

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

Case study

Enrique Bernal-Delgado and Ester Angulo-Pueyo

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

Case study

Enrique Bernal-Delgado and Ester Angulo-Pueyo

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities: case study/Enrique Bernal-Delgado, Ester Angulo-Pueyo
ISBN (WHO) 978-92-4-007859-8 (electronic version)
ISBN (WHO) 978-92-4-007860-4 (print version)

© World Health Organization and the Organisation for Economic Co-operation and Development, 2023

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that the World Health Organization (WHO) and the Organisation for Economic Co-operation and Development (OECD) endorse any specific organization, products or services. The use of the WHO or OECD logo is not permitted. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO) and the Organisation for Economic Co-operation and Development (OECD). WHO and OECD are not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition".

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization (<http://www.wipo.int/amc/en/mediation/rules>).

Suggested citation. Bernal-Delgado E, Angulo-Pueyo E. Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities: case study. Geneva: World Health Organization, Organisation for Economic Co-operation and Development; 2023. Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

Sales, rights and licensing. To purchase WHO publications, see <https://www.who.int/publications/book-orders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/copyright>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

WHO Photographs. WHO photographs are copyrighted and are not to be reproduced in any medium without obtaining prior written permission. Requests for permission to reproduce WHO photographs should be addressed to: <http://www.who.int/copyright/>

General disclaimers. The designations employed and the presentation of the material in this publication, as well as any data, do not imply the expression of any opinion whatsoever on the part of WHO and OECD concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO and OECD in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO and OECD to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO and OECD be liable for damages arising from its use.

This work is published under the responsibility of the Secretary-General of the OECD and the Director General of the World Health Organization. The opinions expressed and arguments employed herein do not necessarily reflect the official views of the OECD member countries, or those of WHO.

The named authors alone are responsible for the views expressed in this publication. Design and layout by Howdy LLP.

Contents

Acknowledgements	iv
Abbreviations	v
Executive summary	vi
1. Background	1
1.1 Institutional design and care for chronic illness	2
1.2 Purchasing policies	3
1.2.1 Global budgeting	3
1.2.2 Other purchasing policy instruments that complement global budgeting	4
2. Objectives	5
3. Methods	7
4. Case studies and results	9
4.1 Case study 1: governance arrangements to improve purchasing in the Basque Country	10
4.1.1 Overview	10
4.1.2 Context	11
4.1.3 Design and implementation	12
4.1.4 Internal assessments	15
4.1.5 Lessons learned	17
4.2 Case study 2: purchasing prioritized services for high-need patients in Navarre	18
4.2.1 Overview	18
4.2.2 Context	19
4.2.3 Design and implementation	19
4.2.4 Evaluation	23
4.2.5 Lessons learned	25
4.3 Case study 3: guiding high-value purchasing in Aragon	25
4.3.1 Overview	25
4.3.2 Context	27
4.3.3 Design and implementation	27
4.3.4 Evaluation	30
4.3.5 Lessons learned	31
5. Conclusions	33
References	35

Acknowledgements

The authors of this case study are Enrique Bernal-Delgado and Ester Angulo, Data Science for Health Services and Policy Research, Institute for Health Sciences in Aragon (IACS), Spain.

Sarah L Barber, World Health Organization (WHO) Centre for Health Development (WHO Kobe Centre – WKC), Japan, Luca Lorenzoni, Organisation for Economic Co-operation and Development (OECD), France, Inke Mathauer, WHO Department of Health Systems Governance and Financing, Switzerland, and Megumi Rosenberg, WKC, led the technical review and revision of the case study.

This case study was commissioned by OECD.

The Kobe Group, which includes Hyogo Prefecture, Kobe City, the Kobe Chamber of Commerce and Kobe Steel, in Japan, contributed financially to the development and production of this case study.

Abbreviations

e-health	electronic health (referring to the use of information and communication technologies for health)
IHO	Integrated Health Care Organization
SWOT	strengths, weaknesses, opportunities and threats

Executive summary

The Spanish National Health System typically uses global budgeting based on framework agreements that provide no incentives to improve the quality of care for patients with chronic diseases. As such, additional instruments have been implemented to address this gap. This case study describes policies designed and implemented in three Spanish autonomous communities. The three examples are a convenience sample that illustrates some of the many approaches and purchasing instruments implemented across the country. The analysis is based on literature reviews and in-depth semistructured interviews with key officers in the three regions.

Implemented in the Basque Country initially in 2010, Integrated Health Care Organizations cover 2.2 million people with a special focus on patients with chronic diseases. The population's risks are identified, and services and conditions for access to these services are specified under a framework agreement and risk-adjusted global budget. Descriptive analysis shows there were positive trends in the reduction of potentially avoidable hospitalizations and visits to emergency departments from 2009 to 2013. No evaluation has been done.

Implemented in Navarre in 2013, the Strategy on Integrated Care for Patients with Chronic Conditions and Multimorbidity targeted 3500 high-need patients. A risk stratification tool is used to determine which providers, services and interventions were appropriate for those patients according to their needs. Unpublished monitoring data from the Regional Health Department showed reductions in emergency department visits after 2 years of implementation, from 2013 to 2015.

In 2014, the Regional Health Department in Aragon implemented the Plan for Integrated Diabetes Care; by 2021, 94 000 patients had been enrolled. Global budgeting is complemented with guidance identifying which high-value services and from which providers care should be purchased, specifying rules for referring patients. Internal monitoring data from the Plan showed positive trends in utilization (i.e. for diabetic foot examination, eye exams) and improvements in renal function between 2016 and 2019, although more recent information is unavailable.

Several lessons have been learned. The successful implementation of purchasing instruments requires wide consensus and commitment from the main stakeholders, including health professionals and health systems managers. Strong regulatory instruments facilitate implementation, but do not guarantee sustainable change towards integrated care. The development of fit-for-purpose information systems is key to foster improvements in the quality of care. The lack of publicly available data and lack of independent evaluations impede full understanding of the programmes' impact.

This case study provided information to the WHO and OECD joint publication *Purchasing for quality chronic care: summary report*.

1

Background

1

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

The Spanish National Health System is built on the principles of providing universal access to health care for all residents and on ensuring free access at the point of care and equity. Population coverage is virtually universal and includes a wide array of benefits. The health system is financed by taxes, with out-of-pocket payments in 2019 amounting to 21.5% of the overall health expenditure in the country, mostly comprising copayments for medications and the costs of dental and optical care (1). People are registered in the system and assigned to a primary care physician, who acts as a gatekeeper and ensures continuity of care, particularly for patients with chronic conditions.

When it comes to governance and organization, the Spanish National Health System is decentralized into its 17 regions (i.e. the 17 autonomous communities). The regions have full responsibility for planning, financing and purchasing health care services for their residents. The Ministry of Health is responsible for coordinating the 17 Regional Health Departments through the Interterritorial Council, a collegiate body composed of representatives of the Ministry and the Regional Health Departments in the autonomous communities. Decisions are usually made by consensus, but occasionally the Council votes on decisions.

1.1 Institutional design and care for chronic illness

Some features of the institutional design of the Spanish National Health System may have substantive benefits in caring for patients with chronic illness (2). These include its depth of coverage, financial protection, institutional architecture and the overarching national policy.

The basket of benefits for patients requiring care for chronic illness is comprehensive and includes diagnosis; treatments for acute and chronic illness, rehabilitation and palliative care at any level of the health system; primary care; outpatient specialist care; hospital care, both acute and long term; and emergency care (3). Although the Spanish National Health System relies on cost-sharing for some benefits, the most vulnerable patients, including those with chronic illness, benefit from large exemptions from copayments, with Spain having one of the lowest levels of household financial hardship related to medical care (4).

The Spanish National Health System is based on administrative areas, as chartered in the General Law on Health Care in 1986 (5), in which primary care and specialist care services are expected to be coordinated for the population residing in the area. Primary care professionals – that is, doctors and nurses – act as gatekeepers and are expected to ensure continuity of care.

1

Background

In 2012, the Spanish National Health System adopted the National Strategy for Chronic Care (6). This entails a commitment from the autonomous communities to develop plans, programmes and interventions aimed at deploying the National Strategy in their region (7). In practice, each Regional Health Department has put its own unique accent on different elements of the strategy, translating these into a variety of programmes and experiences to meet their population's needs, address the specifics of the region and find the best way to use existing resources and the maturity of their care organizations.

1.2 Purchasing policies

1.2.1 Global budgeting

In the Spanish National Health System, in general the Regional Health Department in the autonomous communities (i.e. the main health authority in a region and the single public payer for health care) allocates funds to the Regional Health Service (i.e. the regional body responsible for providing care for the whole autonomous community), which then allocates funds to primary care centres and hospitals providing primary, hospital, emergency and pharmaceutical care to residents. Generally, service providers are public, although in some regions, the Regional Health Service will also purchase care from private providers.

Purchasing is operationalized through framework agreements that include the global budget for the year, estimated from actual expenditures incurred during the previous year, paid retrospectively. Framework agreements broadly specify the volume of services to be provided as well as some quality and efficiency goals. These agreements are used as a reference to monitor the performance of service providers individually and the Regional Health Service as a whole. A small part of the global budget may be used to reward care centres that meet the goals set out in the framework agreements.

In addition, professionals in the Spanish National Health System are public servants, paid primarily with a fixed salary that reflects their professional category, their length of service and some accredited additional accomplishments (e.g. research, teaching). The funds allocated to the payroll are part of the global budget. Health care professionals do not generally receive rewards or incentives linked to performance, although this is possible.

In short, we can define the purchasing mechanism for all services included in the basket of benefits as global budgeting that is slightly adjusted for performance.

1

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

1.2.2 Other purchasing policy instruments that complement global budgeting

A variety of purchasing instruments additional to global budgeting have been implemented to enhance the quality of care, including governance bodies, risk stratification, programmes to develop new expertise and the development of normative care pathways.

The creation of single governance bodies to improve coordination between primary care and hospital care has been used to align contractual arrangements with the goals of ensuring the continuity and coordination of care, major drivers of care quality for patients with chronic illness. In addition, the allocation of funds moves from a separate global budget, in which primary and hospital care are funded independently, to a single budget that reflects the needs of the population, thus partially including capitation in the payment model.

Additionally, Regional Health Departments can use contractual arrangements to prioritize which services to purchase from the Regional Health Service, such as services for high-need patients. This purchasing instrument moves from the traditionally designed framework agreements, based on a global budget that has little specificity about the services and goods to be delivered, to a model in which arrangements between purchasers and providers are more detailed. This strategy requires close monitoring of compliance with the contract.

Risk stratification can also be used as the basis for planning and purchasing services by taking advantage of the wealth of data in the Spanish National Health System.

Programmes have also aimed at developing new expertise by ensuring effective hiring of appropriate professionals or by changing roles. This purchasing instrument is thought to obtain more value from the funds allocated to cover personnel costs by enabling the development of disease-management or case-management approaches to caring for patients with chronic illness.

Normative care pathways have also been added to improve framework agreements by providing guidance about which services to purchase (i.e. highly effective procedures) and from whom (i.e. which care professional). This strategy must be accompanied by close monitoring of implementation and compliance with the pathway.

2

Objectives

2

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

This report aims at describing and assessing strategic purchasing policy instruments by using case studies of policies designed, developed and implemented in three of the Spanish autonomous communities.

The first programme, implemented in the Basque Country, created new Integrated Health Care Organizations (IHOs) that combine funding for primary care and hospital care into one global budget. The second, in Navarre, developed a strategy to provide integrated care to patients with chronic conditions and multimorbidity. And the third, in Aragon, implemented normative pathways for diabetes care to improve the design of framework agreements by guiding the purchase of high-value services.

3

Methods

3

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

These case studies comprise a convenience sample from the many approaches implemented across the country to illustrate the variety of purchasing policy instruments described above. These three programmes were selected for inclusion based on the type of policy instrument implemented, the level of maturity of the programme and the existence of evidence that allows for an assessment of their achievements.

This narrative report is built on a literature review and interviews. Given the small number of academic papers and public reports on the three experiences that this report covers, the team decided to complement the research with in-depth semistructured interviews held with officials in charge of the implementation or evaluation, or both, of the different initiatives.

Thus, one of the authors (EAP) searched for and retrieved relevant information about each of the three approaches, mostly from the grey literature, and translated the information into questions about (i) the regional experience (i.e. a general description, the problem to address, the target population, the target providers, the goals of the approach, the years during which the approach was implemented, who plays the role of purchaser, who is the implementing body), (ii) the purchasing arrangements (i.e. the payment mechanism, the main purchasing instrument, other policy instruments, incentives and rewards) and (iii) implementation (i.e. the facilitators of and barriers to implementation, and lessons learned). Although the questionnaires had a common structure, they were tailored to reflect the specifics of each approach being investigated.

The semistructured interviews were carried out by one of the authors (EAP) between July and November 2022. The officials interviewed were Iñaki de Pablos and Igor Zabala Rementeria for the Basque Country case study, Ana Fernández and Javier Lafita Tejedor for the Navarre case study, and José María Turón Alcaine for the Aragon case study. After a first round of interviews and analysis of the responses, any necessary clarification was sought via email or phone.

The analyses and discussion of the three cases covered in this study are based on the taxonomy for strategic purchasing policy instruments described by the World Health Organization (8). In short, strategic purchasing involves several interrelated areas, namely, (i) what to buy, which can further specify benefits based on a population's needs, and on budgets and costs; (ii) from whom to buy – that is, by determining from which providers to purchase services and how to implement effective contracting arrangements; (iii) how to pay, by setting a context-appropriate mix of payment methods and related payment rates; (iv) how to use information for and from purchasing – that is, using information to make purchasing decisions and monitor providers' performance; and (v) how to exert oversight and ensure coordination by using governance arrangements to ensure more strategic purchasing (4, 6).

4

Case studies and results

4

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

4.1 Case study 1: governance arrangements to improve purchasing in the Basque Country

4.1.1 Overview

Table 1 describes the main features involved in implementing the Integrated Health Care Organizations (IHOs, or Organización Sanitaria Integrada in Spanish) in the Basque Country.

Table 1. Main features of the Integrated Health Care Organizations, Basque Country, Spain

Characteristic	Description
Years of implementation	Phased in from 2010 to 2016; ongoing
Purchaser	Regional Health Department (single payer)
Implementing body	Regional Health Service (Osakidetza; public provider)
Problem to address	Health care fragmentation among patients with chronic illness
Target population	All approximately 2.2 million people, with a focus on patients with chronic illness
Target providers	All public providers and health professionals in the region
Goal	Deliver integrated person-centred care for chronic conditions across all levels of the health system
Purchasing arrangement	Framework agreements between the Regional Health Department and the IHOs (which combine primary care and hospital care) that includes a single global budget
Main purchasing instrument	Governance arrangements supported by a new legal entity (i.e. the IHO)
Other policy instruments	<p>Risk stratification used to specify health services and access conditions for the population, according to their needs</p> <p>Global budget adjusted according to the results of stratification by health risk</p> <p>Quality-related adjustment made to the global budget if performance objectives are reached</p> <p>Data from information management system used to inform quality-oriented purchasing decisions and to monitor the quality of care.</p>

Characteristic	Description
Payment mechanism	Overall, the risk-adjusted global budget is allocated from the general regional budget. Some specific projects were earmarked at the beginning to set up the IHOs
Incentives and rewards	Additional payments made based on providers attaining quality objectives in the annual agreement; 5% of the budget depends on meeting the objectives

IHO: Integrated Health Care Organization.

a Access conditions for health care users are, for example, referral rules that require users to go through a gatekeeper.

4.1.2 Context

In 2010, the Regional Health Department of the Government of the Basque Country launched the Basque Health Strategy for Ageing and Chronicity (9), based on the well-known chronic care model (10, 11).

The integrated care strategy for the Basque Country encompasses structural, clinical and organizational elements that led to the development of an integrated care model capable of providing continuity of care at both the health and social care levels. A key element of the Strategy is an organizational change made to ensure there is more coordination of care and less fragmentation, as well as implementation of a multidisciplinary approach to chronic care, paving the way for more person-centred, high-quality and efficient care (9).

The Strategy includes two types of integrated care approaches (12). On the one hand, clinical care pathways are integrated across all levels of the health care system; on the other, hospitals and primary care organizations are merged under a single governance body. This latter approach resulted in the creation of several IHOs.

Implementation of the IHOs started in 2010, with the pilot trial of an IHO known as Bidasoa (13). Gradually, 12 more IHOs were implemented, with the final IHO initiated in 2016. Currently, all of the population in the Region (2.2 million people) is served by this model, which includes 320 primary care centres, 14 acute hospitals (4278 beds), 4 mid-stay hospitals, 4 psychiatric hospitals and 2 contracted long-term mental health centres. The population served by each IHO ranges from 9980 (Araba IHO) to 383 000 (Dosnostialdea IHO), although most IHOs serve between 66 000 and 164 000 people.

4

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

4.1.3 Design and implementation

Creation of new entities with a joint governing body. In 2010, building on the previous normative law on health care planning (14), the Regional Health Department in the Basque Country decided to implement IHOs. The Board of Governors of the Regional Health Department issued specific normative and legal provisions to allow their deployment.

A key feature of this implementation was the setting up of a governing body to jointly oversee both hospital and primary care providers in a specific administrative health care area (i.e. an area where the population receives primary and hospital care, but not necessarily tertiary services, which are provided at referral hospitals and are not available in all IHOs). This single governing body is regulated by decree (15) and includes an IHO General Directorate, an Executive Management Team, with a specific Executive Directorate for Integrated Care, and a Board of Directors. Notably, the Executive Directorate for Integrated Care is responsible for integrating primary, outpatient specialist and hospital care; coordinating with social services; and interacting with the community through a number of participatory bodies, such as the Social Services Commission and the Social Council.

Purchasing arrangements and accompanying policy instruments. In this new context, global budgeting and framework agreements – based on separate global budgets for primary and hospital care – were no longer suitable. A new purchasing arrangement had to be devised – that is, a framework agreement between the Regional Health Department and each of the IHOs, thus integrating hospital care and primary care. Specifically, the Regional Health Department acts as a single purchaser and single payer and commissions the IHOs to provide services for the population in an area. The allocation of funds is determined by the type and volume of services needed by the population and the resources required to support patient-centred and integrated care; allocation also takes into consideration the actual performance of providers. All these elements are part of an annual framework agreement signed between the Regional Health Department and an IHO.

However, this approach by itself is insufficient to ensure that providers improve the quality of care for patients with chronic illness. Thus, framework agreements and overall budgets were enhanced with additional purchasing instruments. The most relevant are (i) adjusting the global budget by stratifying the population according to health risk, thus addressing the population's needs; (ii) offering incentives or rewards through a quality-related adjustment in the global budget if performance objectives are met; (iii) using risk stratification for the population to specify the health services and access conditions; and (iv) implementing a robust information

4

Case studies and results

system so that data can be used to inform quality-oriented purchasing decisions and monitor the quality of the services provided.

In this new scheme, the global budget for an IHO is adjusted annually. The Regional Health Department developed a methodology to stratify populations according to their probability of using IHO resources during the year. So the whole population living in an area is classified into Resource Use Bands. Residents who are more likely to need assistance are in Bands 4 and 5 – that is, they are patients with complex conditions and multimorbidity (16). About 95% of the funding for an IHO depends on the case mix of individuals registered with the IHO, and it is influenced by expenditures during preceding years (i.e. retrospective budgeting).

The remaining 5% is allocated according to different quality criteria specified in an annex to the framework agreement. The annex focuses on three areas: (i) the design and planning of services, which include the resources needed, services provided and integration of care; (ii) classic performance indicators, such as safety, effectiveness, equity, patient-centred care, access to services and waiting lists, and efficiency and cost savings; and (iii) the development of provider-level projects to improve the care of patients with chronic illness. Out of 100 possible points, 24 are allocated to items reflecting the design and planning of services (with 16/24 points focused on integrated care); 61 are allocated to quality indicators (half of them focused on effectiveness and safety) and 15 to provider-level (bottom-up) projects.

Paramount to the implementation of IHOs has been the deployment of communication and information systems that support integrated care by allowing for care monitoring and refining of purchasing arrangements. The Basque Country Regional Health Service, known as Osakidetza, invested heavily in digitalization (e.g. of health records) and electronic health care (e-health) services, for example, by deploying Osabide (Ibermatica, Spain, under the supervision of the Regional Health Service), a single electronic medical records programme that collects comprehensive health information about patients across all care levels, facilitating both usual care and remote consultation (i.e. telehealth). Interestingly, one of Osabide's functions, known as Integra (for Integrating Health and Social Care), allows for coordination and communication between health care professionals and social care workers (mostly in nursing homes) via a data dashboard for patients in residential care. Another e-health tool, Osanaia, facilitates integrated nursing care, particularly case management, across all care levels. A third tool, PRESBIDE supports the management of pharmaceuticals and the coordination of prescriptions between primary care and hospital care settings. Finally, Osarean enables easy interaction between the health system

4

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

and the patient, and includes a personal health folder for the patient, access to a call centre, and telehealth and telemonitoring (16).

Facilitators and barriers. A number of facilitators and barriers to the implementation of IHOs in the Basque Country were identified through a self-assessment process (17) that the authors of this study considered together with their interviews conducted with officers of the Regional Health Service and Regional Health Department.

First, the regional government and parliament facilitated efforts to pursue integrated care through decisive political commitment that included all political parties. Second, the purchasing policy (i.e. the governance arrangement) was enshrined in law. Third, although global funding comes from the general regional budget, some projects were specifically earmarked to enhance the setting up of the IHOs.

Other important factors easing implementation of the IHOs were that the planning and financing of services are based on risk stratification of the population; also, the alignment between purchasing and providing services is reflected in the framework agreements, as are potential rewards.

Outstanding facilitators have been the extensive development of e-health infrastructure and apps, shared across all care levels and with patients; the enhanced coordination by the Executive Directorate for Integrated Care that facilitates the deployment of coordination mechanisms across different levels of care and formulates recommendations, standards and care pathways (e.g. for patients with complex chronic care needs, multimorbidity or who need palliative care); the implementation of new roles, such as the hospital-liaison nurse or advanced practice nurses in primary care; and the inclusion of physiotherapists in primary care centres.

Interestingly, another facilitator of implementation is a bottom-up approach that encourages health care professionals to propose innovations (i.e. specific projects to improve the quality of care for patients with chronic illness) that if successful can be scaled up to the whole system. Finally, several programmes tailored specifically to patients and caregivers have been developed to encourage community engagement and individual empowerment, such as the School of Health (known as Osasun Eskola), Active Patient (Paciente Activo) and a programme for patients with chronic illness (KronikOn).

However, some barriers to implementation have also been identified. First, there have been difficulties in shifting the culture towards preventing complications or relapse episodes instead of using traditional approaches that focus mostly on treatment. Second, failures to communicate new concepts and methodologies have been noted, as well as failures to discuss organizational

4

Case studies and results

changes. Importantly, the process of building mutual recognition and trust between primary care and hospital care professionals has not been finished. In addition, health care and social care remain separate departments in the Basque Country government, which makes it difficult to ensure full coordination and continuity of care across both care systems.

On a different note, although citizens are included in some participatory bodies, they do not systematically take part in the decision-making processes about service delivery and policies. The public release of and debate about the results of an evaluation of the programme could help encourage engagement.

Finally, it is difficult to evaluate the overall impact of this purchasing policy. On the one hand, the outcome indicators provide a partial view of the services provided to patients with chronic illness; on the other hand, the IHOs serve the rest of the population as well, and no formal evaluation has taken place of health outcomes in the general population.

4.1.4 Internal assessments

Implementation assessment: the case of Bidasoa IHO. An analysis of the deployment of integrated care policies in the pilot IHO (Bidasoa) (12) sheds light on some of the implementation issues by analysing (i) organizational readiness to care for patients with chronic illness as measured by the Instrument for the Assessment of Chronic Care Models (known by the abbreviation IEMAC-ARCHO) (18) and (ii) collaboration between health professionals from different care levels as measured by the D'Amour Questionnaire (19).

Between 2011 and 2014, measurements of organizational readiness to care for patients with chronic illness showed improvements in five of the six areas being evaluated. The six dimensions are (i) the organization of the health system, which evaluates whether a system is moving in a strategic direction towards providing integrated care; (ii) community health, which assesses links with community resources; (iii) the health care model, which measures how well planned, proactive and well coordinated the provision of care is; (iv) self-management, assessing to what extent patients are being empowered to self-manage their condition; (v) clinical decision support, which takes into account the capacity of the system to improve health outcomes using decision-support tools, professional training and exchange of knowledge among providers; and (vi) information systems, assessing the extent to which information and communication systems are integrated and oriented towards improving care

The IHO did very well in the dimension assessing the health care model, and there was evidence of substantial development and

4

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

implementation of clinical pathways, the use of case managers and hospital-liaison nurses, as well as the relevant role of the Continuity of Care Unit in treating patients with complex needs. The IHO showed increasing support for integrated care, and support for patients' self-management grew during the same period. However, in the dimension of community health, activities decreased from 2012, due to the loss of agreements with community organizations responsible for social care.

Collaboration between professionals from different care levels was assessed by questionnaire in 2010, before implementation of the IHO model, and again in 2012 and 2013, after implementation. Specifically, the questionnaire evaluated four dimensions:

- shared goals and visions, including patient-centred approaches;
- internalization, covering trust and mutual knowledge between primary care centres and hospitals;
- formalization, including protocols, fora and meetings meant to increase collaboration; and
- governance, including shared leadership, support for innovation, and the availability of information systems and strategic guidelines.

All of the items evaluated improved, likely as a result of the collaborative work developed among care levels, the implementation of shared clinical decision-making, the creation of the Continuity of Care Unit to support patients with complex needs, and joint training activities.

In 2016, a qualitative evaluation was conducted to assess whether and how integrated health care was being delivered by IHOs to patients with complex chronic conditions through four rounds of nominal group discussions comprising different health care professionals (i.e. internists, general practitioners, primary care nurses and hospital nurses) (20). The idea of the integrated care model was the most highly rated feature of the IHOs. The model was seen as being able to improve communication among different levels of care, improve the quality of care and enhance patients' safety. Additionally, it was agreed that the role of assigned clinicians is key to providing continuity of care. The areas identified as needing improvement were defining nurses' roles, providing care for and monitoring stable patients, working as a team across levels of care, ensuring good communication with patients, coordinating care with social workers and between internists and family doctors, and developing an office meant to foster care integration projects to lead the integration process (20).

Impact assessment. There is no publicly available evaluation of the impact of this purchasing policy, and the annual evaluations of the

4

Case studies and results

framework agreements that include quality indicators are not in the public domain.

The only reference to the overall impact of integration was measured during the pilot process for Bidasoa IHO (12). This descriptive study, based on multiple information sources, included interviews with health care professionals and patients, and assessed a number of indicators based on the Triple Aim framework (21).

In terms of health outcomes, the Bidasoa pilot study (12) showed that between 2010 and 2013 among patients with complex health needs, there was a 10% reduction in the overall rate of potentially avoidable hospitalizations, a 38% reduction in hospital admissions and a 31% reduction in visits to accident and emergency departments. In terms of patients' satisfaction, 87% of patients surveyed in 2013 considered there to be good or very good coordination between primary and secondary care as a result of the establishment of the IHO, and 66% also stated there was good or very good coordination with social care services. As to costs, establishing the new organizations did not result in substantial changes in per capita spending, and only a slight reduction of about 4% was observed, from €596 to €573 per resident during the study period.

4.1.5 Lessons learned

There are some salient lessons from this experience, stemming from an analysis of the documentation and the in-depth interviews conducted with key informants in the Basque Country.

It was made clear that implementation requires purchasing policy instruments in addition to global budgeting based on framework agreements. In that context, key to implementing IHOs has been the deployment of communication and information systems that support the delivery of integrated care.

Regarding governance, the interviews by the authors led to the conclusion that a top-down approach, such as issuing a law, requires wide consensus. Issuing a law facilitates the short-term implementation of a change, but it does not necessarily result in cultural change, which is key to ensuring adoption of new strategies by those implementing the change. Implementing the law also requires coordinating arrangements among care providers across different levels and close supervision by all parties involved.

Finally, it is necessary to evaluate the programme's achievements to assess compliance with contractual goals. However, to secure the engagement of citizens and ensure rigorous external evaluations, internal evaluation results should be in the public domain.

4

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

4.2 Case study 2: purchasing prioritized services for high-need patients in Navarre

4.2.1 Overview

Table 2 describes the main features involved in implementing the Strategy on Integrated Care for Patients with Chronic Conditions and Multimorbidity in Navarre, which aimed to prioritize the services purchased for high-need patients.

Table 2. Main features of the Strategy on Integrated Care for Patients with Chronic Conditions and Multimorbidity, Navarre, Spain

Characteristic	Description
Years of implementation	Phased in from 2013 to 2017; ongoing
Purchaser	Regional Health Department
Implementing body	Regional Health Service (Osasunbidea; public provider)
Problem to address	Health care fragmentation among fragile patients with complex health needs
Target population	All patients who have at least three of the following chronic conditions with severity above a certain threshold: asthma, chronic obstructive pulmonary disease, diabetes, heart failure, renal failure, cerebrovascular disease, dementia, ischaemic heart disease or cirrhosis, or who require palliative care; in 2011 this included about 3 500 patients
Target providers	Health professionals working in primary care and those in internal medicine at hospitals
Goals	Improve health outcomes and functional status in patients with chronic illness and more complex health needs; secondarily, improve the quality of life of patients and caregivers
Purchasing arrangement	Framework agreements between the Regional Health Department and the Regional Health Service that cascade down to primary care settings and hospitals
Main purchasing instrument	Priority services purchased for high-need patients

Characteristic	Description
Other policy instruments	<p>Risk stratification used to identify high-need patients and specify health services and access conditions^a</p> <p>Health services and access conditions defined by specifying clinical roles (e.g. case-management nurse, community-liaison nurse) and rules for referral</p> <p>Rules used to determine from which providers services will be purchased (i.e. primary, secondary or tertiary care) and what will be purchased (i.e. the services and interventions available)</p> <p>Data from information management system used to inform quality-oriented purchasing decisions and to monitor the quality of care</p>
Payment mechanism	No specific funding is linked to the Strategy.
Incentives and rewards	No specific rewards or penalties

^a Access conditions for health care users are, for example referral rules that require users to go through a gatekeeper.

4.2.2 Context

The Strategy on Integrated Care for Patients with Chronic Conditions and Multimorbidity in Navarre is part of a more comprehensive regional strategy approved in July 2013, with the ultimate objective of improving the health outcomes and functional status of patients with chronic illness, as well as caregivers' quality of life (22).

Unlike the Basque Country strategy for chronic care, which was based on a new governance model that led to structural reorganization, in Navarre care integration was seen as resulting from functional coordination between care providers that was developed to assist specific subgroups of patients, specifically more fragile patients with multimorbidity.

4.2.3 Design and implementation

The Strategy in Navarre was adopted in 2013, and implementation began in October 2014. Since 2017, all eligible patients in the Region with multimorbidity have been able to benefit from the services and resources included in the regional Strategy. In a nutshell, the Strategy aims at providing less-fragmented care and easing patients' interactions with the health system by concentrating their visits with fewer specialists. The Strategy specifies which care levels and professionals must provide services for these patients and the clinical pathways that patients can access according to their needs.

4

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

Purchasing arrangements and accompanying policy instruments.

The Regional Health Service is mandated to implement regional plans, strategies and programmes formally adopted by the Regional Health Department. Although theoretically this mandate is directly adopted and the services included are deemed part of the basket of benefits to be provided, the purchasing arrangements between the Regional Health Department and the Regional Health Service, based on framework agreements and the global budget, have not changed: in Navarre, the Strategy was resourced using the regular budgeting and rewards systems.

The lack of incentives in this type of purchasing arrangement required the deployment of additional policy instruments, specifically (i) using risk stratification to identify high-need patients and specifying the health services to which they are entitled and the access conditions, (ii) specifying clinical roles (e.g. case-management nurse, community-liaison nurse), (iii) enacting rules for referral and to determine from which providers services will be purchased and which services will be covered, and (iv) using data from an information management system to inform quality-oriented purchasing decisions and to monitor the quality of care.

The first instrument, on which the other instruments are based, identifies patients' needs. For this purpose, the Regional Health Department implemented a risk stratification tool similar to the one used in the Basque Country. In this case, the tool aims at identifying the target population for the purpose of tailoring services to their needs.

Stratification helps to determine which providers, services and interventions are appropriate for patients. Specifically, once a patient has been classified according to need, a primary care doctor, nurse and social worker provide clinical and social assessments and decide whether the patient is eligible to be enrolled in the Strategy. If eligible, the team designs a care plan for the patient, setting objectives with the patient and with medical and nursing services; the team also identifies the patient's treatment needs, decides how to address any social needs and develops a detailed self-care plan. Then different care professionals are involved in providing care (e.g. specialists, pharmacy staff, hospital staff, palliative care staff). In general, for patients with fewer needs, the care plan essentially focuses on developing and implementing specific care pathways; for patients with more needs, a case-management plan is usually developed.

These plans entail new referral rules. The most relevant are, for example, that patients should be able to have a primary care appointment (either face to face or remote) the same day that they contact the service, thus strengthening the role of gatekeeping in primary care, and a follow-up appointment should take place within

4

Case studies and results

the first 24 hours after a patient is discharged from hospital (either face to face or remote). There have also been organizational changes; for example, new, specialized outpatient units have been created in hospitals so that patients can be referred directly in the event of a relapse or when special procedures are required (e.g. iron transfusion).

Developing these tailored plans requires the inclusion of and training for new professional roles. This is another salient policy instrument used in Navarre. Importantly, the new roles used in this Strategy are:

- case-management nurses – these are primary care nurses who are assigned to provide care to patients with multimorbidity;
- community-liaison nurses – these are primary care nurses who in addition to their usual work support other primary care nurses, social workers and physicians who are treating patients with the most complex needs. These nurses are also delegated to communicate with hospitals, social and health care centres, and residential facilities;
- hospital-liaison nurses – these nurses work at the hospital units designated for patients with chronic illness and complex multimorbidity. They act as the reference nurse when a patient is admitted, coordinating all inpatient services and procedures. They are also the reference nurse for communicating with primary care centres, social and health care centres, and residential facilities;
- consultant of reference – these consultants work at the hospital units designated for patients with chronic illness and complex multimorbidity. They act as consultants of reference for primary care physicians, and they prioritize (or centralize) all specialist care to avoid care fragmentation;
- health counsellor nurses – these nurses staff a help desk that is open 24 hours/day and 7 days/week and aim to address patients' concerns, recognize disease relapse and guarantee continuity of care after hospital discharge on bank holidays.

Finally, the Strategy in Navarre is supported by the deployment of a number of health information systems, notably the integrated e-health record known as ANDIA, which gathers the minimum data required to ensure a patient is followed up. This tool, shared by all professionals assisting a patient, updates as soon as a patient's condition changes. A decision-aid tool helps professionals make joint decisions about a patient's care based on a number of meaningful clinical and procedural indicators.

In addition to this clinical tool, information systems are also used to monitor the quality of care. A number of performance indicators are assessed weekly and displayed on a dashboard that allows

4

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

disaggregation at meaningful levels of decision-making (e.g. by professional and care facility, such as a hospital or primary care centre), enabling self-assessment by and benchmarking of providers and facilities.

Every two months all care professionals and technical staff involved in the Strategy meet with the hospital-liaison nurses and physicians based in the multimorbidity units to analyse the results displayed on the dashboard and discuss how to ensure continual improvement in the care pathways.

The indicators used in these assessments provide insight into a number of dimensions.

- Identification and classification: Evaluation of this dimension, for example, tallies the number of target patients, the percentage of patients with global assessments or the percentage of patients with an assigned consultant of reference; these consultants also act as consultants for the primary care physicians.
- Diagnosis and comprehensive treatment: The indicators for this dimension include, for example, the percentage of patients with an intervention plan or the percentage of patients with severe disease for whom there is information about their caregiver.
- Care training: The indicators for this dimension include, for example, the percentage of patients who have had self-care training or the percentage of caregivers who have had training in providing efficient care.
- Adoption of new care models: The indicators for this dimension may include, for example, the percentage of patients contacted by a health counsellor nurse after discharge, the percentage of patients discharged for whom there is a report about their continuity of care or the percentage of patients treated with home hospitalization (i.e. home-based hospital care used as an alternative to inpatient care).
- Effectiveness: These indicators include, for example, the average length of hospital stay, the rate of hospitalizations or the rate of potentially avoidable hospitalizations.
- Safety: These indicators include, for example, the percentage of patients with polypharmacy.
- Clinical control: These indicators include, for example, the percentage of patients with diabetes who have glycated haemoglobin above 8.5% or the percentage of patients with heart failure assessed with the New York Heart Association scale.

Facilitators and barriers. The analyses conducted by the authors and in-depth interviews conducted with officers from the Regional Health Department in Navarre identified a number of facilitators and barriers to implementation of the Strategy.

4

Case studies and results

Among the facilitators, key has been the joint commitment of the Regional Health Department and the Regional Health Service to embracing a holistic approach to chronic care, particularly for more fragile patients. This commitment emerged and is reinforced by the hierarchical governance of the Regional Health Service that ensures it must adopt any strategy developed by the Regional Health Department.

Some other notable facilitators of care continuity across care levels and professionals have included the introduction of new professional roles; the inclusion in the Strategy of social care centres, assisted-living facilities and nursing homes; and the extensive development of an e-health infrastructure and implementation of decision-aid tools. Likewise, the weekly updating of data and assessments of care processes and outputs have allowed for continual improvement of the care processes.

Among the barriers, it is worth highlighting that the coexistence of different approaches to caring for patients with chronic illness (i.e. owing to differences among medical schools) has made it difficult to establish a common vision for integrated care. In addition, the process of building mutual recognition and mutual trust between primary care and hospital care professionals is not yet fully complete, thus hampering effective implementation of the Strategy. Additionally, primary care professionals are required to adopt many other strategies and plans, which causes implementation fatigue. Finally, the development of e-health information systems has been slower than expected owing to difficulties in ensuring interoperability across different data sources.

4.2.4 Evaluation

Implementation assessment. In 2012 and 2017, the Regional Health Service evaluated implementation of the Strategy using the Instrument for the Assessment of Chronic Care Models (known by the abbreviation IEMAC-ARCHO) (18). This tool collects information about elements in the implementation of a chronic care programme that are predictive of good results, and it includes questions about the care model, the organization of the health system, support for decision-making, the information systems, efforts to help orient patients to self-care and the use of community resources to provide social care.

Scores on all dimensions of implementation improved in 2017 compared with 2012. Thus, out of 100 possible points, the score assessing the care model increased from 28 to 53 points; the scores on questions about the organization of care increased by as much as fivefold; scores assessing support for decision-making improved, increasing from 14 to 53 points; scores assessing how well information systems supported actions improved, from 20 to 72

4

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

points; scores assessing orientation to self-care also increased, by almost threefold compared with scores in 2012; however, scores assessing the broader community approach had a smaller increase, from 17 to 25 points, compared with 2012.

Impact assessment. After 2 years of implementation, the Strategy was assessed using a quasi-experimental design based on routine data collected about patients with complex conditions or multimorbidity. The study compared health outcomes, costs and patients' satisfaction both in patients enrolled in the Strategy and in a control group matched using a proxy for severity. The average follow up for this evaluation was 496 days (Regional Health Service, Navarre, unpublished data, 2018).

The main results from the impact assessment are summarized below.

- The mortality rate after 12 months was 17.5% for both groups.
- Patients enrolled in the Strategy had a 21% reduction in emergency visits to the hospital, whereas patients in the control group had an 18% increase.
- Patients enrolled in the Strategy had an average 18% decrease in the number of specialist consultations, while no difference was found for the control group.
- Activity in outpatient care units in hospitals increased in both groups, although the increase was larger for patients enrolled in the Strategy, for whom visits were 5 times higher compared with 1.2 times higher for the control group.
- Unplanned hospital admissions decreased for the Strategy group, although the reduction was not statistically significant; however, there was a statistically significant 22% increase in the control group. Interestingly, there were no differences across groups in the rate of potentially avoidable hospitalizations.

Costs. In terms of the use of resources, patients enrolled in the Strategy increased their use of home care and hospital care, with a corresponding 18% increase in the average annual cost of care, which rose from €4527 to €5702. However, this growth was 11.9 percentage points lower than the growth observed for the control group, for whom costs rose from €3964 to €5152.

Satisfaction. Patient satisfaction was similar before and after the intervention, although patients perceived an improvement in care continuity. Health professionals had a positive perception of the overall implementation of the Strategy.

4

Case studies and results

4.2.5 Lessons learned

There are some salient lessons from this experience, stemming from an analysis of the documentation and the in-depth interviews conducted by the authors with key informants in Navarre.

To improve the quality of care for patients with chronic illness, global budgeting should be combined with other purchasing instruments, such as tools and processes, to identify high-need patients and specify appropriate services and access conditions for them.

Additionally, before launching a significant organizational change in a health system, it is necessary to bring together all the main actors (e.g. health professionals, technical staff and executive managers) to agree how to ensure care continuity for patients with complex health needs.

Another key element in the successful implementation of the different purchasing instruments in the Strategy was the deployment of health information systems and technologies to enable goals to be met at managerial and clinical levels.

Finally, continual improvement in health care is based on information being generated during the process of care. Two features are important: information for decision-making should be produced in a timely fashion, and this information should be constantly and consistently shared across decision-making levels, both managerial and clinical.

4.3 Case study 3: guiding high-value purchasing in Aragon

4.3.1 Overview

Table 3 describes the main features involved in implementing the Plan for Integrated Diabetes Care in Aragon, part of which aims at providing guidance on purchasing services by defining high-value normative care processes to ensure alignment between purchasing and outcomes.

Table 3. Main features of the Plan for Integrated Diabetes Care, Aragon, Spain

Characteristic	Description
Years of implementation	Adopted in 2014 (updated in 2021); ongoing
Purchaser	Regional Health Department
Implementing body	Regional Health Service
Problem to address	Unwarranted variations in clinical practice in diabetes care
Target population	People diagnosed with diabetes mellitus, representing 91 000 people with this diagnosis registered in primary care information systems in 2019, and (94 000 patients in 2021
Target providers	Mainly primary care professionals (i.e. general practitioners and nurses)
Goal	Improve the health care provided to patients with diabetes, and improve their health outcomes and quality of life; the Plan also includes primary prevention activities.
Purchasing arrangement	Separate framework agreements enacted between the Regional Health Department and primary care centres and hospitals
Main purchasing instrument	High-value services defined to align purchasing with outcomes
Other policy instruments	<p>Health services and access conditions defined by specifying clinical roles and rules for referral^a</p> <p>Rules used to determine from which providers services will be purchased and to specify the level of care (i.e. primary, secondary or tertiary) and where high-value care will be provided</p> <p>Data from information management system used to inform decisions about quality-oriented purchasing and to monitor the quality of care</p>
Payment mechanism	No specific funding is linked to the Plan.
Incentives and rewards	No specific rewards or penalties are linked to the Plan.

^a Access conditions for health care users are, for example, referral rules that require users to go through a gatekeeper.

4

Case studies and results

4.3.2 Context

In 2014, the Regional Health Department in Aragon translated the 2012 national strategy on diabetes (23) into the Diabetes Strategy in Aragon. In 2021, after an evaluation of the first phase of implementation was complete, the strategy was updated to the Plan for Integrated Diabetes Care in Aragon (24).

The main objective of the original strategy was to ensure that the health care provided to patients with diabetes, mainly in primary care, was standardized, thus elaborating a normative care process that included all high-value services and procedures necessary for diabetes care. This normative process comprised actions addressing primary prevention, early detection, diagnosis, assessment and the development of a therapeutic plan; the prevention and treatment of complications; hospital care; and therapeutic education for patients and informal caregivers. The specification and standardization of services and procedures were meant to guide the purchase of high-value services and to ensure they are provided on time and effectively.

4.3.3 Design and implementation

The Plan for Integrated Diabetes Care addresses the purchasing of high-value services by standardizing care and involving all care professionals who are responsible for diagnosing and treating diabetes, specifically primary care doctors and nursing staff. The Plan assigns a leading role to primary care in managing type 2 diabetes and preventing complications. The activities of the Plan are embedded in the regular actions of the health care professionals based in primary care centres. Multidisciplinary teams are responsible for implementing and following up on the Plan in each of the health care areas comprising the Aragon Regional Health Service.

Purchasing arrangements and accompanying policy instruments.

Once the Regional Health Department decided to design and implement a normative care process for patients with type 2 diabetes, a Coordinating Group was set up; the Group is composed of general practitioners, endocrinologists, staff nurses, ophthalmologists and vascular surgeons. Similar to the Strategy implemented in Navarre, implementation of this Plan did not entail any change in global budgeting that is based on a global budget and framework agreements because it was understood that financing for services and resources for equipment are included in the regular budget for care provision.

In addition, and although it is not specific to this Plan, the regular reward mechanism in Aragon also applies. Thus, the performance of primary care providers is evaluated annually. If a health care

4

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

professional meets the objectives of the relevant framework agreement, a reward is paid to the primary care team, and this is then allocated to the professionals according to their performance. Generally, a provider receives a reward of about 3%. The 3% incentive is weak because professionals are civil servants who receive fixed salaries.

As the global budgeting – the framework agreement, a global budget and 3% individual reward – has been shown not to provide strong incentives to improve the quality of care for patients with chronic illness, the mechanism of defining high-value services to align purchasing with outcomes required some additional policy instruments, such as (i) defining health services and access conditions by specifying clinical roles and rules for referral, (ii) using rules to determine from which providers services will be purchased and specifying the levels of care (i.e. primary, secondary, tertiary) and where high-value care will be provided, and (iii) using data from the information management system to inform decisions about quality-oriented purchasing and to monitor the quality of care.

To ensure that care processes are normative, detailed descriptions of the high-value procedures and interventions are required, along with methods for standardizing them (e.g. thresholds for lab tests).

For illustration, we highlight two high-value care pathways implemented as normative pathways using as purchasing instruments the specification of access conditions, rules for referral and changing roles.

- Screening for retinopathy was implemented in 2016. This screening targets the active recruitment of people with diabetes and the delivery of retinography and image analysis. These activities are performed at primary care centres by primary care doctors. If necessary, a patient is sent to the ophthalmologist of reference for further testing or treatment.
- The pathway for diabetic foot care was implemented in 2018. It includes continual examination for and treatment of diabetic ulcers, and it is delivered by primary care nurses in primary care settings. The staff nurse in primary care may decide after assessment to transfer the patient to specialist nurses based in referral hospitals. If necessary, nurses in the referral hospital will take over treatment or will decide to transfer the patient to the only tertiary care centre in the Region, where vascular surgery and rehabilitation may be offered.

Underlying the implementation of normative pathways as purchasing instruments is the continual use of e-health records as part of patients' clinical follow up and as a performance assessment tool for monitoring care quality.

4

Case studies and results

The Aragonese Plan deployed a dashboard that includes decision aids to help professionals recommend a patient for inclusion in a specific care pathway, as well as to provide information about a patient's status and health outcomes.

The dashboard is used for performance assessments and benchmarking, and it is accessed by primary care professionals and health care managers. It shows care results at different levels of aggregation, the primary care team providing treatment, the primary care centre and the health care area. Performance monitoring includes results of tests such as glycated haemoglobin, blood pressure, urine albumin, cholesterol, glomerular filtration rate, examination for diabetic foot and retinography. The dashboard has been in use since 2016 and shows values for each indicator, which can be used to benchmark professionals against their peers. Data are updated weekly.

Facilitators and barriers. The in-depth interviews with the Clinical Coordinator of the Plan in Aragon, together with an assessment of the diabetes care programme in Aragon in 2019 (25), identified a number of facilitators and barriers to implementation of the Plan.

When it comes to facilitators, the institutional commitment and leadership of the Regional Health Department have been key in supporting the Plan and setting up a group to lead and coordinate implementation. Also, the support of staff nurses and the involvement of referral nurses and medical specialists have paved the way for a smooth unfolding of the Plan.

Another facilitator was the regulation issued by the Regional Health Department that defined the nursing skills required for diabetic foot care and training in self-care for patients. Finally, the development of a clinical dashboard that facilitates the evaluation and benchmarking of health care professionals has played an important role in the successful implementation of the Plan. As expected, at the beginning there was some reluctance to use the dashboard because it implied a commitment to transparency in performance evaluations.

There are some barriers to implementation that are worth highlighting. First of all, the rigid legal framework for resourcing and allocating civil servants (e.g. doctors and nurses) relies more on the length of their professional career than on the specific competencies required to care for patients with diabetes. As a result, the need for highly qualified professionals may be met by unskilled staff.

In terms of allocating resources, there are two barriers to implementation of the purchasing instruments: rewards are not linked to outcomes because they are not specific enough to incentivize activities undertaken to support the Plan and the lack of earmarked investments may have slowed further development.

4

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

Although e-health records have been deployed to ensure real-time monitoring in primary care, there is only partial e-health deployment for outpatient hospital care, thus complete information at that care level is not yet available for evaluation. Furthermore, the weak alignment between the Regional Health Department and the units in charge of developing information systems and e-health tools have hampered easy deployment.

4.3.4 Evaluation

Implementation assessment. An analysis focusing on strengths, weaknesses, opportunities and threats (a SWOT analysis) in 2019 (25) revealed what was needed for full deployment of the Aragonese Plan for Integrated Diabetes Care. The most salient findings were the needs to require a specialization in diabetes care for primary care nurses working with the Plan; provide all hospitals with educational and counselling services delivered by nurses trained in patient education; provide primary care centres and diabetic foot units with chiropodists; ensure that all retinographs are functional or have been replaced, if necessary; develop a unified electronic medical record to be used in primary care and hospitals; develop a patient engagement strategy; and increase therapeutic training for patients.

In addition to the SWOT assessment, results from annual evaluations have brought about updates to the implementation objectives, highlighting the needs for greater coordination and information sharing among health care levels, to foster preventive activities to control cardiovascular disease, to spread the therapeutic training programme to every health care sector to avoid inertia (e.g. not changing a patient's medicines despite their diabetes being uncontrolled), and to ensure active retinopathy screening and diabetic foot examination in primary care for all eligible patients.

Impact assessment. In addition to the continual assessment of clinical outcomes and implementation of the care pathways, the Regional Health Department evaluates the Plan annually using time-series monitoring based on the indicators reported in the dashboard. The Plan has been evaluated annually since 2019, and the results of indicators are publicly available by health care area (26). However, the public report does not provide information by primary care practice or physician.

The main results of the latest report in 2021 (26) indicated that there was improvement in controlling albuminuria in patients with diabetes, rising from 30% of patients in 2016 to 40% in 2019; the delivery of diabetic foot examination also improved, rising from 20% of eligible patients in 2017 to 30% in 2019; and the use of retinography improved, rising from 39% of eligible patients in 2016 to 47% in 2019.

4

Case studies and results

In contrast to these positive results, some other indicators have stagnated: for example, cholesterol testing remained stable from 2016 to 2021, with around 60% of patients being tested, and only about 40% of patients were regularly tested for glycated haemoglobin, a slight decrease in 2019 compared with 2018.

4.3.5 Lessons learned

There are some salient lessons from this experience, stemming from an analysis of the documentation and the in-depth interviews conducted with a key informant in Aragon.

The use of global budgeting and framework agreements has not provided strong incentives to improve the quality of care for patients with chronic illness. In this context, defining high-value services to align purchasing and outcomes has been shown to be an alternative.

Strong clinical leadership is required to implement any instrument designed to guide the purchase of high-value services.

The rigid legal framework for professional resourcing has been a significant barrier to implementation: the resourcing of professionals should rely more on the specific competencies required to care for patients with diabetes than on the length of time a professional has been a civil servant.

The use of a shared clinical dashboard that mirrors the normative processes developed in this purchasing instrument has facilitated on-time clinical follow up of patients and also improvements in clinical care by enabling benchmarking. This continual evaluation of clinical results must be complemented and aligned with a more strategic analysis of impact (e.g. a SWOT analysis), which has not yet been deployed.

5

Conclusions

5

Purchasing arrangements to strengthen the quality of chronic care in three Spanish autonomous communities

When global budgeting does not include strong incentives to improve care, other complementary purchasing instruments must be implemented.

Implementing a top-down approach requires wide consensus. Strong regulatory instruments (e.g. issuing a law) may facilitate short-term implementation, but they do not necessarily translate into cultural change towards integrated care, which is key to ensuring sustainable institutional and professional commitment.

The successful implementation of any new purchasing instrument will require the involvement of the main institutional actors (i.e. health professionals, technical staff and executive managers), with a view to securing their commitment and their professional leadership.

Any purchasing mechanism must be developed upon a fit-for-purpose information system and a well-developed technological infrastructure that allow the continual evaluation of purchasing policies and ensure continuity of care.

References

1. Sistema de Cuentas de Salud 2019 [Health Accounts System 2019]. Madrid: Ministry of Health; 2019 (in Spanish; <https://www.sanidad.gob.es/estadEstudios/estadisticas/sisInfSanSNS/pdf/SCSdatosEstadisticos.pdf>, accessed 26 April 2023).
2. Bernal-Delgado E, García-Armesto S, Oliva J, Sánchez Martínez FI, Repullo JR, Peña-Longobardo LM, et al. Spain: health system review. *Health Syst Transit*. 2018;20:1–179. PMID:30277216.
3. Contenido de la Cartera de servicios [Health benefit basket catalogue of the National Health System in Spain]. Madrid: Health Ministry, Government of Spain; 2022 (in Spanish; <https://www.sanidad.gob.es/profesionales/prestacionesSanitarias/CarteraDeServicios/ContenidoCS/Home.htm>, accessed 23 January 2023).
4. Urbanos-Garrido RM, Peña-Longobardo LM, Comendeiro-Maaløe M, Oliva J, Ridaio-López M, Bernal-Delgado E. Can people afford to pay for health care? New evidence on financial protection in Spain. Copenhagen: WHO Regional Office for Europe; 2021 (<https://apps.who.int/iris/handle/10665/347403>, accessed 23 January 2023).
5. Ley 14/1986, de 25 de abril, General de Sanidad [Law 14/1986, 25 April, General Law on Health Care]. Madrid: Government of Spain; 1986 (in Spanish; <https://www.boe.es/buscar/act.php?id=BOE-A-1986-10499>, accessed 23 January 2023).
6. Estrategia para el Abordaje de la Cronicidad en el Sistema Nacional de Salud 2012 [National Strategy for Chronic Care 2012] Madrid: Ministry of Health; 2012 (in Spanish; https://www.sanidad.gob.es/organizacion/sns/planCalidadSNS/pdf/ESTRATEGIA_ABORDAJE_CRONICIDAD.pdf, accessed 21 December 2022).
7. Informe de evaluación de la Estrategia para el Abordaje de la Cronicidad [Evaluation report on the National Strategy for Chronic Care, Annex V]; 2019 (in Spanish; https://www.sanidad.gob.es/organizacion/sns/planCalidadSNS/pdf/Evaluacion_E.Cronicidad_Final_0.3.pdf, accessed 21 December 2022).
8. Exploring the role for strategic purchasing instruments to support improvements in the quality of care. Geneva: World Health Organization; 2022 (<https://apps.who.int/iris/handle/10665/364854>, accessed 23 January 2023).
9. Nuño-Solinís R. Desarrollo e implementación de la Estrategia de Cronicidad del País Vasco: lecciones aprendidas [Development and implementation of the Chronicity Strategy for the Basque Country (Spain): lessons learned]. *Gac Sanit*. 2016;30 Suppl. 1:106–10. doi:10.1016/j.gaceta.2016.03.011 (in Spanish).
10. Wagner EH. Chronic disease management: what will it take to improve care for chronic illness? *Eff Clin Pract*. 1998;1:2-4. PMID:10345255.
11. Bengoa R. Transforming health care: an approach to system-wide implementation. *Int J Integr Care*. 2013;13:e039. doi:10.5334/ijic.1206.
12. Polanco NT, Zabalegui IB, Irazusta IP, Solinís RN, Del Río Cámara M. Building integrated care systems: a case study of Bidasoa Integrated Health Organisation. *Int J Integr Care*. 2015;15:e026. doi:10.5334/ijic.1796.

13. ACUERDO de 13 de diciembre de 2010, del Consejo de Administración del Ente Público Osakidetza Servicio vasco de salud, por el que se crea, en el área sanitaria de Gipuzkoa, la organización sanitaria integrada Bidasoa [Agreement on the creation of the Integrated Healthcare Organization Bidasoa on December 13 2010]. Vitoria: Department of the Basque Country; 2019 (in Basque and Spanish; <https://www.euskadi.eus/y22-bopv/es/bopv/2/datos/2011/01/1100232a.pdf>, accessed 21 December 2022).
14. Ley 8/1997, de 26 de junio, de Ordenación Sanitaria de Euskadi [Law 8/1997, 26 June, on healthcare planning in Basque Country]. Madrid: Government of Spain; 1997 (in Spanish; <https://www.boe.es/buscar/pdf/2012/BOE-A-2012-415-consolidado.pdf>, accessed 21 December 2022).
15. Decreto 100/2018, de 3 de julio, de las organizaciones sanitarias integradas del ente público Osakidetza-Servicio vasco de salud [Decree 100/2018, 3 July, on the organization of Integrated Health Organizations]. Madrid: Government of Spain; 2018 (in Spanish; <https://www.euskadi.eus/gobierno-vasco/-/eli/es-pv/d/2018/07/03/100/dof/spa/html/>, accessed 21 December 2022).
16. Transfer work packages – original good practices [website]. Brussels: Joint Action on Implementation of Digitally Enabled Integrated Person-Centred Care (JADECARE); 2022 (<https://www.jadecare.eu/structure/transfer-good-practices/>, accessed 21 December 2022).
17. Readiness of European regions for integrated care. Annex B: Self-assessment process in the Basque Country Bilbao: Scirocco Exchange; 2019 (<https://www.sciroccoexchange.com/uploads/Maturity-Assessment-Basque-Country-V1.0.pdf>, accessed 21 December 2022).
18. Nuño-Solinís R, Fernández-Cano P, Mira-Solves JJ, Toro-Polanco N, Carlos Contel J, Guilabert Mora M, et al. Desarrollo de IEMAC, un instrumento para la evaluación de modelos de atención ante la cronicidad [Development of an instrument for the assessment of chronic care models]. *Gac Sanit.* 2013;27:128–34. doi:10.1016/j.gaceta.2012.05.012 (in Spanish).
19. Nuño-Solinís R, Berraondo Zabalegui I, Sauto Arce R, San Martín Rodríguez L, Toro Polanco N. Development of a questionnaire to assess interprofessional collaboration between two different care levels. *Int J Integr Care.* 2013;13:e015. doi:10.5334/ijic.984.
20. Jauregui ML, Silvestre C, Valdes P, Gaminde I. Qualitative evaluation of the implementation of an integrated care delivery model for chronic patients with multi-morbidity in the Basque Country. *Int J Integr Care.* 2016;16:9. doi:10.5334/ijic.1975.
21. Berwick DM, Nolan TW, Whittington J. The Triple Aim: care, health, and cost. *Health Aff (Millwood).* 2008;27:759–69. doi:10.1377/hlthaff.27.3.759.
22. Estrategia Navarra de atención integrada a pacientes crónicos y pluripatológicos [The Strategy on Integrated Care for Chronic and Multimorbid Patients in Navarra]. Pamplona; Health Department, Government of Navarra; 2013 (in Spanish; http://www.navarra.es/home_es/Temas/Portal+de+la+Salud/Ciudadania/Nuevo+Modelo+asistencial/, accessed 21 December 2022).

23. Estrategia en Diabetes del Sistema Nacional de Salud: actualización. [Strategy on diabetes care in the National Health System]. Madrid: Ministry of Health, Government of Spain; 2012 (in Spanish; https://www.sanidad.gob.es/organizacion/sns/planCalidadSNS/pdf/excelencia/cuidadospaliativos-diabetes/DIABETES/Estrategia_en_diabetes_de_SNS_Accesible.pdf, accessed 21 December 2022).
24. Plan de Atención Integral a Personas con Diabetes Mellitus en Aragón: actualización 2021 [Plan for Integrated Diabetes Care in Aragon: updated 2021]. Zaragoza: Government of Aragon; 2021 (in Spanish; <https://www.aragon.es/documents/20127/47430881/Plan+atenci%C3%B3n+integral+diabetes+mellitus+aragon+2021.pdf/98118fb1-072b-ccf1-0b58-fa61b738208e?t=1621334402172>, accessed 21 December 2022).
25. Evaluación del programa de diabetes mellitus en Aragón: 2019. [Assessment of the diabetes care program in Aragon: 2019] Zaragoza: Government of Aragon; 2019 (in Spanish; <https://www.aragon.es/documents/20127/47430881/Evaluaci%C3%B3nprogridiabetesAragon2019web.pdf/0e6958f5-2dd5-7eb3-1769-2489af24ae5c?t=1651733844933>, accessed 21 December 2022).
26. Estrategia contra la diabetes [Diabetes Strategy in Aragon]. Zaragoza: Government of Aragon; 2023 (in Spanish; <https://www.aragon.es/-/estrategia-de-diabetes>, accessed 21 December 2022).

World Health Organization
Centre for Health Development
(WHO Kobe Centre – WKC)
Kobe, Japan

www.who.int/kobe_centre/en/

