Piloting integrated health networks to improve type 2 diabetes services in Andorra

Overview

Faced with increasing rates of chronicity since the mid-2000s, the Andorran Ministry of Health and Welfare has prioritized a transition from a system largely orientated towards more acute, reactive care, to a more integrated model of services delivery. This priority is evident in the national Strategic Health Plan 2010–2015 and the efforts put in place to see through its implementation, including the launch of a pilot integrated care model for type 2 diabetes. Working closely with key actors, the pilot has been designed to strengthen the gatekeeping role of primary care, introducing nurse-physician care teams, encouraging self-care through strengthened patient education, and standardizing for quality of care through updated evidence-based care pathways and protocols in guidebooks. While the participation of providers and patients in the pilot is voluntary, financial incentives have been aligned to encourage the engagement of both and reward providers for their performance.

The pilot secured the enrollment of 85% of general practitioners who subsequently received training on the use of the new guidelines. Officially launched on World Diabetes Day 2014 and set to run for one year, the pilot will be monitored against a set of 20 performance indicators. Results from this evaluation will inform the future implementation and scale up of the model in the context of Andorra's new health model for more integrated care.

Problem definition

Since the early 2000s, Andorra, like many countries in the European Region, has faced a high and rising burden of chronicity for noncommunicable diseases, particularly type 2 diabetes. The acute, largely reactive specialist-driven model of services delivery has challenged the health system to provide the coordination across providers and continuity of services needed to effectively respond to changing health pressures. The strained role of primary care to act as the gatekeeper to the system was marked by the growing dissatisfaction among general practitioners and observed patient care seeking patterns consistently targeting secondary or tertiary levels of care. Moreover, the time and resources required to fully engage patients in their diabetes care were found lacking, despite the known complexity of diabetes and close links to individual lifestyle factors.

Box 1

What problems did the initiative seek to address?

- High prevalence of type 2 diabetes.[1]
- Suboptimal patient education on type 2 diabetes for self-monitoring and lifestyle adaptations.
- Growing provider dissatisfaction in primary care linked to their weak gatekeeping function.

Health services delivery transformations

Timeline of transformations

In 2009, the Strategic Health Plan 2010–2015 was launched by the Ministry of Health and Welfare to activate population-wide improvements in health and social services (Table 1). As part of this Plan, in 2012, the new Andorran Model of Healthcare (MAAS) was developed to increase the delivery of patient-centred, integrated primary care. An initiative to pilot this new approach to services delivery in the context of type 2 diabetes was planned by the Ministry and officially launched on World Diabetes Day 2014. The results of the diabetes pilot, expected late 2015, will provide the Ministry with important information on the new Andorran Model of Healthcare.

Table 1
What were the chronological milestones for the initiative?

2009	Strategic Health Plan 2010–2015 launched to guide health system improvements and the development of a new care model.
2012	New Andorran Model of Healthcare conceived; key objectives include increasing patient-centredness and strengthening primary care; Ministry of Health and Welfare plans to gradually phase in Model after testing.
2012-2014	Pilot study for Model planned; type 2 diabetes selected as the disease to test the Model.
2014	One year diabetes pilot officially launched on World Diabetes Day 2014; Strategic Health Plan 2015–2020 developed.
Present	Continued implementation of diabetes pilot.

Description of transformations

Selecting services. Piloting of a more comprehensive package of type 2 diabetes care has introduced additional care services such as patient education and dietary counselling, foot health assessments and social assistance.

Designing care. Existing care pathways have been advanced based on best available clinical evidence, looking also to international experiences from hospitals in France and Spain. Redesigning pathways has sought to improve the quality of care for patients with type 2 diabetes and ensure access to a comprehensive, coordinated set of services based on patient needs over time. "Central to the design of the pilot has been to define a path for patient care where all possible visits to professionals (for example podiatrists, dieticians, doctors, dentists, nurses), both mandatory and optional, are considered."

A guidebook for health providers has been developed to map new type 2 diabetes care pathways and aid decision-making. Patients with type 2 diabetes participating in the pilot follow a fixed route of care tailored to their personal situation. Patients enter the care pathway through a primary care nurse-physician team; this team then develops a personalized plan for each patient, coordinates care and refers to necessary services based on criteria defined in the guidebook.

Organizing providers. The pilot initiative encouraged the voluntary participation of general practitioners, managing to successfully enrol 85% of Andorra's general practitioners in the project. In an effort to strengthen the gatekeeping function of general practitioners, the pilot has introduced nurse-physician care teams to act as the central managers for diabetes health networks and provide all necessary referrals. Diabetes health networks link a wide array of providers to deliver diabetes services including dieticians, podiatrists, social workers and specialists among others. These networks have served to incorporate health professionals previously not recognized by the public system to provide support to patients.

Specific forms have been developed for the purpose of streamlining referrals. All necessary information regarding patient care is recorded there in an effort to avoid duplication of services. This paper record is currently carried by the patient between care providers as an interim solution while electronic means are advanced.

Strengthening care information flow between different actors is essential for achieving integration. In our case, pending full implementation of the electronic health record, we designed a card owned by the patient, containing all the information generated by services provided to the patient from any professional.

Managing services. Diabetes nurse managers have been recruited and travel around the country to provide support to primary care teams and monitor adherence to the pilot's guidelines. All providers in the pilot are required to commit to certain terms and conditions for delivery of type 2 diabetes services. To receive financial incentives, providers are now assessed based on a number of performance indicators that serve to encourage effective service provision in accordance to the protocols in place.

Improving performance. Trainings and seminars have been made available to all health professionals participating in the pilot to educate them on the new guidelines and criteria for providing care to patients with type 2 diabetes; certain trainings are compulsory for specific professional groups. Additionally, diabetes nurse managers have received specialized training as part of the pilot to help them fulfil their supervisory role. A programme of trainings for 2015 is currently being developed for continuous learning and improvement.

Engaging and empowering people, families and communities

The initiative aims to empower patients with type 2 diabetes with the necessary knowledge and skills

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Narrow range of type 2 diabetes treatment services covered by national health insurance; lack of patient education or health promotion services; patients pay 100% of costs for specialist care from providers such as dieticians or podiatrists.[2]	Expanded package of type 2 diabetes services, including specialist services; patient education offered as standard part of care package; social services incorporated.
Designing care	
No protocols or guidelines for management of patients with type 2 diabetes.	Evidence-based care pathways designed in consultation with international experts; primary care teams develop personalized treatment plans for each patient, referring to specialist providers as needed; guidebook developed for providers maps care pathways and aids decision-making.
Organizing providers	
Professionals fragmented across care levels and public and private domains; individualistic culture prevalent and teamwork lacking; patients frequently bypass primary care providers and seek care in higher level settings or abroad; absence of system to share patient information prevents communication and coordination between providers.	Gatekeeping role of primary care strengthened; nurse-physician teams coordinate all care for patients and make referrals as needed; all professionals participating in the pilot committed to share patient information with referring nurse-physician team; pending implementation of an electronic information system, a complete set of (paper) medical records travels with the patient to enable communication and coordination between providers.
Managing services	
Absence of technological infrastructure and an electronic information system poses a barrier to effective coordination; health professionals deliver services with limited managerial oversight and control over performance.	Investments being made to establish necessary infrastructure for an electronic information system; new role of diabetes nurse manager created to oversee delivery of services according to pilot guidelines; general practitioners assessed against several defined performance indicators.
Improving performance	
Limited training opportunities available; absence of specialized diabetes training.	Series of trainings and seminars on type 2 diabetes and new care guidelines offered; specialized training given to diabetes nurse managers.

to effectively self-manage their care while supported and monitored by a coordinated care team. Patient education plans are delivered by nurses and are adapted based on the knowledge and personal circumstance of patients. The long-term goal seeks “to work with the concept of the expert patient” and the vital role patients have to play in generating health improvements related to type 2 diabetes.

The patient will receive an education adapted to their knowledge so that you [patient] get the highest level of self-care and autonomy regarding your condition. We hope to achieve the reduction in complications caused by diabetes in a few years. It will be a benefit to both the patient and the system.

Group training sessions are also being experimented with as part of the pilot project. These bring together patients, families and primary care providers to facilitate open communication. Patients are encouraged to seek advice and support from the national Diabetic Association, an important national actor in diabetes care providing resources for patients, educational opportunities and peer support.

Health system enabling factors

Implementation of the pilot has benefited from wider health system reforms led by the Ministry of Health and Welfare to establish the necessary system conditions for more integrated services delivery (Table 3).

Working in partnership with the Andorran Office of Social Security (the main health system payer) and the Andorran Public Health Service (the main public provider), the Ministry has worked to adapt necessary legal and financial frameworks to support the new working modalities described above. The diabetes pilot has applied these changes as a means to test and further refine new arrangements prior to full-scale reform.

Financial incentives have been introduced for general practitioners who enrol in the pilot and have committed to following the pilot's guidelines. Incentives are paid in accordance to performance, with general practitioners receiving a fixed payment of €5 per patient and service, up to a maximum of €25 per patient. Additionally, a variable incentive based on performance against three groups of indicators (quality, efficiency and teamwork) is awarded to participating general practitioners at the end of the pilot year, up to a maximum of €75 per patient. Nonfinancial incentives, such as improvements in status for general practitioners and increased responsibility for nurses, have complemented and strengthened financial incentives. Patients are also financially incentivized to participate in the pilot as they are only responsible for 10% of ambulatory care costs if they access services through referral from the participating nurse-physician team. Patients not participating in the pilot typically pay 25% of covered care costs and 100% of services not normally covered such as consultations with podiatrists or dieticians.

As a pilot project, a strong emphasis has been placed on collecting information to inform future implementation of the new Andorran Model of Healthcare. A total of 20 process, outcome and satisfaction indicators have been developed for this purpose. Indicators include, for example, the number of relevant health checks a patient receives (such as blood glucose testing and weight monitoring), whether appropriate referrals were made (such as percentage of patients referred to an ophthalmologist), percentage of patients showing health improvements (such as improved blood glucose, blood pressure or cholesterol levels) and percentage of patients satisfied

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Ministry of Health and Welfare has stewardship over the health system. • Strategic Health Plan 2010–2015 and the Strategic Health Plan 2015–2020 detail Ministry priorities for developing a coordinated/integrated system; new Andorran Model of Healthcare calls for widespread health system reforms and will be phased in gradually under Ministry oversight. • General practitioners participating in the pilot agree to follow pilot guidelines for type 2 diabetes care.
Incentives	• Fixed rate of €5 per patient and service (maximum of €25 per patient) offered to participating general practitioners. • Additional payment-for-performance incentive offered (maximum of €75 per patient) based on quality, efficiency and teamwork indicators. • Patients financially incentivized to participate in pilot; patients pay only 10% of ambulatory care costs if participating versus 25–100% otherwise.
Competencies	• New professional roles and responsibilities created for nurses.
Information	• Diabetes pilot serving as a means to test and evaluate new Andorran Model of Healthcare. • Series of 20 indicators developed to assess pilot; indicators include process (such as tests performed and referrals made), outcome (such as blood glucose levels) and satisfaction measures. • Evaluation of pilot will inform future implementation of the new Model.

with services provided. A series of interviews will also be held with participating patients to evaluate any changes in their health knowledge. All the information collected through the pilot will be evaluated at the end of the implementation year in order to provide insight for the future direction of health system reforms.

Outcomes

As the diabetes pilot is still in the early stages of implementation, outcomes are not yet available. Evaluation of the pilot will be based on a series of 20 performance indicators measuring processes, outcomes and satisfaction.

Change management

Key actors

This initiative has primarily been steered by the government. However, great effort has been invested to include a wide range of actors (Box 2). A project coordinator was appointed to oversee the development of the diabetes pilot under guidance from a newly established multidisciplinary steering committee. Plans for the pilot took shape through an iterative process involving regular meetings with representatives from multiple stakeholder groups including the Council of Ministers, general practitioners, nurses and other health professionals, the Diabetic Association, the Andorran Office of Social Security and the Andorran National Health Service.

Box 2

Who were the key actors and what were their defining roles?

- **Ministry of Health and Welfare**. Led development of health system reforms; worked with multiple stakeholders to design pilot to test proposed reforms.
- **Andorran Office of Social Security (CAAS)**. Main payer of the health system; collaborated with Ministry of Health and Welfare to develop and pilot health system reforms; reworked financing structures.
- **Andorran National Health Service (SAAS)**. Main public health system provider; collaborated with Ministry of Health and Welfare to develop and pilot health system reforms.
- **Project coordinator**. Ministry appointed manager for the pilot study; acts as the central contact point for all stakeholders.
- **Multidisciplinary committee.** Composed of several stakeholder representatives and international experts; assisted in design of initiative; continue to advise project coordinator.
- **Diabetic Association.** National association of patients with diabetes; "vital partner" in design of initiative; important resource for patients with diabetes.

Initiating change

Following the proposal set in the context of the new Andorran Model of Healthcare, plans for the pilot's implementation were carried forward by the designated project coordinator and multidisciplinary committee. Plans were updated accordingly to reflect the input of all stakeholders in an effort, as key informants describe, to "make everyone feel identified with this project". In parallel, necessary legal and financial challenges to establish the institutional environment for the pilot's implementation were put in place by the Ministry.

Prior to launching the pilot, a marketing campaign raised public awareness of activities through media channels, including television and newspapers, as well as public presentations on the project. "We conducted a media marketing campaign for positive communication. This has helped us to achieve good acceptance in the population."

Implementation

The official launch of the pilot was timed to coincide with World Diabetes Day and numerous events were held to mark its launch, including a free public diabetes screening held in a church. Mechanisms are in place for regular feedback and engagement of stakeholders to allow for continuous adjustments as necessary. The pilot is still in the early stages of implementation and is set to last one year.

The Ministry of Health and Welfare plans to use the experience and results of the diabetes pilot to inform implementation of the new Andorran Model of Healthcare. The Model calls for a large shift in the organization of health care, but also in the vision and culture of the health system. As such, "the barriers have been great because we had to change our current vision of the system to the new concept we want; a new health culture." Nevertheless, gradual implementation of the changes called for under the Model, supported with carefully chosen testing of new arrangements through the diabetes pilot, has proven successful in generating support for the new system.

Moving forward

An evaluation of the pilot, once complete, will enable the Ministry of Health and Welfare to assess the impact of the new Andorran Model of Healthcare for improving type 2 diabetes care processes and outcomes. Furthermore, the experience and outcomes of the pilot will provide insight on the feasibility of provider health networks at scale and their application to other priority health needs.

Highlights

- To encourage an integrated response to type 2 diabetes, a primary care nurse-physician team was introduced as part of a diabetes health network with the aim of connecting health professionals across disciplines and sectors, as well as strengthening the gatekeeping function of primary care providers.
- Pragmatic intermediary solutions, such as paper medical records carried by the patient, addressed pressing challenges, like poor communication between providers in the absence of an electronic information system.
- Updated evidence-based care pathways published in a guidebook for providers served as a means to streamline and standardize care while also allowing for adaptability based on patient needs.
- Extensive patient education, support and coaching on self-management skills has enabled patients to act as agents in their own care.
- Extensive collaboration with stakeholders in the early design stages of the initiative encouraged multistakeholder buy-in and ownership from the outset.

1 WHO Regional Office for Europe. (2014). *European Health for All Database*. Retrieved from http://data.euro.who.int/hfadb
2 WHO Regional Office for Europe and Netherlands Institute for Health Services Research. (2014). *Evaluation of the Structure and Provision of Primary Care in the Principality of Andorra.*