

DRAFT

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**Strengthening
relational continuity
in primary care in Spain:**
key insights and recommended
policy actions



**World Health
Organization**

European Region



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Abstract

Relational continuity in primary care (RCPC) plays a critical role in health system performance. Extensive evidence demonstrates that strong RCPC is associated with lower mortality, reduced emergency department use and hospitalizations, improved chronic disease management, and higher levels of patient and provider satisfaction. These benefits are particularly significant for older adults; people with chronic, mental health or social complexities; and those with lower socioeconomic status. In Spain, key strengths of its primary care model – such as population empanelment to microteams of family doctors and nurses, strong team-based care, and advanced digital infrastructure and population health management capabilities – provide a solid foundation for RCPC. However, structural challenges – such as high turnover linked to contract instability, workforce shortages, mobility rules and limited team autonomy – undermine the capacity to maintain stable patient–provider relationships. Strengthening RCPC in Spain will require targeted policy actions that are organized, in this paper, around four key aims: establishing RCPC as a central dimension of primary care performance; addressing health systems’ features that undermine RCPC; strengthening primary care teams to support RCPC; and taking advantage of untapped opportunities for future-proofing RCPC.

Keywords

PRIMARY HEALTH CARE
ACCESS TO PRIMARY CARE
CONTINUITY OF PATIENT CARE
DELIVERY OF HEALTH CARE
HEALTH WORKFORCE

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Abbreviations

AC	autonomous community
AEC	the Asociación de Enfermería Comunitaria [Community Nursing Association]
AMG	Adjusted Morbidity Group
CI	confidence interval
COCI	Continuity of Care Index
COVID-19	coronavirus disease
ED	emergency department
EHR	electronic health record
EU	European Union
FAECAP	Federation of Family and Community Nursing Associations [Federación de Asociaciones de Enfermería Familiar y Comunitaria]
GP	general practitioner/family doctor
HHI	Herfindahl–Hirschman index
OECD	Organisation for Economic Co-operation and Development
OOH	out of hours
PIM	potentially inappropriate medication
RCC	relational continuity of care
RCPC	relational continuity in primary care
RGP	regular general practitioner
SEMERGEN	Sociedad Española de Médicos de Atención Primaria [Spanish Society of Primary Care Physicians]
SEMFYC	Spanish Society of Family and Community Medicine [Sociedad Española de Medicina de Familia y Comunitaria]
SEMG	Sociedad Española de Médicos Generales y de Familia [Spanish Society of General and Family Doctors]
UPC	Usual Provider of Care (index)

Key messages

- The evidence unequivocally highlights that strong relational continuity in primary care (RCPC) is associated with improved health system performance. For example, through improved health outcomes, including lower hospitalization rates, better chronic disease management, higher patient and provider satisfaction, and even lower mortality.
- Certain patient groups benefit more from RCPC, particularly the elderly; those with chronic, mental health or social complexities; and people with lower socioeconomic status. This is particularly relevant for policy action as it indicates where (scarce) resources can be better targeted to improve RCPC overall.
- Ensuring RCPC requires policies that stabilize patient–provider relationships over time. This includes addressing workforce retention, limiting contract fragmentation, and aligning appointment systems and empanelment practices to support sustained, person-centred care, particularly in the face of access-driven reforms and staffing pressures.
- Preserving RCPC within team-based primary care models requires intentional design – ensuring consistent patient contact with familiar team members, particularly family doctors and nurses, and enabling structured information-sharing systems – so that as multidisciplinary care expands, continuity remains central to care delivery, especially for patients with complex needs.
- Digital interventions such as integrated electronic health records, telemedicine, online appointment systems and patient portals can support RCPC by enabling consistent access to reference providers, and seamless information sharing within care teams; however, to fully realize this potential, policies must ensure these tools are designed to maintain personal patient–provider links, are equitably adopted across regions and populations, and explicitly embed RCPC as a core objective.
- Financial and nonfinancial incentives – such as payments for longer consultations, bonuses for working in underserved areas, attachment-based funding models, stable contracts and professional development opportunities – can support RCPC, but to be effective they must be embedded within a broader strategy that aligns organizational structures, workforce stability and patient-centred care practices.
- Population risk stratification – using tools like Spain’s Adjusted Morbidity Groups – enables primary care teams to identify highly complex patients who benefit most from RCPC, allowing for targeted care plans, structured follow-up and prioritization of consistent provider relationships; to fully realize this potential, the integration of social determinants of health into digital systems remains a critical next step to be able to systematically account for social complexity.

- Spain enjoys a strong primary care foundation on which to ensure RCPC. For example, population empanelment to a microteam – composed of a family doctor, a primary care nurse and, in some autonomous communities, administrative staff – as a primary point of contact for patients is a robust mechanism to ensure RCPC.
- Yet structural barriers, such as high staff turnover and workforce shortages, severely undermine RCPC in Spain.
- While relational continuity is widely valued in Spain, it is not consistently measured. Indicators like the Usual Provider of Care (UPC) index, Team UPC and average relationship duration can be collected using existing health information systems, enabling regional benchmarking and policy tracking.
- The current evidence base on RCPC is largely focused on the individual relationship between a patient and a family doctor. Given the expansion of the roles and autonomy of primary care nurses, and the growing trend of moving towards team-based primary care models globally, there is a need to better understand and measure the impact of RCPC on nurses and other key primary care professionals, and at the team level.

Introduction

Relational continuity in primary care (RCPC): a strategic priority for Spain in a permacrisis era

Health systems across Europe are increasingly under strain in what many are calling a “permacrisis” era, marked by continuous economic, social and political stressors, compounded by an ageing population and a rising burden of chronic disease. Spain is no exception. Despite strong historical performance, its health system faces mounting challenges, including in primary care.

Given these pressures, Spain must build on one of its greatest strengths: its robust and comprehensive primary care, which has long served as the foundation of its health system. Spain is recognized for being among the strongest primary care performers in Europe (1). It has one of the lowest mortality rates attributable to preventable and treatable causes in the European Union (EU), and low rates of avoidable hospital admissions from ambulatory care sensitive conditions (2). Cancer screening and vaccination rates are generally above the EU averages. Spain’s strong and comprehensive primary care contributes to rates of unmet medical care needs that are substantially below EU averages and one of the lowest catastrophic health spending rates in the EU (3).

Despite this good performance, primary care in Spain is under strain (4). Investments in human and economic resources have not kept pace with increasing pressures. These include rising rates of multimorbidity and disability, the impact of the 2007–2014 financial and economic crisis, shifts in people’s values and expectations, and the impact of the coronavirus disease (COVID-19) pandemic (5). These pressures have contributed to primary care workforce retention and attraction issues, a decline in satisfaction levels among both health service users and primary care providers (6), and signs of deterioration in core primary care dimensions like accessibility, coordination, people-centredness and RCPC.

A strategic response: Spain’s Primary and Community Care strategic framework

In response to these challenges, the Spanish Ministry of Health has launched the *Plan de Acción de Atención Primaria y Comunitaria 2025–2027* [Primary and Community Care Action Plan 2025–2027] (5), with a renewed focus on RCPC. This emphasis is timely and essential, because the current pressures on primary care carry significant risks to maintaining strong RCPC.

Continuity of care is generally understood to encompass three primary dimensions: relational, informational and management continuity (7). Among these, relational continuity emphasizes sustained personal connections and repeated interactions with known providers who understand the patient’s history, preferences and values, and is the focus of this Policy Note. These relationships not only enhance patient satisfaction but also contribute to improved health outcomes and more effective care planning (8–10).

RCPC is enabled and supported by informational and management continuity. Informational continuity ensures that essential patient

information is consistently available and used across settings and time, enabling seamless and informed care. Meanwhile, management continuity supports a coherent and coordinated approach to care delivery – particularly for individuals with chronic or complex needs – by ensuring that services are aligned and responsive to patients' evolving conditions (11,12).

RCPC is a cornerstone of high-quality, patient-centred health services (13). Primary care often plays a central role in enabling this form of continuity, particularly in systems where it functions as the first point of contact and coordinator of services.

The evidence that RCPC impacts positively on health system performance is strong

Focusing on RCPC makes sense. Systematic reviews and large cohort studies have found that patients who regularly see the same primary care physician experience lower mortality rates, with the protective effect especially high among older adults and those with complex health needs. In addition to its impact on survival, RCPC is associated with lower rates of emergency department (ED) visits and fewer hospital admissions, thus directly impacting health service quality, patient outcomes and system efficiency. Patient satisfaction is another critical dimension influenced by RCPC (14).

As health systems face population ageing and a rising burden of chronic and complex diseases, RCPC can play an important role in addressing these pressures (15–18). However, RCPC is increasingly under strain (19,20). System-level challenges – such as workforce retention, attraction and shortages, growing demand and resource constraints – have been compounded by policy shifts that attempt to respond to global changes in attitudes that place greater value on immediacy, consumerism, fluidity of bonding and technological fascination. The shifting landscape affects expectations on health systems worldwide and has led to the prioritization of quick access to services over continuity of care. High turnovers in rural and sparsely populated and socioeconomically disadvantaged areas further weaken continuity.

The time is right now: the need to focus on RCPC in Spain

Results from the Organisation for Economic Co-operation and Development (OECD) Patient-Reported Indicator Surveys (also known as "PaRIS") highlight the need for a focus on RCPC in Spain in order to preserve its strong primary care foundation. Although trust in primary care professionals remains high, only 45% of people with chronic conditions have been with the same professional for more than 5 years, compared with the OECD average of 58%. The data also highlight that the average duration of consultations is relatively short. Only 4% of primary care practices in Spain report allocating 15 minutes or more for regular or follow-up consultations for patients with multiple chronic conditions, far below the OECD average of 47%. Consultation times are particularly relevant for building trusted relationships with patients (21). These figures point to a deterioration in RCPC that needs to be addressed urgently in order to prevent the erosion of Spain's robust primary care.

Window of opportunity to strengthen RCPC

Despite the challenges mentioned above, advances in primary care open new avenues for the strengthening of RCPC. While promoting continuity between family doctors and their patients remains crucial, other measures – such as the expansion of the roles and autonomy of nurses and other primary care professionals, the move towards multidisciplinary teams, growing health system digitalization and the emergence of population health management approaches – offer important opportunities to support RCPC. The last measure in this list includes developments resulting from a more sophisticated understanding of population health and can help identify which population subgroups may be most impacted by RCPC.

The diversity of the digitally enabled service delivery models that have become available since the COVID-19 pandemic can also be used to promote RCPC, although this also comes with inherent RCPC risks. Taking advantage of the opportunities that digital modalities provide requires digital and health literacy, and – crucially for RCPC – a preference for digital service delivery.

What this Policy Note offers

This Policy Note examines the current evidence base for relational continuity as a key feature of primary care in terms of the interventions that make it work and its impact on health system performance (Box 1). Specific emphasis is given to practical strategies relevant to Spain, where primary care serves as the backbone of the health system, and RCPC has become a political priority and a central element of the *Plan de Acción de Atención Primaria y Comunitaria 2025–2027*.

While this note ends with recommended policy actions specifically for Spain, many of the evidence-informed insights on which they are based on are relevant across Europe.

Box 1. Methods and process of development of this Policy Note

This Policy Note was developed using three inputs: a literature review, key informant interviews, and inputs from the all of the autonomous communities and the two autonomous cities of Spain. Interviews and interim virtual sessions for information collection, alignment and validation were also conducted periodically with the Spanish Ministry of Health, autonomous communities and several Spanish scientific societies.

The literature review was a structured narrative review. A number of terms encompassing and related to continuity of care were included in the original search on PubMed and Google Scholar, filtered for results between 2020 and early 2025. The search returned 1854 results, 149 of which were duplicates. After screening titles and abstracts, and then full screening, 44 records were retained (see Annex). Screening was conducted using Rayyan software.

Key informant interviews were conducted following the literature review to address gaps in the literature. Nine interviews were held with experts from Canada, European countries and patient organizations. The interviews were coded using Atlas TI software and organized into higher-level themes reflecting key aspects affecting relational continuity.

Box 1. contd.

Questionnaires were sent to the 17 autonomous communities to gain a better understanding of relational continuity of care in Spain. Autonomous communities were asked:

1. "Are there any barriers in your autonomous community that prevent relational continuity of care in primary care? If yes, please briefly explain them."
2. "Are there any measures in place in your autonomous community aimed at promoting relational continuity of care in primary care?"
3. "Are there any tool/s available in your autonomous community (e.g. indicators) aimed at assessing/monitoring relational continuity of care in primary care?"

After collecting the first round of results from each source, an autonomous community roundtable was held. On the basis of the questionnaire answers, autonomous communities were selected to present on proposed initiatives to improve relational continuity of care. After the roundtable, further requests for input were sent to each autonomous community soliciting ideas for interventions to improve relational continuity of care. Autonomous communities were asked, based on their own initiatives and those shared in the roundtable, what their top three priority measures were to promote RCPC.

A second autonomous community session was held to discuss provisional recommended policy actions based on previous inputs from the autonomous communities, key informant interviews and the literature review. In this session, autonomous communities were invited to provide feedback on the proposed recommended policy actions and propose indicators that could be useful in their context to measure relational continuity of primary care. At a later stage, a virtual session was organized with the Spanish scientific societies (AEC, FAECAP, SEMERGEN, SEMFYC and SEMG).

As part of the broader literature search examining relational continuity of care, we also identified indicators used in the literature to measure RCPC. These indicators were then discussed and assessed for their relevance and feasibility in the Spanish context. Based on this analysis, we propose a set of indicators that could be appropriate for monitoring RCPC within Spain (see Measuring RCC).

All methods of input were synthesized to inform the Policy Note – pulling information from academic literature, experts within and outside of Spain, and evidence from the Spanish autonomous communities and scientific societies – to provide feasible and relevant relational continuity of care-strengthening measures and insights.

AEC: Asociación de Enfermería Comunitaria [Community Nursing Association]; FAECAP: Federación de Asociaciones de Enfermería Familiar y Comunitaria [Federation of Family and Community Nursing Associations]; SEMERGEN: Sociedad Española de Médicos de Atención Primaria [Spanish Society of Primary Care Physicians]; SEMFYC: Sociedad Española de Medicina de Familia y Comunitaria [Spanish Society of Family and Community Medicine]; SEMG: Sociedad Española de Médicos Generales y de Familia [Spanish Society of General and Family Doctors].

2

Purpose of this document

This Policy Note aims to provide evidence-based insights and actionable recommended policy actions to strengthen RCPC in Spain. Drawing on findings from a literature review, key informant interviews, and inputs from autonomous communities (ACs) and scientific societies, this document highlights the importance of sustained patient–provider relationships for improved health outcomes, system efficiency, and patient and provider satisfaction.

Two overarching questions guided the development of this document to ensure that fit-for-purpose strategic recommended policy actions were produced.

- What evidence exists on the impact of relational continuity of care (RCC) provided by any primary care professional and/or by multiprofessional primary care teams on achieving health system goals (such as, for example, improving quality of care, access, equity, efficiency and population health improvement)?
- Which interventions are currently implemented in different countries that contribute to RCC, and to what extent do these interventions positively influence RCC of care?

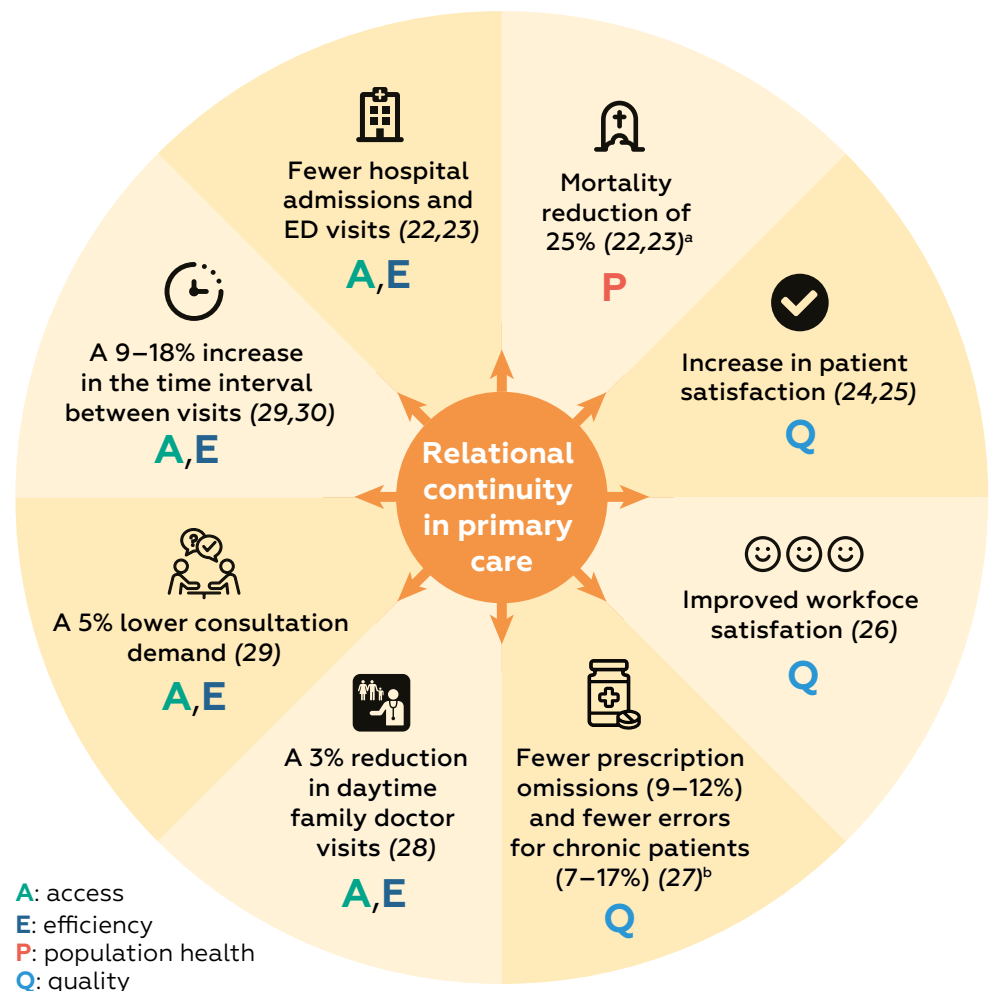
By outlining key challenges, best practices and recommended policy actions, this document aims to support reflections on strategies that enhance long-term patient–provider relationships in primary care, ensuring more coordinated and effective health service delivery.

3

Evidence review results

Drawing from international evidence, Fig. 1 illustrates the wide-ranging positive impact of RCPC on health system performance, discussed in detail in the next section (What is the impact of RCPC on health system performance?). This impact is categorized across five key performance domains: access, quality, population health and efficiency, with equity as a crosscutting theme. Each segment of the wheel presents evidence from the literature demonstrating how sustained patient–provider relationships contribute to better outcomes. For instance, continuity has been linked to a 25% reduction in mortality and significantly fewer hospital and ED visits. RCPC is associated with greater patient and provider satisfaction, fewer prescription omissions and clinical errors, and reduced consultation demand. In the context of access and productivity, continuity can lead to longer intervals between visits and fewer routine doctor visits, easing system burden.

Fig. 1. The impact of RCPC on health systems



^a A regular GP–patient relationship of longer than 15 years relative to a 1-year relationship.

^b Highest tertile relative to lowest tertile RCC patients.

Source: Figure produced by the authors.

The evidence demonstrates that RCPC has clear and positive effects on health system performance, particularly regarding quality, efficiency, access, health improvement and people-centredness. While the evidence regarding other goals is not as clear (e.g. financial protection) or less developed, the overall picture strongly supports efforts to protect and strengthen RCPC as a central pillar of high-functioning primary care, especially in contexts like Spain's, where chronic care needs are rising.

What is the impact of RCPC on health system performance?

A growing body of evidence highlights the value of RCPC in achieving a number of health system goals, such as improving population health, improving quality and access, enhancing patient experience and optimizing system efficiency. This section synthesizes the evidence on the impact of relational continuity of primary care structured around key health system performance goals as defined in *Health system performance assessment: a framework for policy analysis* (31) (Box 2). For the purpose of this Policy Note, we will focus on the first five goals: access, quality, equity, efficiency and health improvement.

Box 2. Health system performance, a definition

Health system performance is defined by WHO as the extent to which a health system achieves stated goals. The WHO document *Health system performance assessment: a framework for policy analysis* (31) defines a number of key health system objectives and goals, as described below.

Access refers to the opportunity to seek out and receive appropriate health-care services in situations of perceived need for care (32). An indicator that can be used for access to services is amenable mortality.

Quality is defined as the extent to which health services provided to individuals and populations lead to desired health outcomes and align with the best available medical evidence (33). Patient satisfaction and prescription quality are indicators used as measures of quality.

Equity refers to how health improvement, people-centredness and financial protection are distributed across the entire population.

Health system efficiency refers to achieving the key health system goals – people-centredness, financial protection and health improvement – to the greatest extent possible with the available resources (input–output ratio).

Health improvement refers to enhancing the overall health status of the population, encompassing various stages of the life cycle, and addressing factors such as morbidity and premature mortality.

People-centredness, also termed responsiveness in the past, refers to people feeling that their nonmedical needs and expectations are met in their interaction with the health system. Examples of such nonmedical issues are: opening hours of clinics, culturally sensitive health services (female health professionals for female patients in some cultures), minority languages spoken by health staff (Romani speakers for Roma patients), etc.

Box 2. contd.

Financial protection, sometimes referred to as risk protection, describes a health system's capacity to protect individuals from the economic burden associated with illness. Unlike people-centredness, it focuses specifically on preventing individuals from impoverishment or catastrophic health spending due to illness-related expenses. This can be measured, for example, through impoverishing health expenditure incidence.

Access

Studies from several European countries show that patients with higher continuity of care have fewer ED visits and lower hospitalization rates, suggesting that RCPC facilitates timely access to care that prevents deterioration (30,34). In Canada, a high level of family doctor continuity has similarly been associated with fewer ED visits and lower rates of hospitalization for complex patients (35). A study conducted in Israel and published in 2023 came to a similar conclusion, with reduced mortality and lower odds of hospitalization for patients who received more regular primary care (36). Similarly, Dyer et al. reported a probable likelihood of reduced hospitalization and ED presentations for care-home residents associated with higher continuity of primary care (37).

Together, these findings indicate that RCC ensures timely access to essential care for serious and urgent conditions, with primary care providers delivering services that align with people's health needs and expectations.

Quality

According to the Institute of Medicine (33), health-care quality can be understood through three core dimensions:

- effectiveness: the extent to which a service achieves the desired results or outcomes, at the patient, population or organizational level;
- safety: the extent to which health-care processes avoid, prevent, and ameliorate adverse outcomes or injuries that stem from the processes of health care itself; and
- user experience: the extent to which the service-user perspective and experience of health care is measured and valued as an outcome of service delivery.

Given that quality in health care is a multidimensional concept that encompasses various aspects, we have used these dimensions in the interpretation of findings from the literature.

Effectiveness

Pereira Gray et al. have reported that higher continuity is associated with improved outcomes in patients with diabetes, cardiac risk factors and dementia, conditions that require ongoing and coordinated management (38). Their study also showed that patients with regular general practitioners (RGPs) are more likely to adhere to medical advice and experience fewer treatment errors, indicating a closer alignment between

clinical intent and actual outcomes. These findings suggest that RCPC improves the effectiveness of care by making it more consistent, personalized and responsive over time.

Safety

Prescription quality is one metric of care quality. Te Winkel et al. investigated the relationship between continuity of care for patients aged 65 years and older and two prescribing errors – potentially inappropriate medications (PIMs) and potential prescribing omissions – in 48 family practices in the Netherlands (Kingdom of the) between 2013 and 2018 (27). Using several indices for continuity of care – the Usual Provider of Care (UPC) index, Bice–Boxerman index and the Herfindahl–Hirschman index (HHI) – higher continuity was associated with reduced likelihood of potential prescribing omissions of between 9% (95% confidence interval (CI): 6–11% using the UPC index) and 12% (95% CI: 9–14% using the HHI). PIM error reduction varied by case complexity. PIMs appeared to increase for medium-continuity patients relative to low-continuity patients, although results were somewhat mixed across the indices. However, for patients with five or more chronic conditions, high-continuity patients faced a reduction of 7% (95% CI: 3–10% using the Bice–Boxerman index) to 13% (95% CI: 10–17% using the HHI) in PIMs relative to the lowest-tertile-continuity patients. Overall, there were reductions in prescribing errors observed as continuity increased, particularly for more complex patients. However, studies in Austria and England (United Kingdom) have reported delayed cancer diagnosis and higher mortality for patients with diabetes in observational studies, possibly because RCPC enabled general practitioners (GPs) to focus on known diagnoses and therefore undervalued new information; however, these studies did not prove causal impacts (38).

User experience

RCPC enables trust and improved relationships between primary care providers and individuals (39,40). Drawing on findings from multiple systematic reviews, Pereira Grey et al. report that higher levels of RCPC are linked to higher levels of patient satisfaction (38).

Provider satisfaction

While not originally part of the Institute of Medicine framework (33), provider satisfaction has gained prominence – especially in the wake of COVID-19 – with increasing efforts to monitor it systematically. Hence, it is included here in the context of RCPC, which not only enhances patient satisfaction by fostering trust, personalized care and consistent communication, but also supports provider satisfaction through more meaningful relationships and improved care coordination. When health-care providers develop ongoing relationships with their patients, they report greater professional fulfilment, a stronger sense of purpose and improved morale. One study (26) found that GP registrars recognized RCPC as a fundamental aspect of general practice, contributing significantly to their professional identity and job satisfaction. They associated continuity with delivering higher-quality, person-centred care and found it to be professionally fulfilling.

Efficiency

Efficiency in health care refers to the relationship between the inputs used – such as time, personnel, equipment and financial resources – and the outputs produced, including improved health status and reduced mortality

or morbidity. Wensing et al. found that higher RCPC was independently associated with lower hospitalization, rehospitalization and avoidable admissions, all of which reduce resource usage and thereby strain on the health system (34). A large-scale study conducted in Norway that was published in 2022 demonstrated that longer patient–GP relationships are associated with significantly reduced use of out-of-hours (OOH) services, acute hospital admissions and mortality (23). Patients with over 15 years of continuity experienced a 25–30% reduction in these events compared with those with shorter relationships. The health system implications are clear. RCPC (i.e. better quality of care) improves health system efficiency by reducing demand for health care, especially for high-cost, reactive care. However, the study also indicated that such benefits only become apparent after 2–3 years, highlighting the importance of sustained investment and support for RCPC.

Acute consultations (determined by antibiotic prescription) with RGPs were associated with lower subsequent hospital admission and ED use relative to locums and non-RGPs in England (30). However, RGPs had higher outpatient referrals relative to locums and non-RGPs, and ordered more tests than locums, although fewer than non-RGPs. Reconsultation periods after regular GP consultations were 9% longer than after other practitioners, supporting previous work (29,30).

Kajaria-Montag, Freeman and Scholtes assessed the productivity impacts of RCC (29). Using data from over 10 million office consultations from 381 English primary care practices over 11 years, the authors reported that when patients with at least three consultations over the previous 2 years saw their regular doctor (defined as their most frequently seen doctor over the past 2 years), the time to the patient's next visit was 18.1% longer than for those who did not see their RGP. It is estimated that if all primary care practices were able to offer high levels of continuity of care, demand for consultations could fall by up to 5.2%, placing RCC as a potential solution to many health systems that face labour shortages and rising consultation demands. The productivity benefits were largest when applied to older patients, those with complex and chronic conditions, and those with mental health conditions.

A second Norwegian registry-based study investigated the effects of a discontinuity in RCPC on health system productivity. During the period 2011–2020, the 1.1 million patients of 819 retiring RGPs and 228 relocating RGPs were studied (28). Relative to the 3 years prior to the discontinuity, there were marginal increases (3% each) in daytime GP contacts and planned hospital contacts that persisted for 5 years in both cases. OOH GP contacts and acute hospital admissions also increased in the year following discontinuity. The discontinuities did not affect mortality in the following 5 years. However, the increased burden on the health system that comes with changing RGPs is apparent.

The first three goals described above are deeply interconnected. Many interventions to improve quality also have an impact on access and efficiency, for example by reducing avoidable hospital use and consultation demand. Improvements in access, quality and efficiency can also help address gaps in equity (see next section).

Another topic related to efficiency (although not limited to it) that is receiving growing attention is environmental sustainability in health care, particularly in the hospital sector (Box 3).

Box 3. Environmental sustainability

The global health-care sector has a substantial environmental footprint, accounting for 1–5% of global environmental impacts depending on the indicator, and more than 5% in some countries, largely through energy use, resource-intensive hospital operations, and complex supply chains for medical goods and services (41). RCPC offers a pathway to mitigate some of these impacts. By fostering long-term patient–provider relationships, RCPC can reduce avoidable hospital admissions, redundant diagnostics and ED use, thereby lowering reliance on high-emission, resource-heavy services. As studies show, patients with strong continuity require fewer acute interventions and less-frequent consultations, especially those with chronic or complex conditions. Further, the observed reduction in prescribing errors (see What is the impact of RCPC on health system performance?) also reduces pharmaceutical waste, a growing source of environmental harm through production emissions and drug residues entering water systems.

Equity

The greater impact of RCPC on health system performance when applied to patients who are older or who have chronic, complex or mental health conditions is a common theme in several pieces of literature cited above. Further, continuity has been reported to be lower for patients in more deprived areas (42). This implies a greater benefit of RCPC for these groups, and underlines the importance of proactively identifying population subgroups and areas with greater needs, for instance through population stratification, for prioritization in providing RCPC.

Health improvement

Pereira Gray et al. summarize the impacts of RCC, citing several systematic reviews (38). These reviews have shown reduced mortality associated with higher levels of continuity of care, greater patient satisfaction, lower health-care use or lower costs, better outcomes for patients with diabetes, better care for those with dementia and cardiac risk factors, greater adherence to medical advice and fewer hospital admissions. Further studies conducted in Canada (35) and Israel (36) have also indicated reduced mortality and lower odds of hospitalization for patients with higher RCPC. A 2022 study that investigated the relationship between continuity of care and OOH health service use, acute hospital admissions and mortality is particularly robust, relying on nationwide registry data from 4.5 million residents in Norway, and is recognized as a key paper in the study of RCPC (23). The study investigated the association between the length of patient–RGP relationships and the outcomes listed above. The probability of each event (OOH, acute admissions and death) decreased with statistical significance as the length of patient–RGP relationship increased. Compared with 1- or 2–3-year patient–RGP relationships, relationships of 15 years or longer were associated with reductions in the probability of OOH use, acute hospital admission or death of 25–30%. The dose–response relationship indicates a causal relationship between continuity and outcomes.

Further, a recent nationwide cohort study conducted in Denmark found that, compared with patients listed at the same general practice for 10 years or more, those listed for only 0–1 years had a higher risk of all-cause mortality (hazard ratio: 1.21, 95% CI: 1.17–1.25), lower cross-sectoral continuity of care (odds ratio: 1.20, 95% CI: 1.13–1.27), more unplanned hospital contacts

(incidence rate ratio: 1.25, 95% CI 1.21–1.30) and more OOH contacts (incidence rate ratio: 1.21, 95% CI: 1.17–1.26) (22). This underscores the need for policies that support provider stability and discourage unnecessary switching. Together, these findings provide strong evidence that RCPC is a critical driver of improved health outcomes, reduced service use and lower mortality, especially when sustained over time.

Measuring RCPC

This section presents some of several quantitative measures used in the literature to assess RCPC, as well as proposed indicators to measure RCPC in Spain. The most commonly used indices in the literature include the UPC index, the Continuity of Care Index (COCI), the HHI and relationship duration (Table 1). These measures offer different insights into how RCPC is experienced and can be tracked across populations. The choice of index often depends on the research question, available data and whether the focus is on visit frequency, provider dispersion or long-term relationships.

Table 1. Commonly used indicators of relational continuity in the literature

Indicator	Formula	Description
UPC index	$UPC = \frac{n_i}{N}$	Proportion of visits to most frequent provider, where n_i is the number of visits to the most frequently seen physician by patient i , and N is the total number of patient i 's physician visits
COCI/ Bice– Boxerman	$COCI = \sum_{j=1}^P \frac{n_{ij}(n_{ij}-1)}{N_i(N_i-1)}$	Dispersion of visits across providers, where n_{ij} is the number of patient i visits to provider j , N_i is total visits by patient i , and P is the number of different providers patient i has visited
HHI	$HHI = \sum_{i=1}^P \left(\frac{n_{ij}}{N_i} \right)^2$	Concentration of visits across providers, where n_{ij} is the number of patient i visits to provider j , N_i is total visits by patient i , and P is the number of different providers patient i has visited

Drawing on the above indicators identified in the literature, we selected and adapted those most relevant to Spain's health system priorities, policy environment and available data sources, with the aim of supporting the monitoring of relational continuity in the national context. The proposed indicators are presented in Table 2.

Table 2. Proposed indicators to monitor RCPC in Spain

Indicator	Formula	Contextualized considerations for Spain
UPC	$UPC = \frac{n_i}{N}$ Where n_i is the number of visits to the most frequently seen family doctor or nurse by patient i, and N is the total visits by patient i to all family doctors or nurses	To be calculated separately for family doctors and for primary care nurses. It can be calculated for the general population and also be disaggregated by complexity, e.g. using the Adjusted Morbidity Groups and/or for patients prioritized for home care and/or for patients with the highest number of primary care visits (in the previous year, for instance).
Team UPC	$Team\ UPC = \frac{n_i}{N}$ Team UPC points to the proportion of visits to the most frequent providing team, where a team includes a family doctor, nurses and other professionals depending on the context; n_i is the number of visits to the most frequently providing team by patient i, and N is the total number of visits by patient i to all teams	Can be adapted to the specificities of every AC, but it should always include at least family doctors and primary care nurses.
Percentage of long-serving practitioners	$LSP = \frac{\sum_{i>x} L_i}{L}$ Percentage of primary care providers L_i in post with the same patient list for longer than x years (3, 5, 10, 15 or 20 years) as a proportion of total primary care providers L in each basic health zone; this is a proxy for provider stability, which supports RCPC, and may help identify areas at risk of disrupted continuity due to turnover	To be calculated at least for family doctors and primary care nurses, and disaggregated by basic health zone.

Table 2. contd.

Indicator	Formula	Contextualized considerations for Spain
Average relationship duration	$T = \frac{\text{Time since empanelment}_i}{N}$ T = Average relationship duration Average number of years that a primary care provider maintains the same patient lists; may also serve as early warning if average relationship durations drop substantially (e.g. due to higher turnover)	To be calculated at least for family doctors and nurses, and disaggregated by basic health zone.

The UPC index is considered the gold standard and is internationally comparable. The proposed indicators align well with the characteristics of Spain's primary care system: good availability of data, a robust digital health infrastructure and evolving team-based care models. They allow for both individual-level (UPC) and system-level (practitioner tenure and average duration) tracking, and can be disaggregated by complexity, provider type or AC/basic zone.

What lessons can be drawn from countries' implementation of RCPC interventions?

While the previous section highlights the implications of RCPC on health system performance, this section focuses on the interventions adopted in health systems to foster RCPC.

Across Europe, the literature analyses several interventions currently in place that enhance RCPC. Many of these were not originally designed with RCPC as their primary goal, emerging as part of broader primary care reforms, yet they clearly contribute to strengthening RCPC.

Drawing on evidence from the literature review, key informant interviews and consultations with the Spanish ACs, existing RCPC-enabling interventions were compiled and categorized into five strategic approaches, based on their defining characteristics and the ways in which they promote RCPC:

1. ensuring strong and sustained patient links with a primary care provider/team
2. strengthening team-based operations to support RCPC
3. leveraging digital tools to ensure consistent patient links to health system
4. leveraging risk stratification to target RCC for those who need it most

5. providing incentives (financial and nonfinancial) for RCC strategic approaches.

The following sections describe each of the five approaches, their implementation and an accompanying analysis tailored to the Spanish context.

Strategic approach 1: Ensuring strong and sustained patient links with a primary care provider/team

Why this approach is crucial for RCPC

Several policy interventions outlined in the literature were specifically focused on strengthening the connection between patients and their primary care providers, particularly with family doctors. This connection underpins RCPC and is required consistently over extended time periods to build the relationship between care providers or teams and patients. Interventions that focus on establishing or supporting clear, identifiable relationships between care providers and patients contribute to RCPC.

Patient–provider relationships in Europe are increasingly strained by systemic challenges. Chronic shortages of GPs and other health system staff – exacerbated by the COVID-19 crisis – have significantly worsened already problematic waiting times. In response, policy-makers have placed growing emphasis on improving access metrics, such as reducing wait times, often using them as proxies for system performance. This shift has led to reforms that prioritize rapid access to any available provider rather than sustained access to a patient’s usual family doctor or care team. For example, the United Kingdom’s National Health Service has long used waiting times as a key performance indicator, a trend mirrored in other countries. While this approach may improve short-term access, it undermines the development of long-term, trusting relationships between patients and providers, relationships that have been consistently linked to better health outcomes and more efficient use of resources.

In Spain, health workforce employment conditions linked to the civil service system undermine the establishment of long-term relationships between primary care professionals and patients. For example, a high prevalence of temporary contracts among Spanish health professionals is largely due to the complex and lengthy process required to obtain permanent *funcionario* [civil servant] status. Once a permanent *plaza* [civil service position] is obtained, professionals have the option to request reassignment at their discretion. Those on temporary contracts may be reassigned based on administrative decisions. As a result, many primary care professionals do not remain in the same geographical area for long periods, which disrupts continuity with their patient population. To fill staffing gaps, temporary contracts are commonly used; however, these often end just as meaningful relationships between doctors, nurses and patients begin to form. These challenges, as well as the those faced by European counterparts, have also impacted Spain’s ability to provide timely care, with attention being drawn to waiting times in the country.

Evidence review: key findings

A number of interventions have been implemented either as part of wider primary care reform or specifically to improve the patient–provider team relationship (43,44).

One foundational strategy that became apparent in several key informant interviews is empanelment: assigning patients to a specific primary care

provider or team to support long-term, personalized care. Empanelment systems are used in countries such as Canada, Denmark, Finland, Netherlands (Kingdom of the), Norway, Portugal, Spain, Sweden and the United Kingdom, where family doctors, nurses and wider teams (including admin staff in some localities) manage patient panels (23). In Norway, the RGP Scheme was enacted in 2001, which allowed patients to choose their own RGP. If a choice was not made an RGP was assigned. The RGPs act as health system gatekeepers and are required to refer patients to hospitals, outpatient clinics and EDs, ensuring strong connections between patients and their RGPs (23). In a key informant interview, an expert in rural medicine explained how, in rural northern Sweden, patient lists are capped at 1100 per GP to ensure that providers can maintain meaningful relationships with their patients. Sweden is also considering broader policies to formalize named GPs and shift preventive care closer to communities, recognizing the potential for both improved care and system-level efficiencies such as reduced hospital transport costs. A recent study from Denmark showed that long-term relationships of patients listed in the same primary care clinic were linked to better coordination of care and smoother transitions across different parts of the health system, highlighting the system-wide value of RCPC (22).

One study explored the “Named Physician Pair” model to strengthen continuity of care in English primary care amid workforce pressures (45). Using data from over 30 million consultations, the authors showed that when patients see either their primary or secondary designated physician, time to the next consultation increases significantly – by 14% and 6.5%, respectively – compared with other providers. The model reduces emergency visits and hospitalizations, particularly for older patients and those with chronic conditions. Targeting the 30% of patients who benefit most from continuity could reduce overall consultation demand by nearly 5%, with estimated annual savings of over £100 million across England.

Other interventions have focused on appointment systems designed to support continuity. In Austria, the Vienna Urban Healthcare Hotline allows patients to book appointments with their preferred GP through integrated scheduling systems (information from key informant interviews). In many ACs, appointment platforms are designed to automatically prioritize the patient’s assigned family doctor or nurse, with other ACs planning to implement similar systems. Similarly, in the United Kingdom, patients can prebook review appointments with their usual GP or nurse practitioner following diagnostic tests, reinforcing continuity (46–48).

Another important approach supporting RCPC involves extending opening hours to ensure patients can access care from familiar providers. For example, in rural Sweden, health stations have extended their hours to allow patients to consult with known professionals outside of regular working times, rather than being redirected to hospital-based or unfamiliar providers (information from key informant interviews). In care homes for the elderly, those patients with access to 24-hour/7-days-per-week on-site physician and nurse care saw increased RCC relative to those without access (37).

Finally, workforce retention policies are also being leveraged to reinforce relational continuity. In ACs, health professionals are encouraged to stay in their roles over the long term once they receive an indefinite public sector

contract. This applies not only to public sector positions but also to publicly funded positions in privately delivered services, helping to maintain stable care teams and reduce turnover (information from AC inputs).

Granular analysis for Spain

In Spain, every individual is assigned to a primary care microteam composed of a family doctor, primary care nurse and (in some ACs) administrative staff. The professionals making up the microteam act as the primary point of contact and as reference providers for patients, serving a population of around 1500 people. The microteam coordinates the care of their assigned individuals; the microteam model thus aims to ensure sustained relationships between individuals and primary care providers. These microteams are part of larger multidisciplinary teams that include social workers, physiotherapists, midwives, dentists and others.

Although this feature is designed to promote RCPC, it is often undermined in practice by a range of interrelated challenges and pressures that destabilize the composition of primary care microteams. First, ACs struggle to attract and retain primary care professionals, particularly in (but not limited to) rural and sparsely populated areas. This issue, along with the progressive retirement of professionals and the inability to retain residents once they finalize their specialization in family and community medicine or nursing, results in shortages of doctors and nurses. Second, there is a high turnover of family doctors and nurses due to temporary contracts. Although this situation has improved in recent years, there is substantial contract instability for those that do not have a fixed position, preventing them from staying and working with the same *cupo* [patient list]. This is exacerbated by the fact that working with a given patient list does not guarantee priority to remain with the same list during the stabilization processes. Mobility policies that allow those in fixed positions to frequently change patient lists also contribute to this process. Third, having a specialty in family and community nursing is not a prerequisite for practicing in primary care. This, together with the lack of separate contracting pools for hospital and primary care nursing in most ACs, favours nurse mobility between hospital and primary care settings, disrupting microteam stability. Fourth, difficulties in meeting high demand and workloads reduce the time available to primary care professionals to build strong relationships with patients during consultations. In some cases, this also results in solutions that prioritize immediacy over continuity.

To address this, ACs are implementing several workforce-related policies. This includes converting the high number of temporary contracts to longer-term ones, and introducing different incentives to retain and attract professionals in primary care with a focus on rural areas, such as the establishment of incentivized positions in “hard-to-cover areas”.

Some ACs referred to the *libre elección* [free choice] of a family doctor and/or nurse as an RCPC measure. This, in principle, allows for patients to retain a trusted care relationship with their reference professionals regardless of place of residence within the region, effectively allowing patients to empanel themselves to the same provider. However, in the absence of a minimum required time period with a provider, frequent changes allowed by unlimited choice may inadvertently undermine RCPC.

Another set of measures being taking by some ACs are related to improving or implementing new appointment systems. These systems in some cases

include an algorithm to classify consultation motives based on “what”, “who”, “how” and “when”. The idea behind the algorithm is to allow for prioritization of the patient’s assigned family doctor or nurse, thereby preserving continuity and channelling the demand to the most appropriate professional.

Strategic approach 2: Strengthening team-based operations to reinforce RCPC

Why this approach is crucial for RCPC

While RCPC traditionally centres on the ongoing relationship between a patient and their primary care provider, strong and consistent connections with multiple members of a care team may offer similar benefits; however, this requires an RCPC-enabled approach to implementing team-based care as primary care in Europe increasingly adopts multidisciplinary models. Ensuring that teams operate in a coordinated, patient-centred way becomes essential to preserve RCPC, where information is shared effectively and team members collaborate closely. This evidence review demonstrates that RCPC-preserving interventions embedded into the roll out of multidisciplinary teams can allow patients to reap the benefits of team-based care while preserving RCPC, particularly for those who need it most.

Team-based operations that support RCPC are particularly relevant to the Spanish context, because primary care is delivered by multidisciplinary teams. Ensuring that teams are enabled to deliver RCPC is therefore a necessary component based on the environment in which RCPC reform will be implemented.

Evidence review: key findings

The evidence reviews suggest that team-based models that manage to enhance RCPC seek to build trusted relationships with team members such as nurses, or other family doctors practicing with the primary provider, while also ensuring effective information sharing within the team.

A key approach to foster RCPC across a multidisciplinary team is ensuring consistent contact with nurses or other team members. In countries like Belgium, Canada and Estonia, practice-specific nurses and assistants work alongside family doctors, providing patients with familiar, reliable points of contact beyond the lead physician (key informant interviews). In Estonia, specialized nurses are leading primary health care with some rural patients (key informant interviews). In Sweden, health centres are staffed by nurses around the clock, ensuring that patients always have a consistent and recognizable human connection in addition to their assigned family doctor (key informant interviews). In contrast, where nurses and assistants are contracted or rotate between practices – as seen in some systems – this continuity can be disrupted, weakening the potential for stable relationships with secondary providers. In some ACs in Spain, a nurse-led care model is employed where the nurse care manager not only coordinates care between the primary care team and social services, but also ensures that patients are followed up by their regular doctor or nurse postdischarge, thereby reinforcing long-term connections (AC inputs). Given the role that primary care nurses play in primary care in Spain, they are a key actor to ensure RCPC. In the United States of America, increased RCPC has been associated with nurse-led care coordination models that include home visits to assess, plan, monitor and adjust care with GPs (49).

These relationships are most effective when backed by structured, consistent information sharing across the team; this is essentially informational continuity of care (see introductory definition), which directly supports RCPC. For example, in the United Kingdom, Primary Care Networks allow groups of general practices to collaborate with other health and social care professionals (key informant interviews). Through integrated systems and shared access to patient data, providers can develop a more complete understanding of each patient's health context, even when the patient sees a different professional to usual. Similarly, in Austria, contractual requirements for regular team handover meetings ensure that all members are updated on patient needs, preserving continuity across touchpoints (key informant interviews). In Canada, patients are enrolled with a physician and physicians belong to administrative groups. These groups use shared patient lists and doctor rostering, expanding the care relationship from an individual to a small, consistent team, while still keeping patients within a known and cohesive circle of care (50). This is done both during regular GP hours – called cross-coverage between physicians – and after hours, where physicians in the same group are supposed to share patient lists and responsibility for after-hours care. Both systems are enabled by systems to support informational continuity (50).

Some countries have gone further to ensure that continuity is maintained even during extended hours or temporary absences. For example, in some ACs, specific efforts are made to schedule extended hours, substitutions and vacancy coverages using professionals from within a patient's assigned team, rather than introducing unfamiliar providers (AC inputs).

These interventions highlight that while team-based care may challenge relational continuity with a single professional, it can still support patient-team RCPC if the goal of continuity is safeguarded. With well-structured information flows and coordinated team organization, RCPC need not be lost, and may even be enhanced. Patients with complex, chronic, or multimorbid conditions can also be prioritized to see the same provider or provider pair, ensuring that continuity is preserved where it is most critical.

Granular analysis for Spain

This strategic approach is particularly relevant in the Spanish context. One of the defining features of Spain's primary care model – enshrined in the landmark General Health Act of 1986 (51), which established the foundational pillars of primary care – is the delivery of services by multidisciplinary teams.

A key strength within this model is the advanced role and autonomy of nurses, especially those who complete both a 4-year nursing degree and an additional 2-year residency to specialize in family and community nursing. These nurses play a central role in managing stable patients with chronic conditions, with a strong focus on health promotion, disease prevention and home-based care. In addition, they address a wide range of acute care needs, including wound care, and lead community-based group activities that tackle the social determinants of health, often in collaboration with other team members and local organizations.

Across Spain's ACs, there is broad consensus that the expanded role of nurses presents a significant opportunity to strengthen RCPC. Ensuring

strong, long-term relationships between nurses and patients has become a top priority. However, achieving this will require that the nurse-specific workforce challenges discussed earlier are addressed. In addition, further research is needed to better understand the impact of expanded nursing roles on relational continuity.

In some regions, a nurse-led case manager model is in place. Here, the nurse not only coordinates care between the primary care team and social services, but also ensures that patients discharged from hospital are followed up by their regular doctor or nurse, reinforcing stable, long-term connections.

Other regions have integrated administrative staff into microteams, assigning them a defined population. This enables them to develop ongoing relationships with patients, improving service responsiveness. Because they know which professionals are best suited to handle specific concerns, these staff members help direct patients efficiently within the system.

Finally, a critical barrier to enhancing RCPC lies in the limited autonomy of primary care teams. Their lack of control over scheduling and key aspects of service organization within their catchment areas prevents them from adapting workflows to prioritize continuity of care. This structural constraint may contribute to the erosion of RCPC over time.

Strategic approach 3: Leveraging digital tools to ensure consistent patient links to health system

Why this approach is crucial for RCPC

Digital tools continue to gain momentum throughout health systems following their increased adoption during the COVID-19 pandemic (52); however, widespread usage has not reached its forecast potential (53). RCPC is no different to health systems in general. Some digital measures have been adopted across Europe to improve RCPC over recent years, but it is still largely nascent apart from rudimentary interventions.

Similarly to Strategic approach 2 involving team-based care, the adoption of digital tools has the potential to either strengthen RCC by creating stronger, more accessible links between patients and primary care providers, or to undermine it by creating impersonal, inhuman systems that patients feel frustrated by. Digital tools in primary care offer significant upsides in terms of quality, safety and equity of care (54). However, specific attention should be paid to planned digital measures to ensure that RCPC implementation is not undermined by increasing distances between patients and their human reference primary care providers.

In terms of digital integration, Spain's health system is advanced relative to many European peers. While the integration and interoperability of digital patient records is frequently cited as a key issue that hinders RCC by experts in the field (key informant interviews), Spain has an integrated information technology system in primary care that enables informational continuity of care and the sharing of patient records. Some ACs have embraced digital medicine more readily than others, with the implementation of specific tools and applications to share patient records and engage remotely via digital technologies. However, not all regions have progressed at the same rate, and digital usage and empowerment – particularly among elderly and rural communities – lags behind more advanced urban hubs, mirroring other

countries in Europe (key informant interviews). A further challenge is the restricted accessibility to clinical data for patients residing in a different AC.

Evidence review: key findings

Digital tools are primarily used in two ways that support consistent links to health systems. The first is to ease organizational burden and information sharing and the second is to provide easier (via digital channels) access to primary care providers.

From an organizational standpoint, integrated digital health records have been implemented in Spain and Austria (key informant interviews). Spanish ACs use unified electronic health records (EHRs), and some ACs have linked them to selected nursing homes and drug addiction centres, as well as secondary care hospitals (AC inputs). These records allow safe storage of information for individual practitioners who can easily refer to patient history and thus strengthen continuity of care. Digital records also enable smooth handovers between members of integrated teams; this informational continuity enables primary care providers to foster relational continuity.

A second organizational element that enables RCPC is appointment management. While booking systems that refer patients preferentially to reference family doctors or nurses were discussed in Strategic approach 1, digital appointment management can go further. In the United Kingdom, patients can book appointments online, and these (and analogue bookings) are followed up with SMS and email prompts and reminders, to ensure patients do not miss or forego appointments (key informant interviews) (47). Results of certain procedures can also be delivered digitally in the United Kingdom, although this does not have an effect on RCPC unless accompanied by a scheduled follow-up with a reference primary care provider.

The third mechanism through which digital tools support RCPC is through increasing access to primary care providers via digital channels. Fox et al. found a that number of interventions in United Kingdom health reform focused on increasing appointment availability (47). While increased numbers of appointments can cater to a broader patient base, they also enable patients to see their reference primary doctors more frequently, because patients can be spread more evenly across a greater number of appointments. Digital services offer a convenient solution to expand appointment availability, particularly for rural patients, and through this patient access to their primary care providers and teams.

Online or phone-based teleconsultations have gained prominence since the COVID-19 era, and are now offered as channels to access care in several regions within Spain (AC inputs) and several other European countries (e.g. Belgium, Denmark, Estonia, France, Germany, Italy, Netherlands (Kingdom of the), Norway, Romania, Spain, Sweden and the United Kingdom; note this list is nonexhaustive and is based in part on key informant interviews) (55). The extension of traditional primary care consultations to digital channels can, if managed conscientiously, enable increased contact between reference primary care providers and their patients, improving RCPC and patient links to providers via digital tools. However, if RCPC is not embodied as an objective within remote or teleconsultation, there is a risk that patients are directed to the next available operator, who may be unfamiliar to them, and

in certain contexts situated in a different region entirely in an outsourced call centre-type operation. If such operations are relied on, RCPC may be undermined.

In rural Sweden, the circumstances are flipped to allow remote digital family doctors to enable RCPC. In southern Lapland, there are seven health-care stations, open from 08:00–17:00. Two stations are staffed with family doctors between 08:00 and 21:00, while nurses are available at the wards 24 hours per day, 7 days per week. From 21:00 to 08:00, a doctor is on standby digitally on behalf of all of the seven health-care stations, and can dispatch an ambulance and/or helicopter from the nearest station. As these digital doctors are sourced from the area on rota, the chances of previous interaction are higher and, indeed, the doctor may interact with a patient from his/her very own patient list (key informant interviews).

In Estonia, digital approaches are being piloted with remote elderly populations. However, the population has not shown a high level of interest in the solutions proposed. Instead, elderly patients have found a loophole, enabled by strong and lasting relationships with family nurses. To avoid engaging with the new digital systems, patients call the family nurse on their cellphone number. While not engaging with the new digital systems, the direct line of contact made available to patients by family nurses via technology enables a positive RCPC feedback loop (key informant interviews).

Granular analysis for Spain

Spain is a digital transformation fast-tracker in primary care in Europe. It has a highly digitalized health system, with all of the population covered by EHRs and e-prescription in primary care. The EHRs are the same for all primary care providers within each AC. They allow communication between primary care team members (although access by all primary care team members may vary across ACs) and are part of regional health networks that allow communication between primary care teams, hospitals and other outpatient specialists.

EHRs play an important role in supporting continuity between team members in primary care and between levels of care, but also between patients' reference professionals and nonregular primary care providers. This may contribute to reducing the impact of not being seen by the person's reference provider, especially for mild, acute and/or self-limited conditions. Timely information sharing across team members and care levels also supports joint care planning, and enhances continuity.

Many ACs are increasing the number of access channels to primary care. Phone-based consultations are routinely used as a consultation modality. Different portals allow patients to make online consultations with their reference professionals. Telemedicine has gained prominence since the COVID-19 era, and is now offered as another channel to access care. However, there are different levels of adoption across ACs.

The highly mature digital context in Spain offers an immense opportunity to support relational continuity, especially between patient groups that would benefit from it most (e.g. those with chronic conditions, the elderly and patients with more complex needs) and their reference primary care professional, provided that digital propensity and literacy are considered, and RCPC is an explicit goal.

Strategic approach 4: Leveraging risk stratification to target RCPC for those who need it most

Why this approach is crucial for RCPC

Population stratification (Box 4) is increasingly embedded within population health management programmes in Europe and beyond as a means to monitor, and predict, adverse and high-cost health outcomes, including unplanned hospitalizations, frequent ED visits and intensive care utilization (56,57). Risk stratification typically draws on routinely collected health-care data – such as diagnostic information, care utilization patterns (e.g. primary and secondary care visits, hospital admissions) and medication histories – and may also include sociodemographic variables to capture broader determinants of health.

By identifying different risk strata – including high-risk subpopulations, which often constitute a small share of the overall population yet account for a substantial portion of health-care demand – stratification enables more focused service planning and targeted intervention. In this context, RCC becomes particularly relevant; individuals identified as being at high risk frequently have chronic or complex conditions that require sustained engagement with health-care providers across time and settings. Prioritizing RCPC for these populations can support better coordination, improve the patient–provider relationship and enhance the consistency of care management.

In general, the health-care data systems in Spain are robust and have the potential to support population stratification. Several ACs reported having incorporated elements of population stratification to support proactive care models. Andalusia has developed specific plans for chronic care patients (e.g. the Andalus Integrated Care Plan For Chronic Disease Patients) that prioritize structured follow-ups by the same team with the aim of reducing fragmentation. Similarly, Aragon has designed strategies for chronic patients, emphasizing the joint approach of the doctor–nurse pair, to guarantee a longitudinal approach to patient care. In Murcia, personalized care plans, particularly for patients with chronic conditions, foster a stronger connection between the patient and their care team. The Basque Country has established care pathways for a number of the most frequently presenting health conditions.

Box 4. Risk stratification, a definition

Risk stratification is a population health management step used to classify individuals, within a defined population, into different risk groups according to their estimated risk of experiencing undesirable health events (56). This is used to tailor targeted services and interventions accordingly in a proactive manner. Stratifying the population is one approach that can be used to support the implementation of RCC by identifying individuals who are more likely to benefit from sustained, coordinated relationships with health-care providers. For example, individuals with multiple chronic conditions, frequent hospital admissions, mental health needs or social vulnerabilities.

Evidence review: key findings

While some patients actively value continuity of care, it is not a priority for all (20). Continuity is relevant across all consultation types, whether in-

person or remote. It tends to be especially valued by older adults, those with chronic or mental health conditions, and patients receiving palliative or end-of-life care. Familiarity with a family doctor can be particularly important when facing serious illness or discussing future care, although it may be less critical for urgent, one-off issues. Practices aiming to improve continuity often start by prioritizing these groups, although doing so involves administrative effort. Several interventions identified in the scoping review by Fox et al. employed patient profiling or stratification to enhance RCC (47). These approaches typically focused on identifying individuals with complex or long-term health needs – such as those with multimorbidity, frailty, high health-care utilization or severe mental illness – and assigning them a named GP or prioritizing access to a familiar provider. Patients receiving palliative or end-of-life care were also specifically profiled for continuity interventions, as were individuals with learning disabilities or those considered socially vulnerable. In some cases, predictive risk stratification tools or usage data (e.g. frequent attenders) were used to target continuity initiatives through case management or structured follow-up. Risk stratification has been introduced as a foundational component of the United Kingdom's approach to enhancing RCPC in primary care and, although not yet fully mature, an increasing number of countries are exploring population health management and risk stratification approaches in primary care, including Belgium, Germany, Netherlands (Kingdom of the), Portugal and Singapore. As part of the 2025 GP contract in the United Kingdom, practices are now incentivized to carry out risk stratification to identify priority patient cohorts that may benefit most from continuity, particularly those with complex or changing health needs. This initial step is supported by digital tools and training, and forms the basis for a longer-term programme aimed at linking financial incentives to the delivery of RCPC. Additionally, a government-led working group has explored innovative approaches to profiling patients – such as flagging individuals with sudden increases in consultation frequency – as a way to proactively identify those requiring sustained therapeutic relationships (key informant interviews).

Granular analysis for Spain

The highly digitalized health system, as well as the existence of a population risk stratification tool deployed in all ACs – the Adjusted Morbidity Groups (AMGs) – puts Spain in a very good position to strategically use the AMGs to support RCPC. The AMGs classify the population into several mutually exclusive morbidity groups. They assign a single risk score to each individual and disease labels for a set of priority conditions. This information, available in EHRs, supports the identification of patients who are at high risk and those with priority conditions who will benefit more from RCPC.

Primary care teams can draw up lists of the most complex patients within their assigned populations, including complex chronic patients and advanced and frail chronic patients. Several ACs mentioned that the implementation of care programmes for complex chronic patients that include the development of personalized care plans and care pathways is a key strategy to promote RCPC.

A sophisticated understanding of a population and its determinants is paramount for following a more tailored approach to promoting relational

continuity between patients and their reference primary care professionals. The potential of using AMG information, together with individual-level data on the social determinants of health and other variables (e.g. health and digital literacy), can help to identify population subgroups for which ensuring RCPC is of the utmost importance; this potential is not fully realized yet in Spain. Although steps are being taken, improving data collection on the social determinants of health at the individual level and the availability of data in EHRs are important priorities moving forwards.

Strategic approach 5: Providing incentives (financial and nonfinancial) to support RCPC

Why this approach is crucial for RCPC

Incentives – both financial and nonfinancial – can be used to support RCPC. However, their design and implementation require careful consideration. Financial incentives for providers include payments for longer consultations and timely follow-up, but financial incentives alone have not consistently promoted RCPC (58). Nonfinancial enablers remain essential to a comprehensive RCPC strategy. These include team-based models that ensure relational continuity even within multiprovider settings, organizational support for consistent care assignment and information systems that promote coordination over time. Furthermore, training in communication and interpersonal skills can equip providers to cultivate durable therapeutic relationships. Overall, the use of incentives should be seen as part of a broader strategic framework that aligns policy, organizational processes and professional practice in support of sustained, person-centred care.

Evidence review: key findings

Some evidence indicates that financial incentives are not always perceived as appropriate or effective tools for strengthening relational aspects of care (58). In one example in Australia, GPs and their staff have viewed such incentives as rewards rather than drivers of behavioural change, and expressed concern that financially motivated programmes may unintentionally undermine care quality or shift attention away from core values such as trust and patient-centredness (58).

Despite these reservations, financial incentives have been used effectively in some contexts to support RCPC-enabling policies. For example, formal patient attachment schemes – such as those implemented in Quebec’s Family Medicine Groups – have increased primary care engagement and facilitated continuity, even in the absence of the assigned physician. Incentives for enrolling or “attaching” new patients, when coupled with robust administrative tools (e.g. registries of unattached patients), have supported outreach and policy-targeting efforts. Recent policy debates in England (15) further illustrate both the potential and complexity of using incentives to promote continuity. While the use of the Quality and Outcome Framework demonstrated that incentivization can influence practice behaviour, it also led to unintended consequences, such as reduced attention to nonincentivized conditions and a “tick-box” culture. Equity implications are also critical: practices serving deprived or high-need populations may face greater structural barriers to achieving continuity targets, potentially risking a redistribution of funds away from those most in need. To mitigate this, continuity incentives could be weighted based on the social and clinical complexities of practice populations, improving existing capitation formulae.

Granular analysis for Spain

Several ACs emphasized the role of incentives in promoting RCPC, supporting an interest in context-sensitive incentive strategies, with both financial and nonfinancial incentives tailored to local workforce dynamics and population needs. A proposal from one AC was to provide targeted financial incentives in primary care settings that face greater difficulties in recruiting and retaining family doctors, such as rural clinics, high-deprivation urban areas, areas with higher care burdens, and areas with high housing costs and/or high levels of tourist traffic. These centres often struggle to maintain stable patient–provider relationships due to high turnover, workforce shortages or lower attraction capacity. To address this imbalance, larger payments or bonuses could be allocated to clinicians who choose to work in these settings and remain over time, particularly if they build long-term therapeutic relationships with patients (AC inputs). Most ACs highlighted the importance of identifying hard-to-fill positions as a prerequisite for targeted recruitment efforts. Strategies discussed included the use of financial incentives, long-term contracts, improved job board visibility, and access to high-quality continuing education to attract and retain professionals in underserved areas. These measures were suggested as a base to create the stable workforce needed to support RCPC (AC inputs). Another AC emphasized the importance of increasing the flexibility of working conditions and supporting work–life balance with a focus on hard-to-cover areas. This may be difficult to delineate clearly, as several components outlined in Strategic approach 1 may also apply to this area.

4

Recommended policy actions

Having provided a thorough review of the evidence, in this section we draw on the above to present the 13 recommended policy actions. These are structured around four strategic aims and draw on the five strategic approaches described in the previous section.

While the five strategic approaches provide a conceptual foundation, the 13 recommended policy actions translate these into actionable, context-specific reforms. The five strategic approaches are interlinked and often support more than one policy aim. For example, strengthening team-based operations can help with both retaining staff and organizing microteams, while digital tools can improve performance monitoring and support targeted care. Ensuring patient–provider links cuts across nearly all recommended policy actions. This overlap shows that improving relational continuity requires coordinated action on multiple fronts: workforce, organization and technology. Further, reforms are colour-coded by expected implementation timeline: short-term versus medium-term.

Aim 1: Establishing RCPC as a central dimension of primary care performance

Recommended policy action 1: Agree on a standardized set of common indicators for all ACs to monitor RCPC, using available data and performance monitoring systems (short-term). See indicators proposed for Spain in Table 2.

Aim 2: Addressing health system's features that undermine RCPC

Recommended policy action 2: Introduce financial and nonfinancial incentives to ensure retention, attraction and job stability of primary care professionals, with a particular focus on hard-to-cover areas.

2.1. Establish a minimum duration of 3 years for temporary interim and vacancy contracts, as well as stable and agile mechanisms to cover absences (short-term).

2.2. Create specific positions for nurses with the specialty in family and community nursing, and progressively introduce the specialty as a prerequisite to work in primary care (short-term).

2.3. Until the prerequisite of having the family and community nursing specialty is introduced, establish a specific pool and competitive examinations for primary care nurses (i.e. separate from hospital ones), giving priority through additional points or weighting factors to nurses who have already worked in primary care and in the same primary care centre (short-term).

2.4. Introduce having worked in a given primary care centre as a key criterion when applying for a fixed family medicine position in competitive examinations (i.e. through additional points or weighting factors) (short-term).

2.5. Offer long-term contracts to all professionals completing their specialty in family and community medicine and nursing, so that the day after completing their residency, they have a vacancy assigned to them **(short-term)**.

2.6. Facilitate incorporation in the same location, particularly within hard-to-cover areas, of couples and organized groups of primary care professionals that wish to work in the same location or area, and other possible contracting flexibilities **(short-term)**.

2.7. Promote that each patient list is consistently linked to the same family doctor or nurse, and communicate changes in reference professionals' schedules to their patients (i.e. morning or afternoon shifts), so that they are aware of their usual provider availability and can choose to remain with them **(short-term)**.

2.8. Make the time served in positions in hard-to-cover areas count as double the score established in general areas in the different selection mechanism systems **(short-term)**.

2.9. Grant by extraordinary means a professional grade immediately above the recognized one, to professionals who have served for 3 years in a hard-to-cover area **(short-term)**.

2.10. Promote the continuous professional development of primary care professionals with an emphasis on hard-to-cover areas, and on professionals who have recently obtained their specialty in family and community medicine and nursing (e.g. participation in research groups and academic projects, research initiatives with specific funds that respond to the particular challenges of these areas, funding for specific training areas of their interest, training stays in other parts of the country and abroad etc.) **(short-term)**.

2.11. Increase the score of the time served in hard-to-cover areas for accreditation as specialized health training tutors or university professors **(short-term)**.

2.12. Ensure that mobility processes for family doctors and nurses do not coincide in the same year, to prevent patients from losing, at the same time, their reference professionals **(medium-term)**.

2.13. Establish partnerships with municipalities in hard-to-cover areas, and in places with very high living standards, to facilitate primary access of primary care professionals and their families to housing and education (kindergartens, schools), and/or facilitate financial aid to cover the costs of moving to these areas **(medium-term)**.

2.14. Introduce stabilization processes in hard-to-cover areas that guarantee permanent employment through extraordinary/ad hoc competitive processes **(medium-term)**.

2.15. Establish economic incentives for staying in the same position for a minimum of 5 years, which increase progressively over time (e.g. 5 years, 5–10 years, 10–15 years etc.). Once the professional changes their patient list, the counter resets to zero **(medium-term)**.

2.16. Increase the flexibility of working conditions and support work–life balance with a focus on hard-to-cover areas (e.g. setting a minimum required working time frame, allowing for compressed work weeks and facilitating leave during school holidays) **(medium-term)**.

Recommended policy action 3: Ensure that patients can see their reference primary care professionals during the afternoons in all ACs, taking into consideration the specific characteristics of each territory and of the population served **(medium-term)**.

Recommended policy action 4: Improve the autonomy of primary care professionals over their agendas, favouring comprehensive care around the person and avoiding the organization of agendas based on tasks **(medium-term)**.

Recommended policy action 5: Improve the autonomy of primary care teams in organizing and setting up health care in their primary care centres **(medium-term)**.

Recommended policy action 6: Improve recruitment processes, increasing their transparency and accountability towards professionals and citizens, and avoiding punitive or coercive practices **(medium-term)**.

Aim 3: Strengthening primary care teams to support RCPC

Recommended policy action 7: Include administrative staff as part of the microteams (i.e. *unidades básicas de atención* [basic care units]) and expand their role in demand management **(short-term)**.

Recommended policy action 8: Ensure a balanced composition of microteams' patient lists by adding clinical (risk stratification) and social complexity criteria when forming them **(short-term)**.

Recommended policy action 9: Protect and strengthen the role of primary care teams in home care, with an emphasis on people living in residential centres for older people and people with disabilities **(short-term)**.

Recommended policy action 10: Expand the role of nurses in acute care and in following up stable chronic patients, promoting longitudinal relationships with them **(short-term)**.

Recommended policy action 11: Establish a patient-sharing system in which two microteams (a main one and a back-up one) share a patient list and cover each other when needed **(medium-term)**.

Aim 4: Taking advantage of untapped opportunities for future-proofing RCPC

Recommended policy action 12: Harness the potential of risk stratification tools (i.e. information on clinical complexity) and available information on the social determinants of health (social complexity) to identify patients for whom RCPC has the greatest impact and establish specific care pathways to ensure it **(short-term)**.

Recommended policy action 13: Make the most of telemedicine, telemonitoring and other forms of virtual primary care to ensure relational continuity of selected patient groups with their primary care professionals **(short-term)**.

13.1. Expand the types of consultations in primary care professional agendas – including video consultations, email, mobile applications, and group consultations using platforms such as Zoom or Teams – ensuring that patients have different ways of accessing their reference primary care professionals **(short-term)**.

13.2. Make the most of digital tools, such as patient portals and mobile applications, to facilitate ongoing communication between patients and their reference primary care professionals, ensuring continuity of care and timely follow-up **(short-term)**.

Conclusions

Spain's health system boasts several features that provide strong foundations to foster RCPC, namely, population empanelment to a microteam composed of a family doctor, a primary care nurse and, in some ACs, administrative staff; team-based primary care and strong teamwork dynamics; advanced information technology systems for information sharing, population health management and performance monitoring; and, importantly, strong political will. However, some features, particularly around civil servant regulations, may substantially affect RCPC.

Based on a consultative process with members of the Spanish primary care community and international experts in primary care, as well as analysis of the existing literature, several actionable recommended policy actions have been made:

- consistently measure RCPC as integral to overall performance monitoring;
- address some embedded, systemic features of the Spanish health system that undermine RCPC;
- continue strengthening the robust team-based primary health care model; and
- invest in future-oriented strategies that will ensure strong RCPC beyond the present (such as population health management and digital tools).

It is acknowledged that although the evidence base clearly supports the positive impacts of RCC on health system performance, the quality and consistency of findings are varied. For example, the evidence base largely focuses on RCC from the perspective of family doctors or GPs. While evidence on relational continuity with nurses, social workers and dentists in primary care teams is currently limited, there are indications that it exists in practice. Further research is recommended to better understand and support RCC across all primary care professionals, not just family doctors.

Yet, despite these limitations, the recommended policy actions laid out in this Policy Note are very valid; the evidence review provides sufficient insight to act, while simultaneously motivating the policy and research community to continue to collect data, analyse implementation and fine-tune recommended policy actions in the future.

The suggested recommended policy actions in this Policy Note specifically focus on preserving RCPC in the Spanish primary care system. They aim to build on existing strengths while addressing key barriers in order to position RCPC as a central dimension of primary care performance moving forwards.

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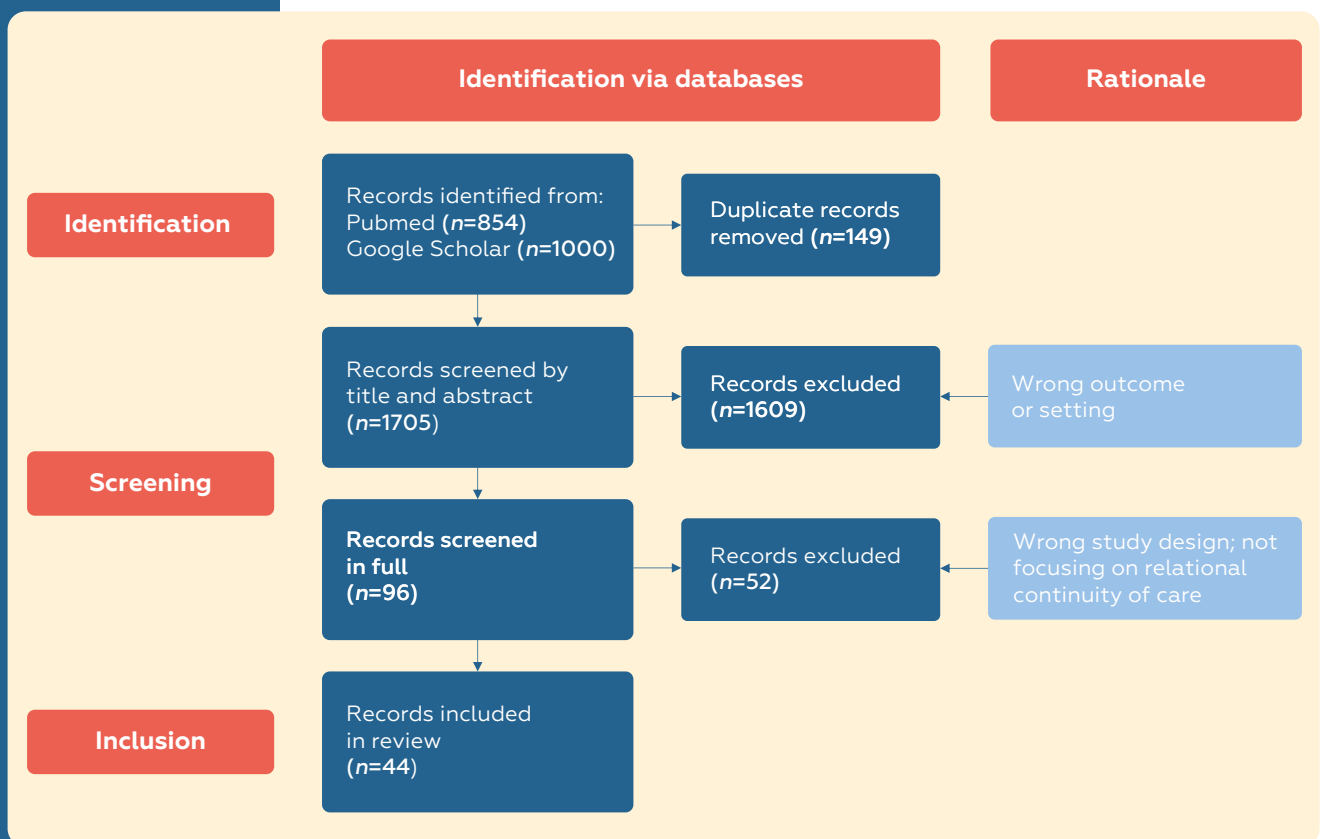
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Annex

Figure A1 illustrates the systematic process used to identify, screen, and include studies for the review on relational continuity of primary care. A total of 1854 records were retrieved from database searches. After removing 149 duplicates, 1705 unique records were screened based on titles and abstracts. Of these, 1609 records were excluded. The 52 remaining articles were screened full-text, leading to the exclusion of those with wrong study designs or not addressing relational continuity of care. The final number of studies included in the review and listed below was 44.

Fig. A1. Flow diagram of study selection process



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