

GOOD PRACTICE BRIEF

PRIMARY CARE PERFORMANCE MONITORING IN PORTUGAL: Benefits of an integrated information system

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Summary

Portugal is on a journey to a high-performing health system. The 2005 primary health care reform lies at the core of this successful endeavour. The reform consists of a comprehensive transformation of the traditional hierarchical model of care towards larger multiprofile teams managing population health with an emphasis on technology and networking. As part of the reform, an integrated primary care performance monitoring system has been developed to connect, manage, validate and optimize health care processes and outcomes.

Projecting future demand for health and care skills

In 2005, a major primary health care reform was launched in Portugal in response to low levels of satisfaction with care among citizens, professionals and policy-makers; poor access and inefficiencies; bureaucratic barriers; and lack of incentives to improve performance (1). Multidisciplinary primary care centres were established and connected in a network to manage the health of 50 000–200 000 people. These networks of primary care centres coordinate and integrate different units: family health, shared services (e.g. dental care, mental health, nutrition, physiotherapy), public health and community services (e.g. home care, palliative care, school health). Voluntarily established and self-organized, family health units are multidisciplinary teams (including family doctors, nurses and clinical secretaries), whose size depends on the registered population. They work in an integrated manner with other primary health care units, community outreach programmes, other health care providers and hospitals. The integrated primary care performance monitoring system has been an integral part of this reform and aims to put into practice more community-oriented care, teamwork, autonomy and accountability, continuous quality improvement, efficient contracting and evaluation.

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Key Messages

- Performance monitoring and strengthening of information platforms are integral parts of a clear and strategic vision for the future of primary health care in Portugal.
- The design of the performance monitoring system is fully aligned with the model of service delivery thereby improving both clinical processes and management functions.
- The performance monitoring system has also been brought in line with the contracting process but in a supportive secondary role.
- Health professionals are engaged in using information platforms as their work benefits from it.
- The performance monitoring system has changed the culture and ethos in primary care.
- Developing an effective performance monitoring system requires the engagement of all stakeholders, which takes time.

Primary care performance monitoring

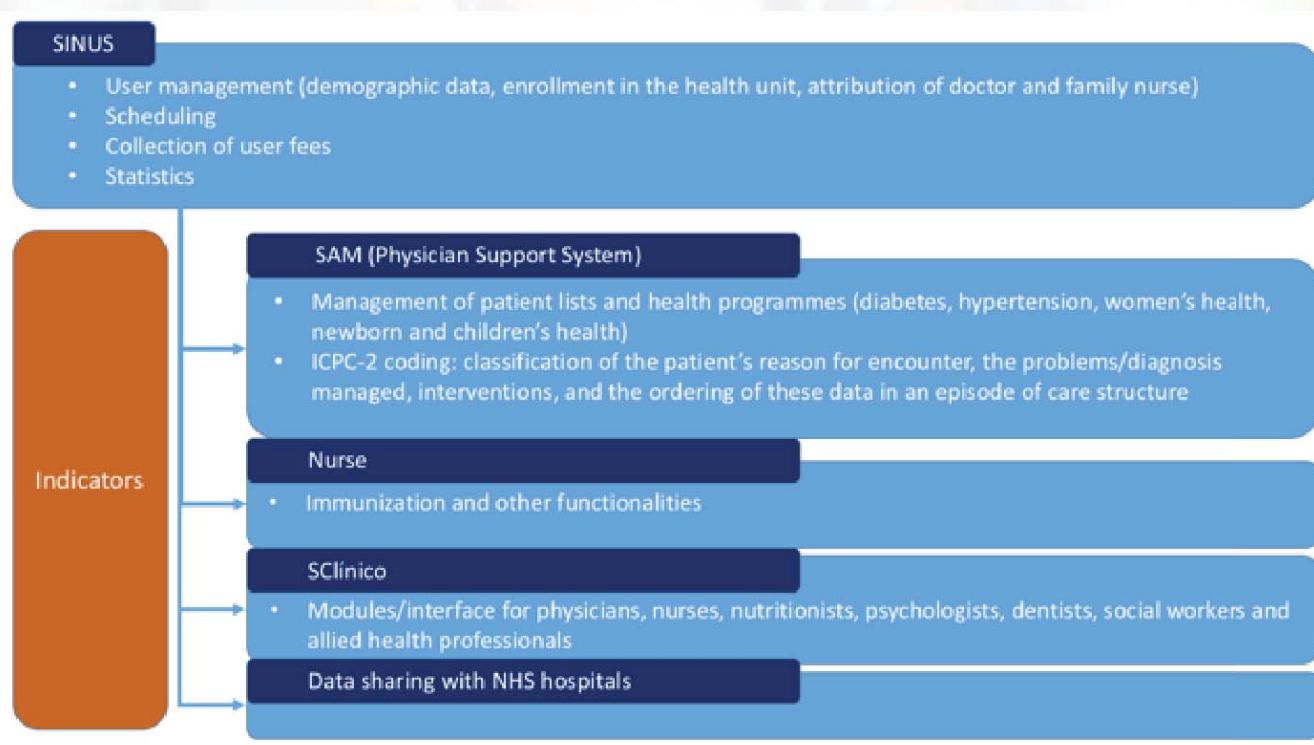
The integrated primary care performance monitoring system is part of the strategy defined by the Ministry of Health for the digital transformation of the National Health Service. It provides for the standardization of information such as clinical records and procedures. Fig. 1 shows the functionalities of the system.

The basic information system used in primary care in Portugal (SINUS) dates back to 1996. Initially, SINUS was used for administrative purposes. Over time, a number of additional modules were added to support better clinical management. The Physician Support System was added allowing physicians to manage their patient lists and specific health programmes. It uses the International Classification of Primary Care, Second edition (ICPC-2) coding, which is part of the family medicine residency programme. A nurse module was developed, beginning with immunization tracking and gradually incorporating more functionality.

As the primary care practice moved towards a multiprofile team-based approach, a single interface (SCLínico) was developed with different profiles for each type of health care worker in the team. This software, developed and maintained by the Ministry of Health, covers 90% of primary care providers, and proves to be very cost-effective to run given the lack of licensing fees or external contracting requirements. Primary care physicians also have access to a web platform to see all information recorded by hospitals, such as electronic patient records. Patients can use this platform to access their electronic health records and to request medical appointments and medication renewals.

More than 300 primary health care centres have adopted this integrated information platform and more than 13 000 health care workers use it.

Fig. 1. Functionalities of the integrated primary care performance monitoring system



This extensive and integrated information system enables effective performance monitoring in primary care. Since 2009, concepts, registration rules and the definition of performance indicators are published annually, assuring consensus among health professionals, health care administrations, professional and scientific associations and trade unions. The indicators are in line with strategic directions as defined in the National Health Plan, clinical guidelines and health system administrative directives. Indicators are collected (forming a matrix) across several domains, for example, hypertension, diabetes, cancer screening, mental health, woman's health, family planning, maternal health, youth and child health. Additionally, the incidence and prevalence of patients with specific disease diagnoses are recorded (diabetes, hypertension, asthma, dementia, obesity, tobacco use).

A subset of the performance indicators is used for contracting purposes (2). Since 2017, the primary health care contracting process is based on improvement action plans with a commitment to results, activities and resources, and it follows a two-step approach.

1. External contracting involves negotiation between the regional health authority and each group of primary health care centres. The indicators' matrix and goals are common for all the country, assuring the coverage of all predefined domains (i.e. clinical performance, health care integration, organizational quality, continuous professional education, information and communication). The associated action plan is developed according to regional and local health improvement priorities.
2. Internal contracting involves negotiation between each group of primary health care centres and health units (e.g. family health, community health, public health, shared services). The indicators' matrix and goals are also nationally defined for a period of three years, assuring the coverage of all predefined domains for each type of unit.

For both steps, a subset of indicators is selected from a common national set. They are a mix of process (e.g. proportion of patients who were assessed for risk of diabetes), outcome (e.g. proportion of diabetics controlled) and population-based indicators (e.g. hospitalization rate of diabetics). Priority is given to comprehensive indicators (i.e. indicators that capture the outcomes of several interconnected activities) and population-based indicators (e.g. avoidable admissions).

One of the most powerful capabilities of the system is to provide strong and easy-to-interpret input into performance management. Fig. 2 shows the analytical and benchmarking capabilities based on the indicator diabetes-related amputations. The top panels show regional comparisons of this indicator from best to worst; the bottom panels show trends over time.

Fig. 2. Benchmarking screenshot of a selected indicator: incidence of major amputations among residents with diabetes mellitus



Performance evaluation takes place annually at the regional and primary health care centres' group levels and is used predominantly as an improvement tool. Shortcomings are identified based on an analysis of indicators and by benchmarking. Regional health authorities and providers discuss ways to overcome suboptimal performance. These discussions lead to improvement action plans, which form the basis of the contracting process. Performance evaluation is also used to allocate financial incentives.

Impact

The development of the performance monitoring system has supported the primary health care reform process. It ensures continuous quality improvement by creating a culture whereby all employees continually examine and improve the organization of their work to satisfy user requirements. Specifically, performance monitoring has (i) allowed working towards common goals and promoted teamwork; (ii) set clear expectations; (iii) allowed the introduction of regular feedback on performance and the implementation of corrective measures; (iv) permitted benchmarking and dissemination of best practices; and (v) supported the implementation of the pay-for-performance mechanism.

The performance monitoring system is an essential tool for the health care professional's day-to-day role. Almost all contacts between a physician and a patient are registered including ICPC-2 coding. Supporting health professionals, the system allows primary health care units to focus on prevention activities by identifying patients that need personalized care.

Performance monitoring has introduced a new layer of transparency. Following the transparency policy led by the Ministry of Health, since December 2017, more than 300 indicators for all primary health care units are publicly available online (<https://bicsp.min-saude.pt/pt/Paginas/default.aspx>). The site allows benchmarking and analysis of the health-related indicators by provider, district level, regional level and country level, increasing the possibility of participation on health care delivery.

Evidence shows that noncommunicable disease-related early detection and disease management indicators are significantly better in current multidisciplinary practices (family health units) than in traditional primary care centres (3). Waiting times for an appointment with a family physician in a multidisciplinary practice are 54% lower, and the total number of consultations is 6% higher. Waiting times for acute consultations and nursing appointments are also lower in multidisciplinary practices (4). Other

data show lower total societal cost in multidisciplinary practices, with less spending on diagnostic tests and pharmaceuticals. Multidisciplinary practices proved to be more efficient and accessible and received higher patient satisfaction scores (5).

Lessons learned

- **Performance monitoring and strengthening of information platforms are integral parts of a clear and strategic vision for the future of primary health care** in Portugal and not stand-alone efforts at digitalization. This vision has been continuously refined and implemented in a step-by-step fashion. This has allowed learning-by-doing and experimentation with evidence-informed solutions appropriate for the Portuguese context.
- **The design of the performance monitoring system is fully aligned with the model of service delivery thereby improving both clinical processes and management functions.** The performance monitoring system was designed based on the desired model of care including the package of services and key quality standards such as clinical guidelines. This integration provides incentives for all to use and improve it.
- **The performance monitoring system has also been brought in line with the contracting process but in a supportive secondary role.** Individual improvement plans supported by a set of indicators are prioritized over the contracting process, which adapts to these and supports them.
- **Health professionals are engaged in using information platforms as their work benefits from it.** Utilizing ICPC-2 made the information clinically relevant and helpful. The ability to receive feedback made data input worthwhile and assured engagement on data quality. Investment in training was prioritized, for example, including ICPC-2 as part of the family medicine residency programme.
- **The performance monitoring system has changed the culture and ethos in primary care.** It has been an essential tool used to reorient health administrators and health care professionals in recognizing the impact of their work on the population that they serve.
- **Developing an effective performance monitoring system requires the engagement of all stakeholders, which takes time.** Critical success factors were strong leadership, good coordination between the political and operational spheres, strategies to avoid unnecessary conflicts with status quo, careful management of change so that the reform was not politicized, and strong investment in training to establish a critical mass of professionals who can quickly operationalize and implement policies.

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