

Case study: Catalonia, Spain

November 2021

I. BACKGROUND AND OBJECTIVES

This case study aims to describe the different monitoring and evaluation tools that are available at central and local level and used by health managers to plan and organise community health services and by health professionals to provide care to patients and communities. Specifically, we focus on the role of nurses as providers of community care and, eventually, managers of community and primary care services.

II. THE CATALAN HEALTH SYSTEM

Healthcare in Spain follows a national health service model with universal health coverage funded by revenue taxes. Organization of services is decentralised at regional level.

Catalonia has 7.7 million inhabitants and spends more than 10 thousand million euros in providing health care services. The Department of Health is responsible for governing, regulating and planning the health system. The Catalan Health Service (CatSalut) purchase health services to a wide range of healthcare providers of primary care, acute and long-term hospital care, mental health and emergencies.

Primary care includes community health and it is provided by multidisciplinary primary care teams which include family doctors, paediatricians, dentists, nurses, nurse aides, social workers and administrative staff. Each team provides health promotion, health education, preventive, curative and rehabilitative care services to a defined territory (basic health area) with around 25 000 inhabitants.

Primary care nurses hold a 4-year university degree. Since 2005, they can also do the specialty on family and community nursing after completing the degree. Every primary care team can self-organise their community work. In general, primary care nurses combine community health activities like visiting schools or organising health promotion talks, with preventive and curative care at the primary care centre.

III. HEALTH PRIORITIES PLANNING

Every five-year, the Department of Health published the Health Plan of Catalonia that set forth the health goals to achieve through the implementation of different strategies and plans. The Health Plan mobilises the entire health sector and provides a framework to align front-line work with health policies through the contracting mechanism between CatSalut, health care providers and health professionals.

Against the backdrop of the COVID-19 crisis, the recently launched Health Plan 2021-2025 underscores recovery and transformation of health services. Community health is placed centrally in the strategy of health and care integration, reinforcing links with public health and social work and addressing social determinants of health.

Implementation of these strategies pivot in different mechanisms like intersectoral governance, strategic purchasing or health information systems. Health goals are incorporated in the health service contract between CatSalut and health care organizations and those transfer incentives to health professionals through the pay-for-performance segment of their remuneration.

IV. COMMUNITY HEALTH MONITORING AND EVALUATION: AREAS AND TOOLS

Community health services aim at increasing the health status of populations through the activities carried out by primary care teams and specifically family and community nurses. To support these range of action, monitoring and evaluation tools should be in place to appraise the needs of communities and report improvements of health outcomes, quality of care and patient satisfaction. Managers must be also equipped with instruments to plan services, monitor activity and performance and manage health workforce. The next section describe each area of monitoring and evaluation and review the tools used in the context of community care in Catalonia.

4.1. Population health

Based on personal health data registered in the different health registries, population health is measure through a risk stratification system. Population risk stratification is a practical tool to have an oversight of the health status of a defined population. Among the different population risk stratification tools available, the Catalan health system uses two: Clinical Risk Groups (CRG) and Associated Morbidity Groups (GMA). CRGs are a commercial solution developed in the US by 3M. GMAs are a bespoke solution developed internally by a technical unit of CatSalut.

GMAs classify people by clinical complexity and severity into 45 groups.

Population risk stratification is available at individual level through the primary care EHR (ECAP) and the Shared EHR (HC3). Specific labels for complex chronic patients have been added to indicate special requirement and further coordination work with other levels of care including social work. These labels are PCC for chronic complex patients and MACA for patients in an advanced clinical condition. A shared individual intervention plan (PIIC) can be established for determined patients and health and social care professionals have access through HC3.

4.2. Health and care activity

Traditionally, health care managers have focused on monitoring health care activity like number of visits as a proxy of performance. This was the type of information easier to collect before the irruption of EHRs and other management information systems. Extracting data from the appointment system (agenda) that records programmed and urgent visits by type (at the centre, at home or via telephone or telehealth) and the assignment of patients to doctors and nurses (empanelment), managers can have a clear view of the distribution of patients between health professionals. Hence, they can make decisions of redistribution based on the expected and actual workload of each team member.

Figure X. Panel distribution of community nurses

[Screenshot]

Source: Khalix

As not all patients are equal, more sophisticated systems than head counting have been implemented to adjust panels by socioeconomic level. Primary care teams in Barcelona use the MEDEA Index of deprivation to balance lists of patients between doctors and nurses.

Accessibility to health services is a core quality indicator that does not require clinical information and can be derived from the agenda. Time to get an appointment or “waiting time” is the most used metric and can be checked by health managers aggregated through Khalix. Unfortunately, due to organizational reasons this information is only updated monthly, forcing managers to check directly individual agendas to have a quick view of the offering situation if they want to make proactive decisions.

Non-face-to-face visits before the pandemic were marginal, accounting for less than 5% of the total number of visits. Now this pattern has changed, and secure email consultations (eConsulta), videoconference (videoConsulta) or just regular phone calls have become an accepted mean for interacting with patients. Ensuring enough face-to-face time is then a new managerial task.

Further activity analysis can be done ad hoc fetching manually data from the appointment system databases.

Community health activities include programmes like “Health and school” where nurses organise health promotion workshops for children and adolescents, health promotion and education talks in the community targeting vulnerable groups like elders, vaccination campaigns or home visits.

4.3. Quality of care

SISAP is the management health information system built over ECAP to provider clinicians and managers how effective their practices are. SISAP tracks systematically a set of quality of care indicators and allows comparisons with other health professionals, primary care teams and the aggregated country average. To summarise quality of care performance, a composite index called Healthcare Quality Standard (EQA) was built to monitor quality comprehensively, including all major clinical interventions in primary care.¹ EQA indicators have been used to quantify improvements in the follow-up and control of different chronic diseases in primary care, reducing the variability of performance among primary care teams.

The EQA is a synthetic indicator composed by more than 60 clinical indicators on quaternary prevention, preventive activities, and follow-up, control and treatment of different chronic diseases. These indicators are considered a useful tool for measuring clinical practice and their results have been validated by more than 6,000 professionals.

Table 2. Healthcare Quality Standard: conditions and indicators

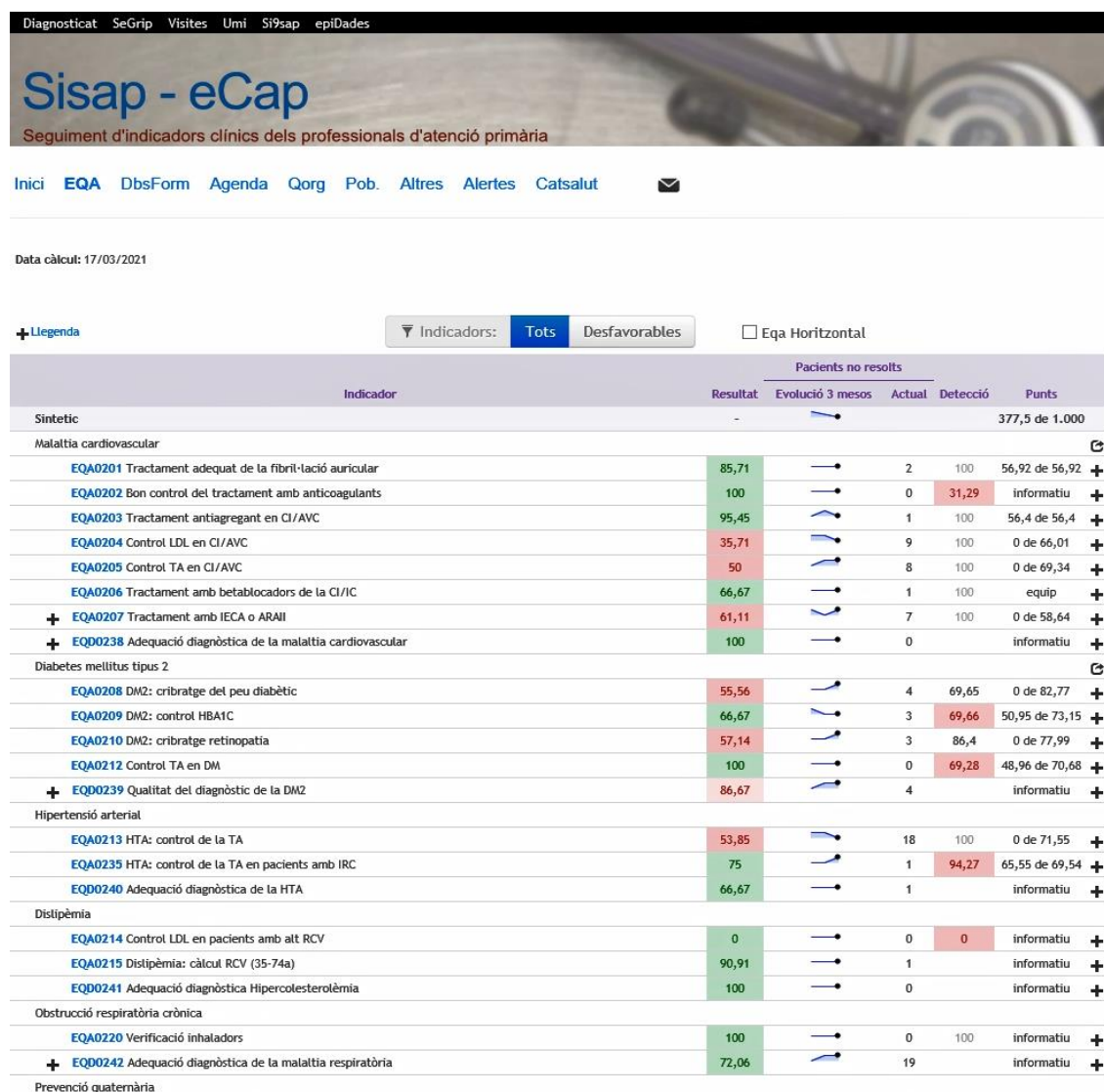
Condition	Indicators
Ferropenic anaemia	▪ Diagnosis of new cases ▪ Follow-up
Social assessment	▪ Of individuals who are dependent on family members ▪ Of frail elderly individuals
Cerebrovascular disease (CVD) and/or transient ischemic attack (TIA)	▪ Antiplatelet/anticoagulant treatment ▪ Lipid control
Ischemic heart disease (IHD)	▪ Beta-blockers treatment

¹ Coma E, Ferran M, Méndez L, Iglesias B, Fina F, Medina M. Creation of a synthetic indicator of quality of care as a clinical management standard in primary care. SpringerPlus. 2013 Dec;2(1):1-1.

	▪ Antiplatelet/anticoagulant treatment ▪ Lipid control
Hypercholesterolemia	▪ Cardiovascular Risk (CVR) record of hypercholesterolemia
Atrial fibrillation (AF)	▪ Antiplatelet/anticoagulant treatment
Arterial hypertension (AHT)	▪ Blood pressure (BP) control ▪ Blood pressure (BP) control in at-risk population (IHD, DM, CVD/TIA, CKF)
Heart failure (HF)	▪ ACEI/ARB treatment ▪ Beta-blockers treatment
Chronic hepatitis C	▪ Vaccination for hepatitis B virus
Alcohol use	▪ Screening for alcohol use
Tobacco use	▪ Screening for tobacco use in at-risk population ▪ Smoking cessation
Diabetes mellitus 2 (DM2)	▪ Screening and onset prevention ▪ HbA1c control ▪ Screening and prevention of diabetic retinopathy ▪ ACEI/ARB treatment in DM2 with chronic nephropathy
Cognitive deterioration	▪ Syndrome diagnosis, new cases of cognitive deterioration ▪ Home health care interventions for a safe living environment for patients with dementia ▪ Assessment of caregiver burnout
Impacted earwax	▪ Removal of earwax plugs in primary care
Asthma	▪ Diagnosis of new cases of asthma
Vaccinations	▪ Flu shots in patients aged >60 years ▪ Flu shots in at-risk patients ▪ Pneumonia shots in patients aged >60 years ▪ Tetanus shots
Chronic obstructive pulmonary disease (COPD)	▪ Diagnosis of new cases ▪ Training in use of COPD inhalers
Home health care	▪ Case complexity assessment of home health care patients ▪ Assessment of pressure ulcers risk
Pre-discharge	▪ Contact within 48 hours with pre-discharge patients
Nephritic colic	▪ Proper treatment of nephritic colic
Prostate cancer	▪ Avoid improper use of PSA

A visual representation of the quality of care indicators is shown in the next figure.

Figure 2. Quality of care dashboard



Besides EQA, primary care professionals have access to other indicators related to the quality of prescription. The Standard for Quality of Pharmaceutical prescription (EQPF) consists of 26 indicators for family doctors encompassing prescription of antihypertensive, oral antidiabetics, prostate benign hyperplasia, urinary antispasmodics, antiulcer, no steroids anti-inflammatory for musculoskeletal pathology, osteoporosis, antibiotics, lipid-lowering, medicines for respiratory diseases (COPD and asthma), antidepressants, and hypnotic anxiolytics. Since 2020, nurses can officially prescribe [], so it is expected to enlarge this monitoring tool with indicators related to nurse prescription.

Midwives have also specific indicators for their activity. [List indicators included in EQA]

All indicators in EQA appeal to nurses, but some are over their responsibility

Domiciliària (EQA)

Patient safety

Two systems are used to ensure patient safety at community care level: a registry of patient safety incidences (PTSP Cloud) and proactive patient safety checklist (PROSP) that includes quality indicators related to blood extraction, cold-chain management for vaccines and procedures at nursing homes.

Contracte de gestió: cartera adicional (prick test alergia)

Through DBSforms, clinicians and managers can query SISAP's data base to obtain responses to very specific questions about their patients. For instance, they can list how many patients that receive regularly home visits are taking antihypertensive medication.

DBSforms: SISAP

- Pacientes domiciliara que toma antihipertensivos (p.ej.)
- Vacunación antineumocócica para acogerse a la subvención

<https://www.ics.gencat.cat/3clics/main.php>

4.4. Health workforce: planning, incentives and satisfaction

Primary health care managers are responsible for substituting health professionals when they are in annual or sick leave. They use a software for human resources management that provides budget execution follow-up and leaves management.

Annual incentives are agreed between health professionals and the director of the team.

DPO-CP (FDRAC)

DPO incentivo a ser referente

40% gerencial (acord de gestió)

60% 3 o 4 objetivos + referente

QVP-35: cada dos años + evaluación de la dirección cada dos años

Resolución: KALIX

- Derivaciones (TIBIDABO)
- BASIQ: tecnicos de salut BCN
- Actividad administrativa (GISVERD)
- NERUDA : referentes de patologias
- EQD: qualitat diagnostica, mejora de la detección y por tanto mejora de los indicadores EQA
- Derivaciones adecuadas, peticiones analíticas

4.5. Patient satisfaction

PLAENSA i seguiment de reclamacions

V. CONCLUSIONS AND RECOMMENDATIONS

Annex 0. Outline

The aim of selected case studies is to provide evidence of existing monitoring tools applied to the field of community health. A practical approach is followed to showcase monitoring tools applied and used in selected countries or regions.

We propose that each case study will be structured in five blocks that covers policies and instruments from a health system perspective to individual incentives to improve community health.

Block	Description
1. Context	Describes the country context (like we did in the previous case studies, focusing on M&E instruments)
2. Health priorities planning	This block describes how the country or region sets health priorities in multi-annual health plans that are related to community health action. What we can highlight is the alignment of health planning with policies and interventions at community level.
3. Population health monitoring	The focus of this section is population health and the instruments used to measure health needs. We include here tools like population risk stratification and how they are built and deployed.
4. Activity monitoring	This section deals with community health activity monitoring at national and local level. By activity, we refer to stratification of interventions by complexity (complexity of the care plan), and relative outputs ("what do they do") like the number of interventions and campaigns, but also the volume by type of activity (e.g., home visits, counselling sessions) and target groups (e.g., people living alone)
5. Quality and performance monitoring (indicators)	Unlike the previous block, this section focuses on the outcomes of community health activities ("what do they achieve"). Quality and performance include community and individual health indicators like the

	percentage of diabetic patients with glycaemic levels under control.
6. Personnel monitoring	This section monitors the number and type of health professionals involved in the delivery of care plans. Involvement of patients' organizations/volunteers if any.
7. Incentives to good performance (to be removed from here and moved to the Recommendations)	This recommendation deals with the incentives that the system introduces to community health centres and community health professionals that are based on the use of activity, quality and performance monitoring tools described above. Incentives can be financial or non-financial.
8. Patients' satisfaction	Feedback on the improvement of patients/citizens quality of life and on their perceptions about the delivery of care received
9. Health workforce satisfaction	Feedback on personnel satisfaction about working context, organization quality of life at work, workload, general feeling about the innovative approach, usefulness of available tools (ICT, protocols, health pathways remote monitoring device, etc).
10. Conclusions and recommendations	Focus on the weak points as described in the case studies and proposals to improve the M&E system.