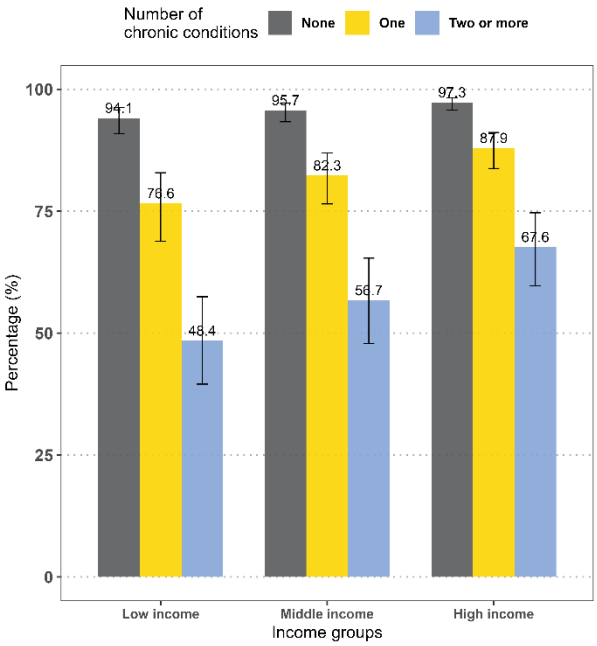


Figure A4 • Percentage of respondents reporting (very) good or excellent general health (%) by income and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

Figure A5 • Average score for respondents for well-being by gender and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

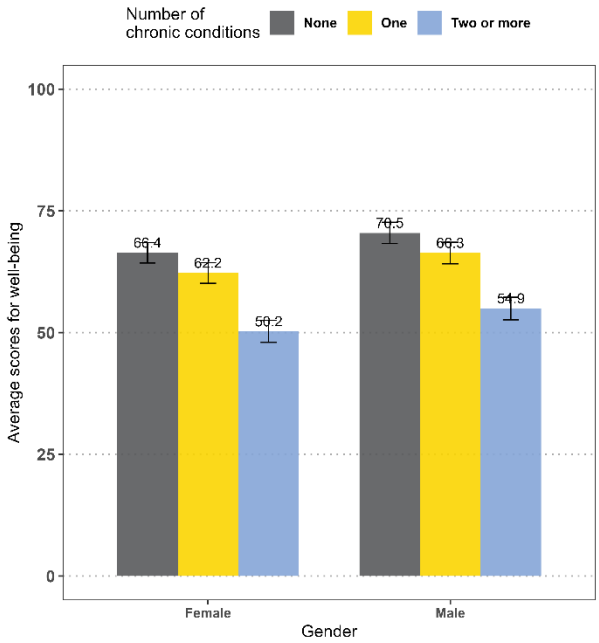


Figure A6 • Average score for respondents for well-being by age group and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

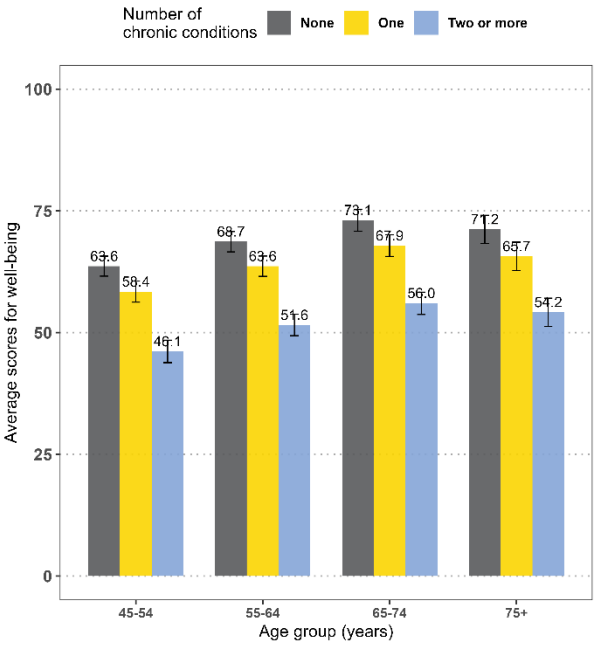


Figure A7 • Average score for respondents for well-being by education and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

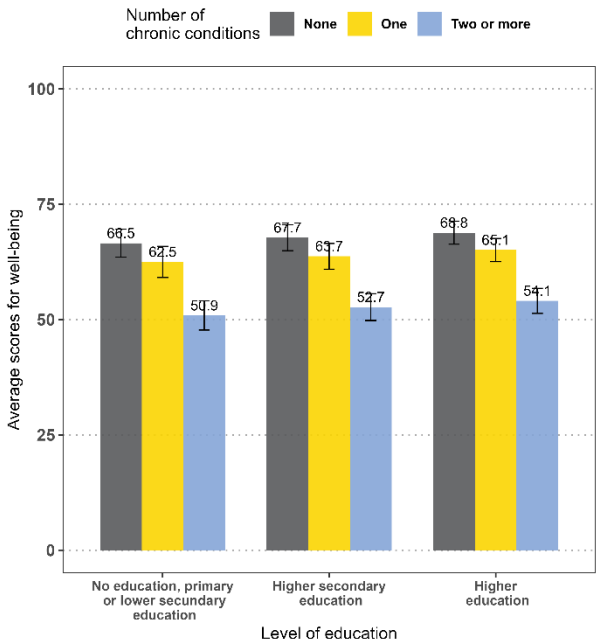
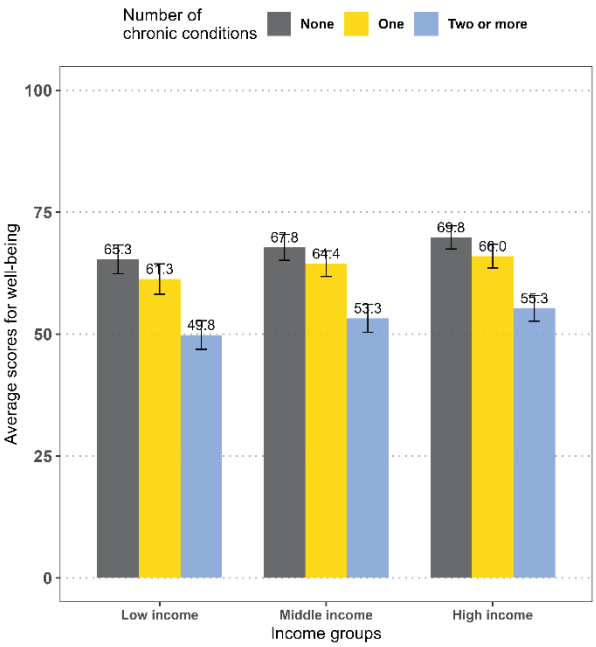


Figure A8 • Average score for respondents for well-being by income group and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

Figure A9 • Average score for respondents for physical health by gender and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

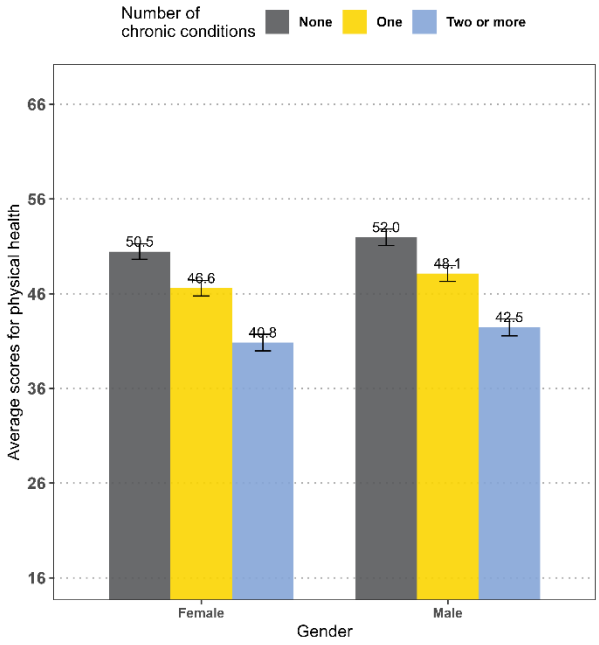


Figure A10 • Average score for respondents for physical health by age group and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

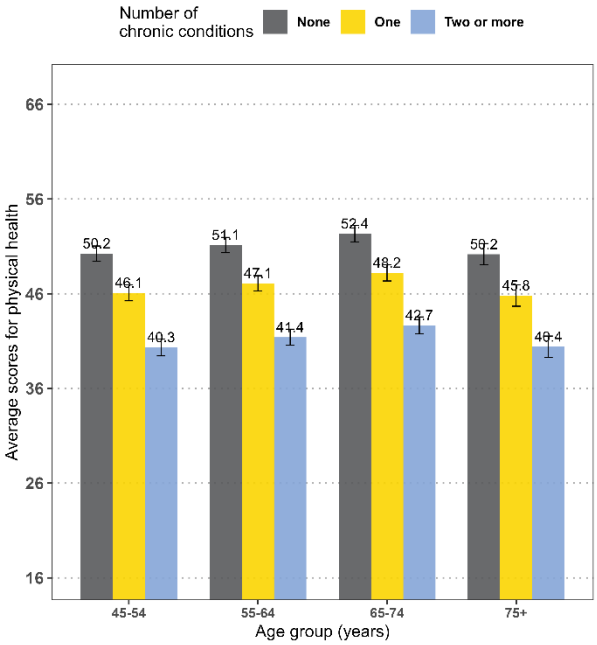


Figure A11 • Average score for respondents for physical health by education and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

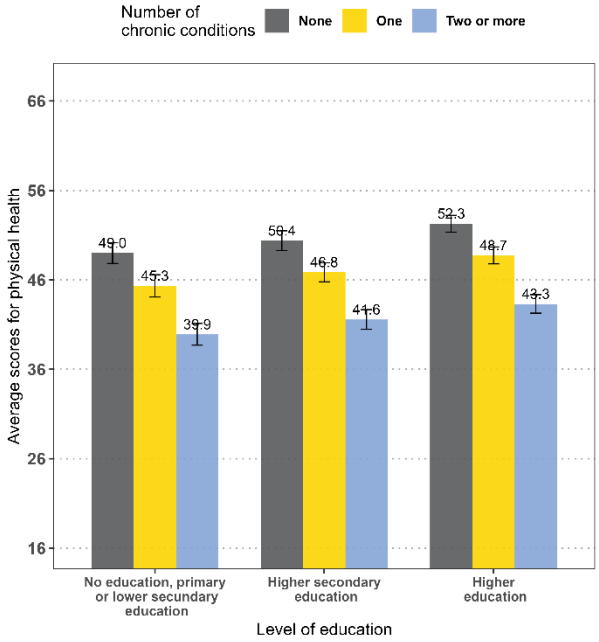
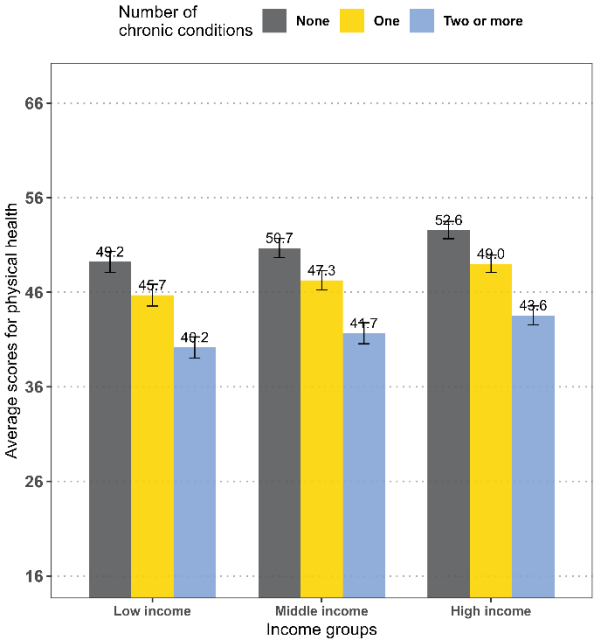


Figure A12 • Average score for respondents for physical health by income group and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

Figure A13 • Average score for respondents for mental health by gender and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

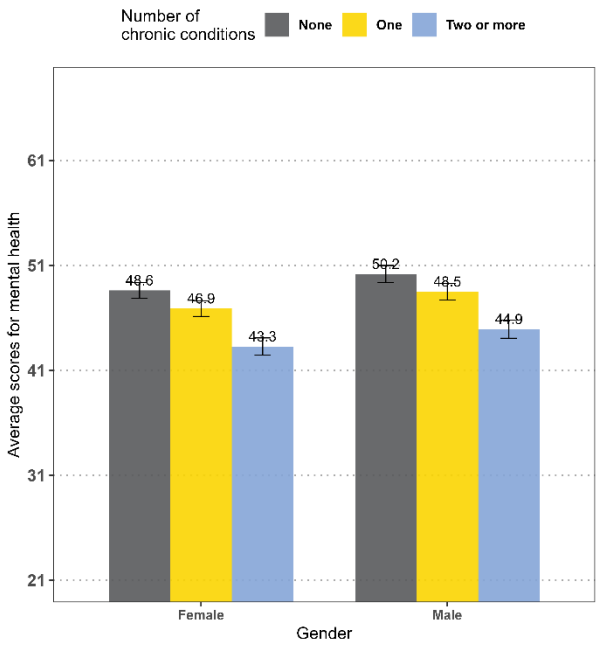


Figure A14 • Average score for respondents for mental health by age group and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

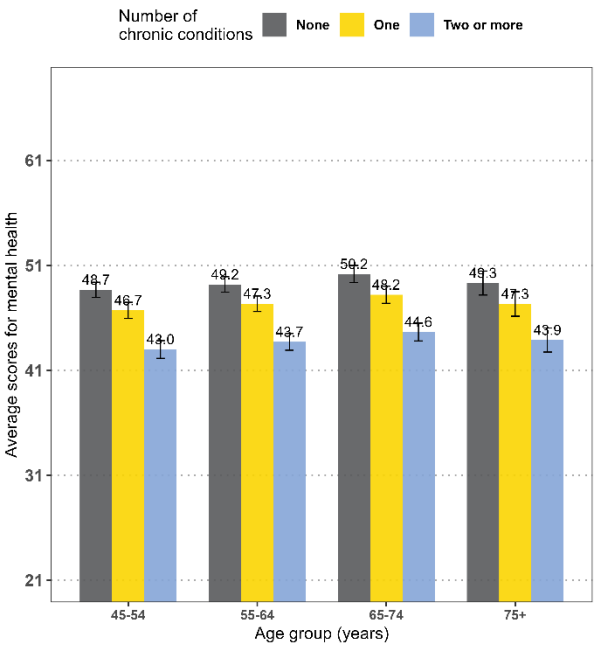


Figure A15 • Average score for respondents for mental health by education and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

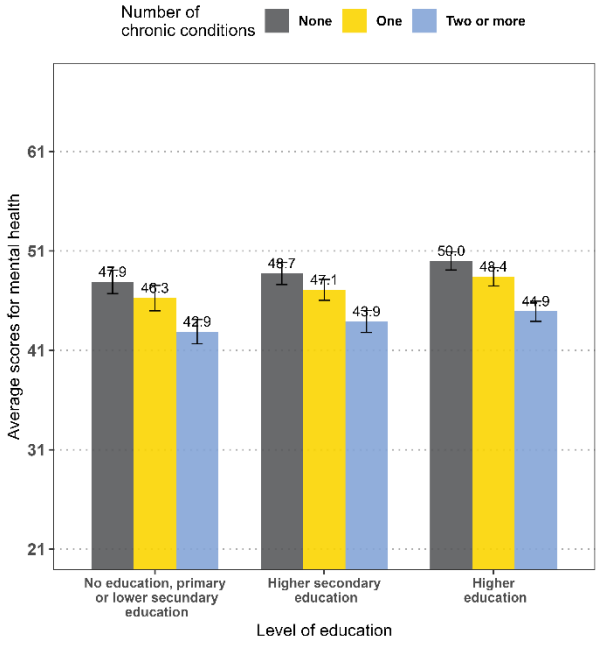
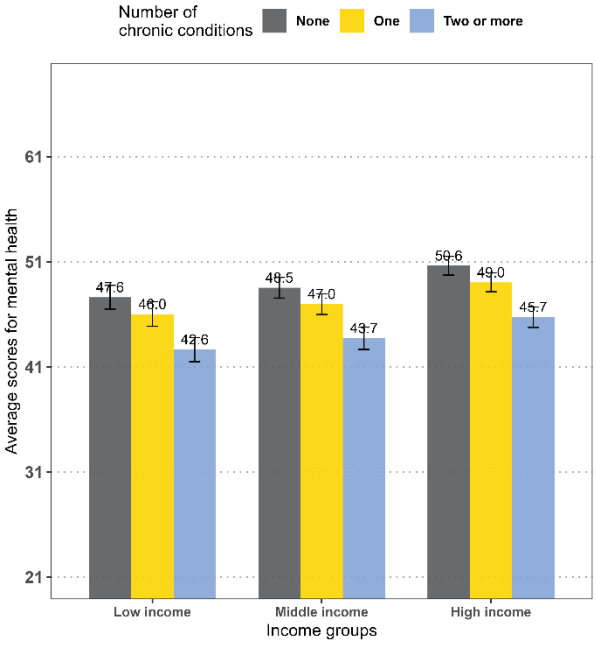


Figure A16 • Average score for respondents for mental health by income group and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

Figure A17 • Percentage of respondents reporting (very) good, or excellent ability in social activities and roles (%) by gender and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

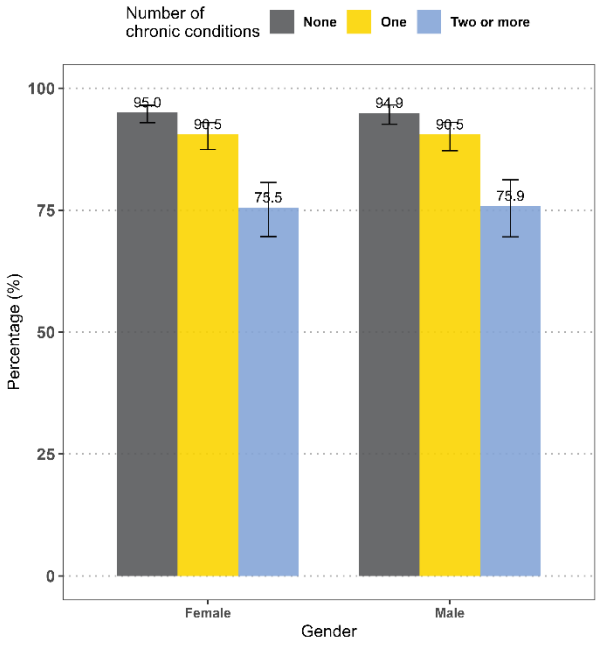


Figure A18 • Percentage of respondents reporting (very) good, or excellent ability in social activities and roles (%) by age group and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

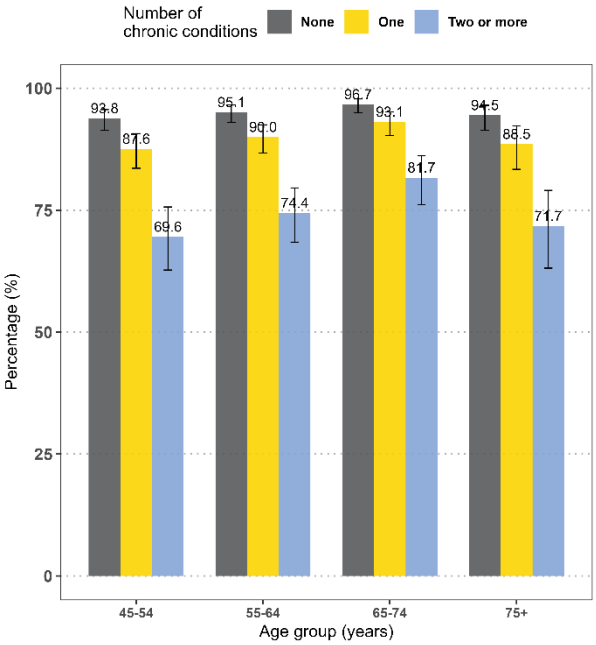


Figure A19 • Percentage of respondents reporting (very) good, or excellent ability in social activities and roles (%) by education and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

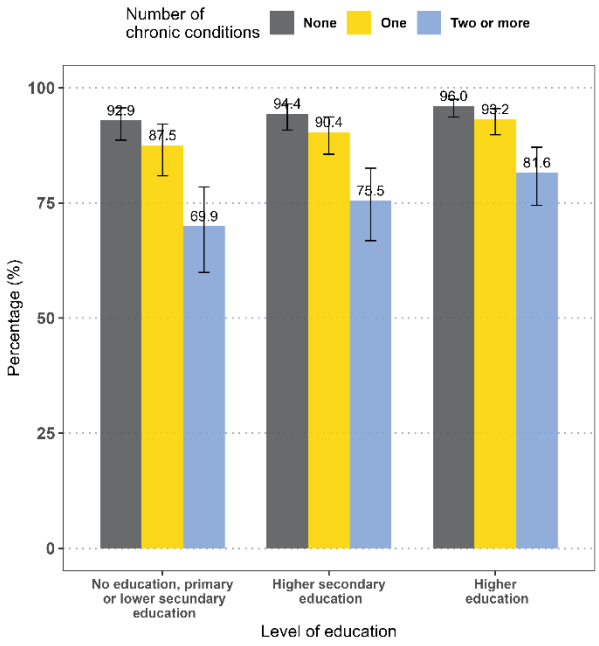
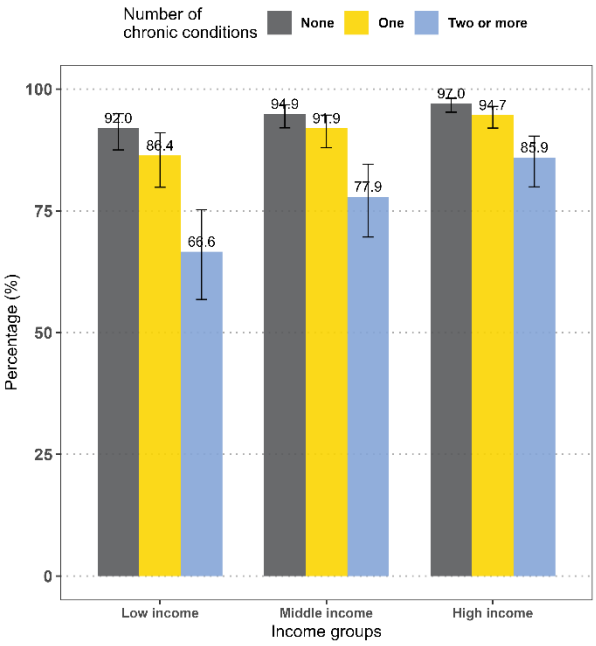


Figure A20 • Percentage of respondents reporting (very) good, or excellent ability in social activities and roles (%) by income and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

Figure A21 • Percentage of respondents reporting medical care in past 12 months as (very) good or excellent (%) by gender and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

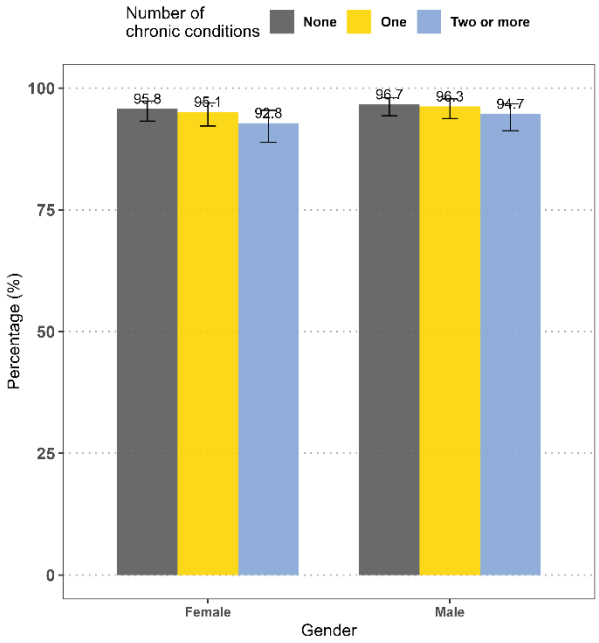


Figure A22 • Percentage of respondents reporting medical care in past 12 months as (very) good or excellent (%) by age group and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

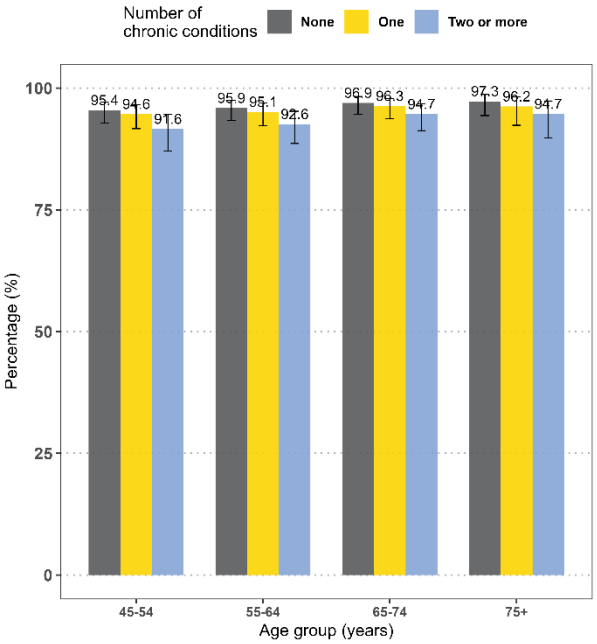


Figure A23 • Percentage of respondents reporting medical care in past 12 months as (very) good or excellent (%) by education and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

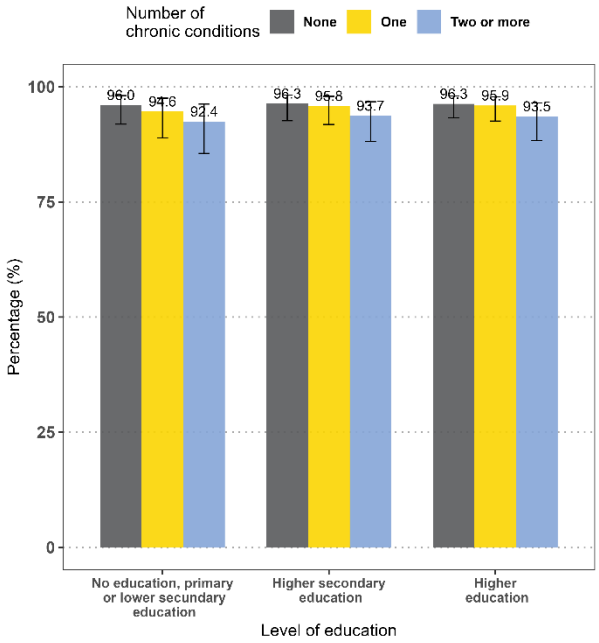
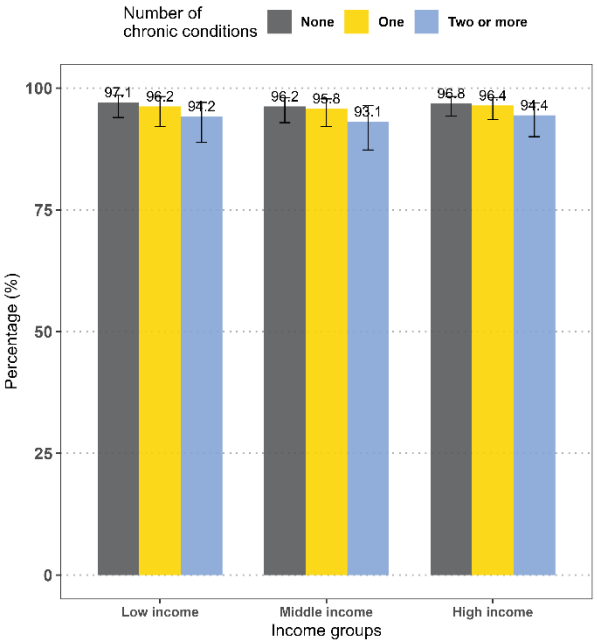


Figure A24 • Percentage of respondents reporting medical care in past 12 months as (very) good or excellent (%) by income and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

Figure A25 • Percentage of respondents reporting being (very) confident in managing their own health and well-being (%) by gender and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

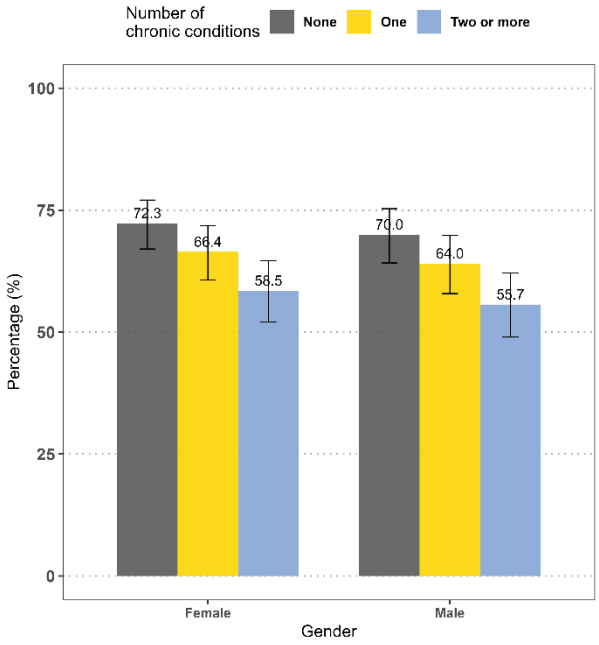


Figure A26 • Percentage of respondents reporting being (very) confident in managing their own health and well-being (%) by age group and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

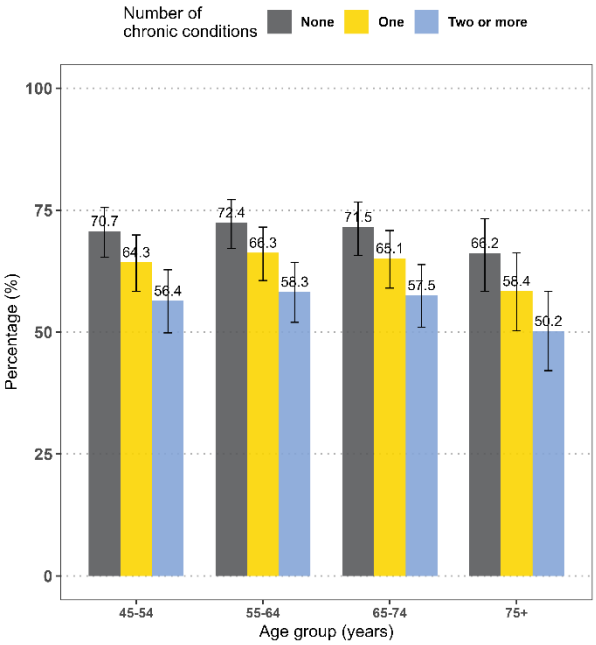


Figure A27 • Percentage of respondents reporting being (very) confident in managing their own health and well-being (%) by education and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

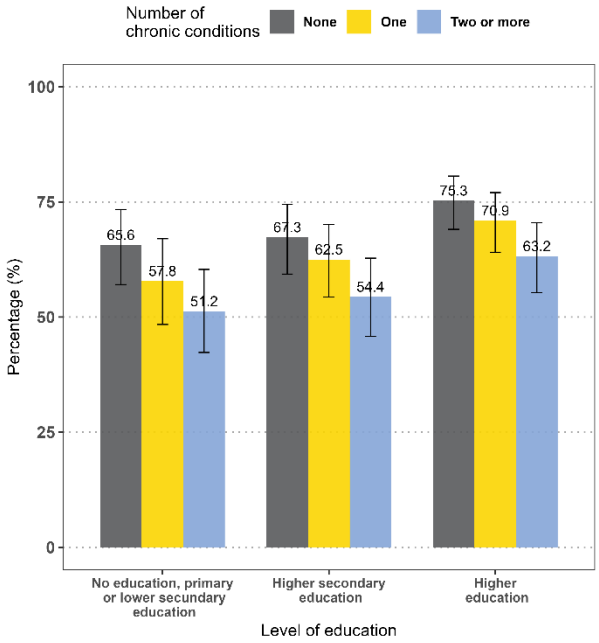
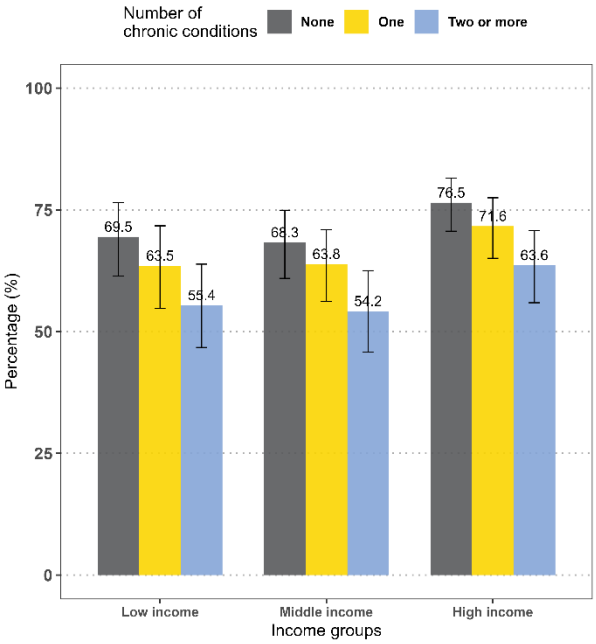


Figure A28 • Percentage of respondents reporting being (very) confident in managing their own health and well-being (%) by income and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

Figure A29 • Percentage agreeing or strongly agreeing that the healthcare system can be trusted (%) by gender and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

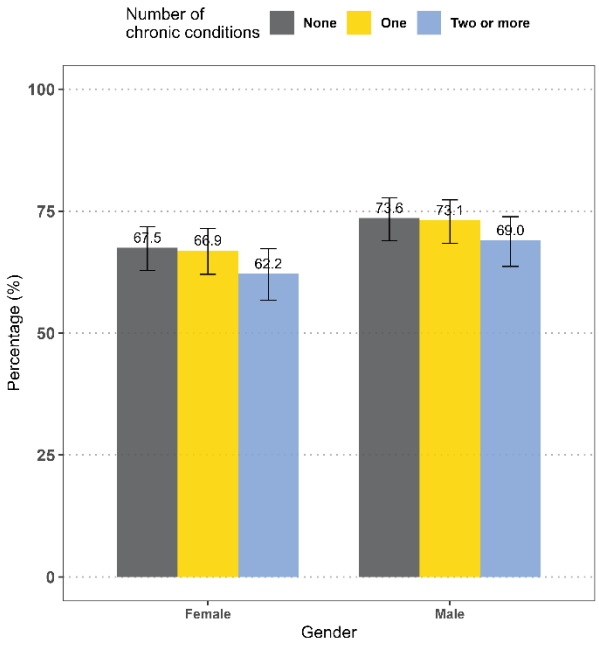


Figure A30 • Percentage agreeing or strongly agreeing that the healthcare system can be trusted (%) by age group and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

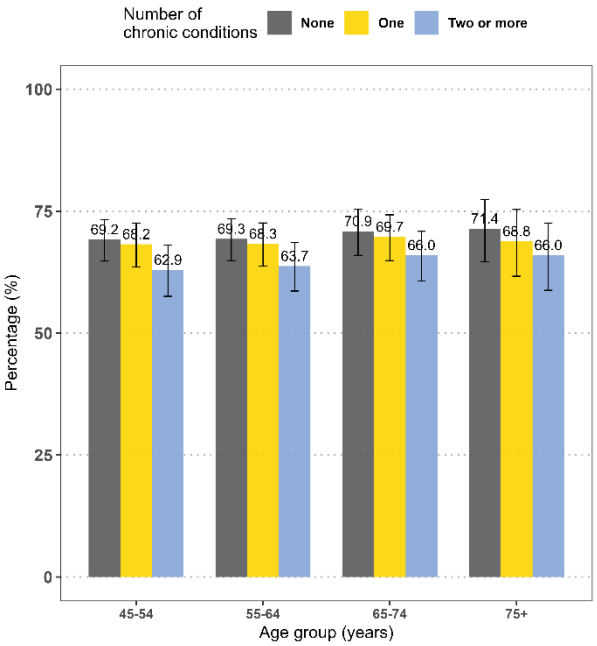


Figure A31 • Percentage agreeing or strongly agreeing that the healthcare system can be trusted (%) by education and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

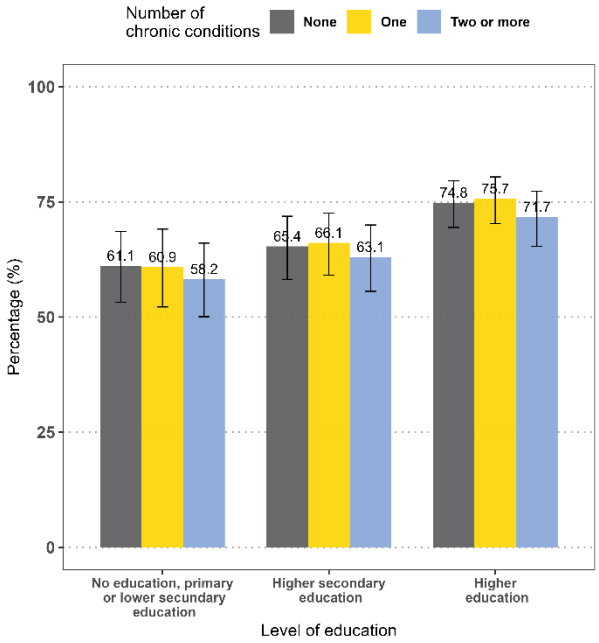
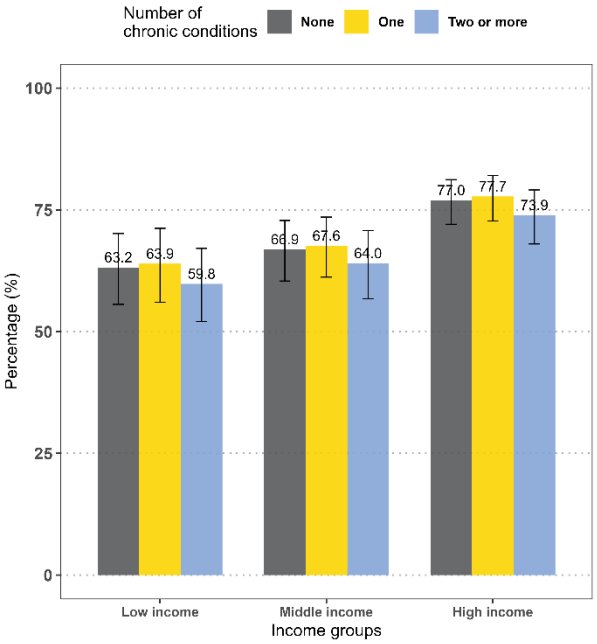


Figure A32 • Percentage agreeing or strongly agreeing that the healthcare system can be trusted (%) by income and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

Figure A33 • Average scores for experienced care coordination by gender and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

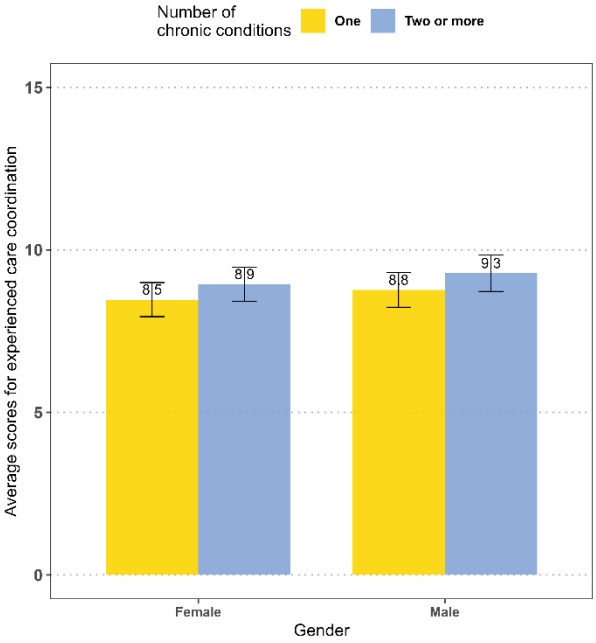


Figure A34 • Average scores for experienced care coordination by age group and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

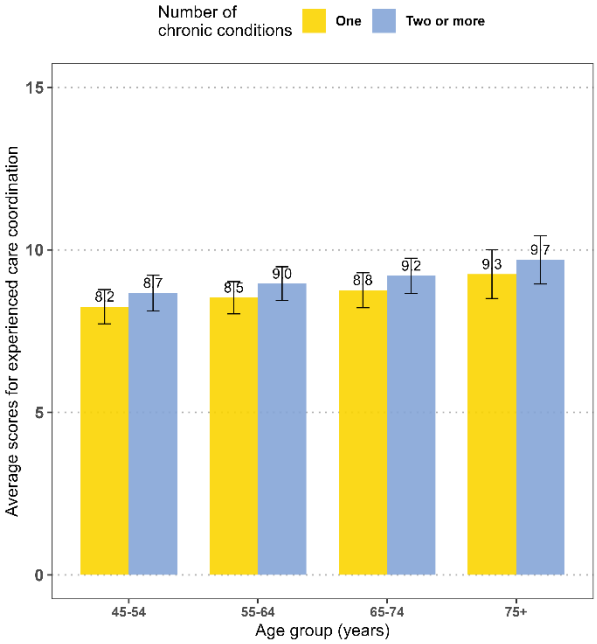


Figure A35 • Average scores for experienced care coordination by education and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

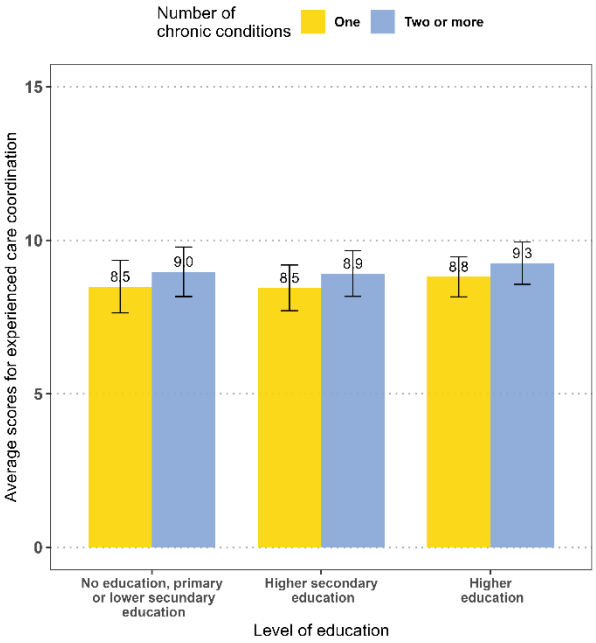
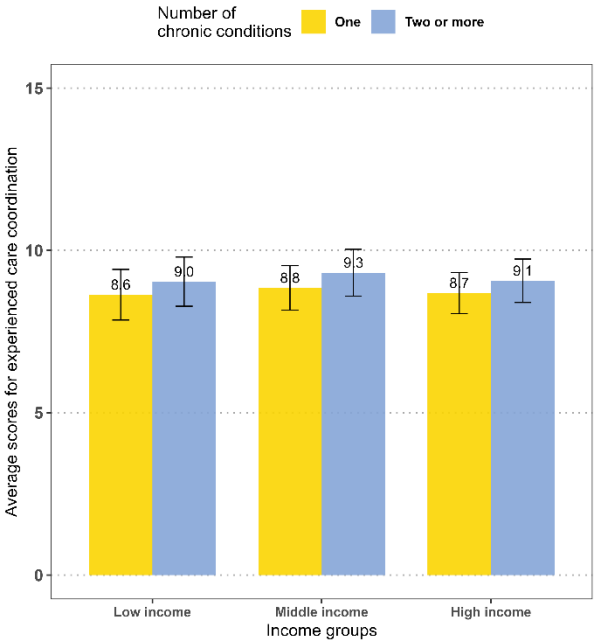


Figure A36 • Average scores for experienced care coordination by income and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

Figure A37 • Average scores for person-centredness by gender and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

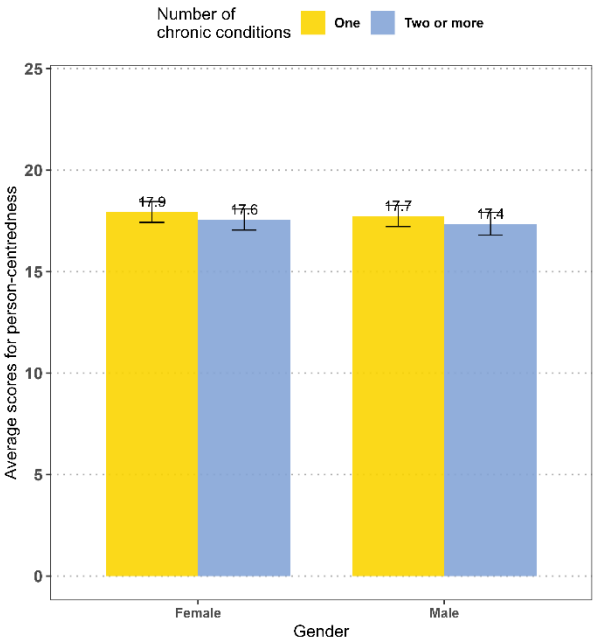


Figure A38 • Average scores for person-centredness by age group and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

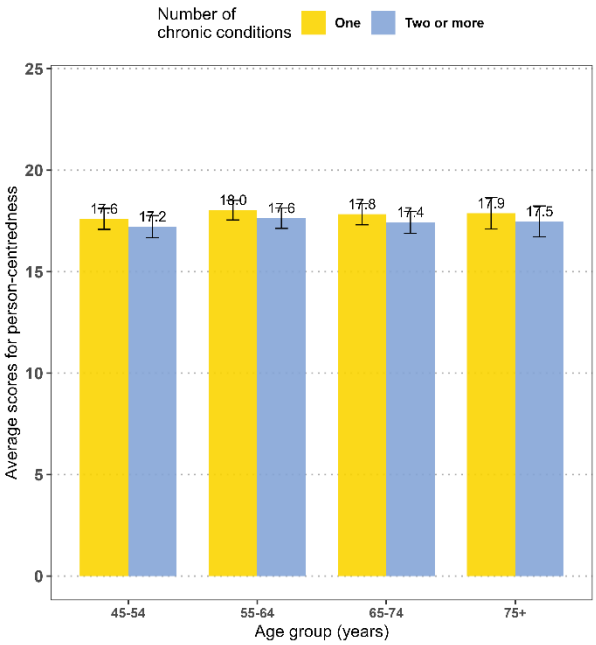


Figure A39 • Average scores for person-centredness by education and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium

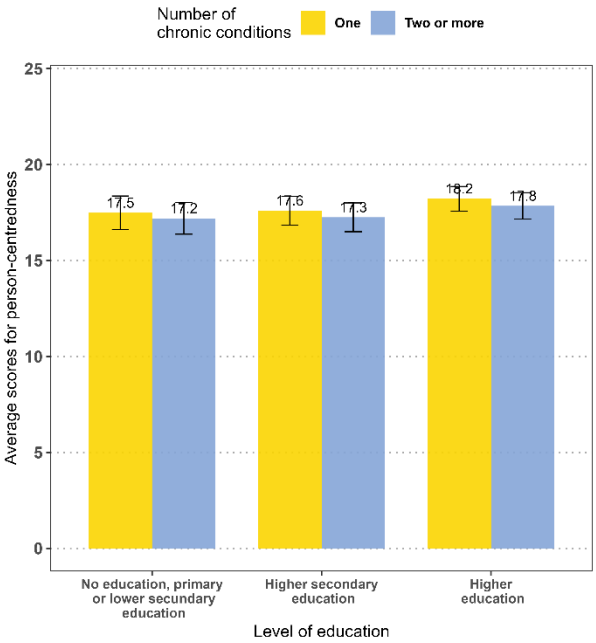
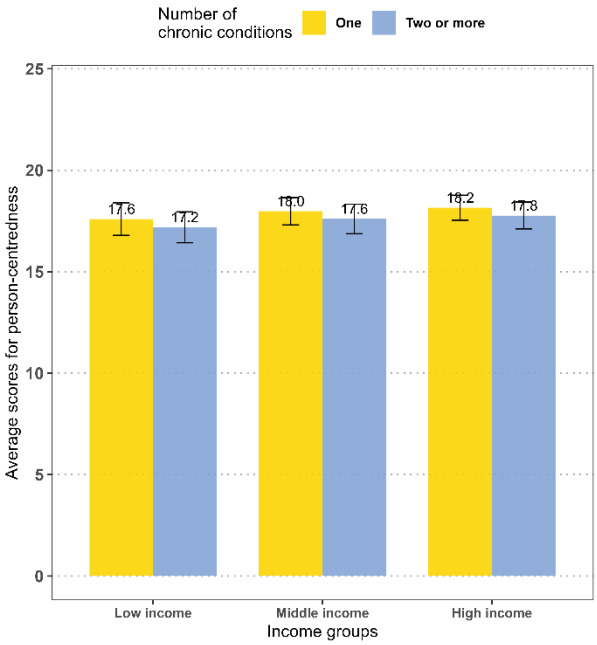


Figure A40 • Average scores for person-centredness by income and number of chronic conditions (excluding high blood pressure), PaRIS Survey, Belgium



Note: All comparisons were controlled for age and gender. Comparisons for education were controlled for income and vice versa.

ACKNOWLEDGEMENTS

We would like to express our sincere gratitude to all members of both the Advisory Committee and the Steering Committee who have contributed their expertise, time, and dedication over the years. Their valuable input has played a crucial role in the development and progress of our work.

Advisory Committee
This group has played a key role in the strategic guidance and oversight of the project.

FOD VVVL - SPF SPSCAE	Saskia Van Den Bogaert
	Ilyse Kenis
RIZIV - INAMI	Pedro Facon
	Nathalie Laus
Sciensano	Karin De Ridder

Steering Committee
This group has actively contributed to the scientific and substantive direction of the project.

LUSS	Mr. Fabrizio Cantelli
	Ms. Marie Villance
	Ms. Sabine Corachan
	Ms. Diane-Estelle Ngatchou-Djomo
KCE	Ms. Anja Desomer
Sciensano	Kris Doggen
KU Leuven	Dr. Geert Goderis
Socmut	Ms. Evelyne Haus
	Ms. Siska Germonpré
VPP	Ms. Laura Jame
	Mr. Thomas Deloffer
RIZIV - INAMI	Ms. Mariam Agarad
	Ms. Nathalie Laus
	Mr. Mickael Daubie
FOD VVVL - SPF SPSCAE	Dr. Saskia Van Den Bogaert
	Ms. Annemie Vlayen
	Ms. Joke Wuyts
SSMG	Dr. Quentin Mary
	Dr. Thomas Orban
Domus Medica	Ms. Jo van Hoof

A special thank you to our international partners at the OECD for spearheading this initiative and taking this groundbreaking step. Belgium is honored to have participated in this important endeavor. We would also like to extend our deepest appreciation to the PaRIS Secretariat for their unwavering support, as well as to Nivel and Ipsos for their invaluable guidance and assistance throughout this project.

Additionally, we would like to extend our gratitude to our colleagues from the Primary Care Unit, including Sherihane Bensemmane, Nathalie Bossuyt, Robrecht De Schreye, Sarah Moreels, Mélanie Nahimana, and Floriane Rouvez.

We also sincerely thank the participating general practitioners and patients for their valuable engagement.

This project is funded by RIZIV/INAMI.

CONTACT
Dagmar Annaert • T + 32 2/642.58.19 • dagmar.annaert@sciensano.be

MORE INFORMATION
Visit our website
https://www.sciensano.be/en/paris-patient-reported-indicator-survey
or contact us at :
PaRIS@sciensano.be

Sciensano • Rue Juliette Wytsmanstraat 14 • Brussels • Belgium • T + 32 2 642 51 11 • T press + 32 2 642 54 20 • info@sciensano.be • www.sciensano.be

Responsible editor: C. Léonard, Managing director • Rue Juliette Wytsmanstraat 14 • Brussels • Belgium • D/2025.14.440/15