Macro-level support to innovation in frontline teams: the case of the Basque Country
4th March 2011

O+berri
Basque Institute for Healthcare Innovation

Support to the Microsystems from the Macro-level

Macro-organizational support to Microsystems, among 9 success characteristics of 20 high-performing Microsystems

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1. O+Berri: Who we are
O+Berri, the Basque Institute for Healthcare Innovation

- O+Berri belongs to a public foundation fully financed by the Department of Health and Consumer Affairs of the Basque Government.
- O+Berri promotes organisational innovation within the public Basque Health Service, as a means to achieving excellence.
- Basque Health Service: 23,800 employees.
- O+Berri’s team:
  1 director + 1 secretary + 7 researchers/consultants + 1 statistician + 1 communications officer

O+Berri’s GRIAL (grail) innovation model
2. The Basque Health System
Basque Health System: Which population it serves?

**POPULATION (2009): 2,178,339 inhabitants**
- ≥65 years (2009): 18.8%
- Total fertility rate (2009): 1.32
- Old-age dependency ratio (2011): 29.9

Source: INE

**Life expectancy at birth (2009)**
- 78.5 for men
- 85.2 for women

Source: INE
Spanish Health System

- Beveridge type
- Universal access
- Free health services at the time of use
- Financed through taxes
- **Competence for organisation at regional level (Basque Government)**
  - In the Basque case, public provision of services

Spanish Health System: Distribution of competences

- **State**
  - General organisation and coordination of health matters
  - International health, and international health relations and agreements.
  - Legislation on pharmaceutical products.
- **Autonomous Communities**
  - Health Planning
  - Public Health
  - Health care
- **Provinces**
  - **Social services**
- **Municipalities**
  - Complementary public health functions linked to hygiene and the environment, and **social services**.
The Basque Country as a Regional Government holds Health Planning powers as well as the capacity to Organize its own health services (since year 1988).

### Planning/Financing/Regulation

Basque Ministry of Health (Regional Government)

### Provision of Services

Osakidetza-Basque Health Service

#### Key figures about the public Basque Health System

- **Primary Health Care**
  - 320 Health Centers distributed in 7 geographical health areas
- **Hospitals (20)**
  - 12 Acute H. (4,278 beds)
  - 4 medium and long stay H (524 beds)
- **Mental Health**
  - 4 psychiatric services in acute hospitals
  - 4 psychiatric Hospitals (777 beds)
  - Ambulatory Mental health Services (54 centers in 3 organisations, one per province)
- **Workforce (civil servants)**
  - total 23,803 (2008)

31 healthcare organisations with management autonomy
Public Basque Health System: multiple providers

- Primary Care Centres (public)
- Public hospitals
  - Private hospitals
- Pharmacy (out-of-patient)
  - Specialists
  - Emergencies
  - Acute care
  - Medium-long stay
- Mental Health Centres (public)
- Psychiatric hospitals
- Free provision of services (provider according to place of residence)
- Co-payment

Basque Health System: Public health expenditure per capita

![Graph showing health expenditure per capita from 1999 to 2009.]

Basque Country:
- 4.5% of GDP (2007)

Average OECD:
- 6.4% of GDP (2007)

* Data from the last published budget.
Basque health system v. OECD

- Acute beds: 190
- Nurses: 190
- Doctors: 190
- Discharges: 190
- Average LOS (acute): 190
- Occupancy rate: 190

Source: Eurostat 2007, OECD

Basque health system v. other EU regions

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Basque country</th>
<th>Veneto</th>
<th>Wales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of medical doctors working in public health care system per 1000 population</td>
<td>2.7</td>
<td>1.58</td>
<td>1.85</td>
</tr>
<tr>
<td>Number of nurses working in public health care system per 1000 population</td>
<td>4.16</td>
<td>5.28</td>
<td>7.2</td>
</tr>
<tr>
<td>Total number of hospital beds per 100,000 of population</td>
<td>383</td>
<td>459</td>
<td>438</td>
</tr>
<tr>
<td>Hospital discharge rate per 1000 population</td>
<td>146.7</td>
<td>117.4</td>
<td>173</td>
</tr>
<tr>
<td>Average length of hospital stay, days</td>
<td>6.29</td>
<td>8.3</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Source: Thesis by Polina Putnik, student of Reghealth master 2010, developed in O+Berri
3. History of quality management in the Basque Health Service

Experience of 15 years with the EFQM

- **1983**: Creation of the Basque Health Service
- **1992**: Creation of Department of Care Quality
- **1995**: EFQM model of excellence
- **1996**: Biannual self-evaluation with model
- **1998**: Strategic objective of the organisation
- **2000**: External evaluations

Training in EFQM and increasing number of quality technicians

Basque Foundation for Quality Promotion
Promoted by regional Department of Industry (1992)
The EFQM model

EFQM model of excellence as framework for quality improvement in the Basque Health Service

EFQM awards obtained by Basque Health Service

EUROPEAN PRIZE
1 Prize award Hospital Zumárraga
1 Finalist

12.9%
54.8%
89.7%

Q GOLDEN
Q SILVER
Excellence Compromise

(500 points)
5 hospitals
2 PC

(400 points)
7 hospitals
3 PC
4 other
Projects and tools developed

Projects developed over time:
- Training programmes on care quality
- Clinical management contracts
- Improvement of information systems technologies
- Implementation of health technology assessment systems
- Support to health care research and knowledge
- Mapping of key processes of care
- Clinical guidelines
- Standards and indicators of quality of care for some diseases
- Standardization of nursing process of care; surveillance prevention and control strategies for nosocomial infection; strategies to improve waiting lists for surgical procedures and specialized care

Tools:
- Surveys for patient
- Surveys on motivation and people satisfaction in healthcare organizations
- Development of indicators and standards of patients safety, effectiveness and accessibility

Source: Sánchez et al. (2006) in International Journal for Quality in Health Care
4. The need for a new organisational paradigm

Challenges of the Basque Healthcare System

- Demographic and epidemiological changing environment
  ageing of population, lifestyles

- Sustainability of Basque healthcare system
  economic crisis, ageing, expensive new technologies
Evolution of prevalence of diabetes and cardiovascular diseases in the Basque Country

Evolution people with chronic illnesses by age
Distribution of population over 65 by number of chronic illnesses, 2007

Approximately, the 77% of the population 65+ has at least one CD

Most prevalent chronic illnesses/risk factors (patients 18+)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Patients</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High blood pressure</td>
<td>172,820</td>
<td>10,33%</td>
</tr>
<tr>
<td>Hypercholesterolemia</td>
<td>117,200</td>
<td>7,01%</td>
</tr>
<tr>
<td>Osteoarticular Pathology</td>
<td>74,402</td>
<td>4,45%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>71,556</td>
<td>4,26%</td>
</tr>
<tr>
<td>Asthma</td>
<td>34,154</td>
<td>2,04%</td>
</tr>
<tr>
<td>Cardiovascular illnesses</td>
<td>33,246</td>
<td>1,99%</td>
</tr>
<tr>
<td>Obesity</td>
<td>18,469</td>
<td>1,10%</td>
</tr>
<tr>
<td>Neurodegenerative dementias</td>
<td>23,153</td>
<td>1,38%</td>
</tr>
<tr>
<td>Chronic Obstructive Pulmonary Disease</td>
<td>22,995</td>
<td>1,37%</td>
</tr>
</tbody>
</table>
Burden of Chronic Disease

59%  66%  86%

Source: WHO Report 2004

What does it imply for the healthcare system?

✓ 80% of interactions with healthcare system
✓ ...By 2020, responsible for 3 of each 4 deaths

...more than the 77% of healthcare expenditure
Which healthcare model are we offering?

- The basic characteristic of the current care model is that it is reactive.
- Patients have an episodic relationship with the health system.
- The current system is designed and structured to comply with an epidemiological pattern characterized by acute conditions which does not correspond with today’s needs.
- Furthermore, there is a lack of integration of services within the health system and with other social resources.

...There is an urgent need to respond to the needs of this increasing group of patients in a different way; in a more integrated way...

Differential factors interventions chronic patients

- Require a coordinated approach from all levels of care (primary, specialised, medium stay, mental health, emergencies, social services, health at work, etc.), and a continuum of care with a focus on the individual patient.
- The patient and the carer play an important role in the successful outcome of the intervention with the need to change life styles and adhere to these over long periods.
- Not only medical, but also social, emotional and material needs of the patient are to be considered.
- Preventive (primary and secondary), rehabilitative and palliative interventions become fundamental.
Our health system does not fit!

Need for a new organisational paradigm

Chronic care – a new approach is advocated

TRADITIONAL MODEL

Sickness Care Model
Physician Centric

CHRONIC CARE MODEL

• Care is Proactive
• Care delivered by a health care team
• Care integrated across time, place and conditions
• Care delivered in group appointments, nurse clinics, telephone, internet, e-mail, remote care technology.
• Self-management support responsibility and integral part of the delivery system
Which way?

A new paradigm is needed with less emphasis on acute and episodic care.

We know where to go: models of chronic care offer us the guide.

What have we learnt from others?
Ed Wagner’s CCM: A framework for change
Evidence on effectiveness of CCM

There is evidence of positive impact of using one or several components of the CCM on processes of care, clinical outcomes and use of resources. But it varies depending on intervention, condition and implementation context (Tsai et al. (2005) and Bodenheimer (2009)).

There is no evidence that all components of the model are essential for improvement in care to chronic patients (NHS Institute for Innovation and Improvement (2006)).

Evidence suggests that it is the accumulative effect of different elements of the CCM, rather than each element on its own, what explains its impact (Ham (2009)).

WHO’s Innovative Care for Chronic Conditions (ICCC) Framework

Guiding principles of the ICCC model

• Evidence-based decision making.
• Population health approach.
• Focus on prevention.
• Emphasis on the quality of care and systemic quality.
• Flexibility/adaptability.
• Integration as a core and fractal of the model.

Population management/stratification:
The Kaiser Permanente Pyramid

Extended Kaiser Pyramid

- Level 1: 70-80% of people with long term conditions
  - Supported Self care
- Level 2: Higher risk cases (15%)
  - Disease or Care Management
- Level 3: Complex cases with co-morbidities (3-5%)
  - Case Management

Health promotion and prevention

General population
Characteristics of high performing chronic care systems

C. Ham (2010)

1. Universal coverage
2. Care that is free at the point of use
3. A delivery system focused on prevention
4. Support for patients, carers and families to self-manage their conditions
5. Priority for primary care
6. Population management is emphasised
7. Care should be integrated
8. IT should underpin the provision of chronic care
9. Care should be effectively coordinated
10. These ten characteristics should be linked into a coherent whole

What we learnt from literature and experiences elsewhere

Effective interventions exist
greatest impact when implemented in COMBINATION
need to be adapted to LOCAL CONTEXT
5. Our way forward: a strategy at macro-level

The vision for change in the Basque Country

Framework for transformation of the Basque Health System at medium term

Through organisational innovation

An opportunity for improvement in quality and sustainability of whole system

2-5 years

A Strategy for Tackling the Challenge of Chronicity in the Basque Country (July 2010)
Keeping the population in the radar

5 Policies

I. Focus on stratified population health

II. Promotion and Prevention of chronic illnesses

III. Responsibility and autonomy for patients

IV. Continuous care for the chronic patient

V. Efficient interventions adapted to the patient’s needs
Implementation process

**Strategic direction**

**TOP-DOWN**
- from strategic direction
  - Economies of scale
  - Extension of successful local innovations
  - Signals common direction and priorities

**BOTTOM-UP**
- from health professionals
  - Makes use of local leadership
  - Adapted to local context
  - Accepted by clinicians

**Clinical practice**

Implementation through 14 strategic projects

**Strategic projects**

- **Population Focus**
  - 1. Stratification and targeting of the population

- **Prevention and Promotion**
  - 2. Interventions aimed at the principal risk factors

- **Patient Responsibility and Autonomy**
  - 3. Self care and patient education: Active Patient
  - 4. Setting up a network of activated patients, connected through Web 2.0 by the patients associations

- **Continuity of care**
  - 5. Unified Medical Record
  - 6. Integrated care
  - 7. Development of sub-acute hospitals
  - 8. Advanced nursing competences
  - 9. Socio-health Collaboration
  - 10. Financing and contracting

- **Interventions adapted to patients needs**
  - 11. Multi-channel centre
  - 12. e-prescription
  - 13. Chronic illness research centre

14. Innovation by the health professionals
Expected results

**Visión**

- Better health results
- Greater satisfaction and quality of life
- Efficient use of resources
- Prevention of chronicity and its progress
- More time for tasks of higher added value
- Less routine tasks

**Implementation gears**

- Innovation by health professionals
- Investment in IT
- Leadership development
- Alliances
- Financing mechanisms of providers
- Investing in research on health services
6. The pillar of change: innovation by health professionals

**Bottom-up innovation:**
*an evidence-based process*

- Action-research projects from health professionals
- Mechanisms of identification, finance and support
- Follow up and evaluation
- Assessment for scaling up

*Work in progress*
*Process under test*
Edalia - capacity building on action-research

EDALIA: Team for the support of action-research.
- Multidisciplinary
- Trained quality experts and researchers

Action research: collaborative and participatory research methods that integrates research and action, with the aim of achieving improvements to be implemented in the health system though a cyclical process of continuing learning.

Characteristics of projects supported by EDALIA:
- Aligned with chronicity strategy
- Action-research project to be piloted in Basque healthcare system
- Originated from health professionals (clinicians and managers)
- Require methodological or organisational support in order to be successful

Functions of EDALIA team

✓ Identification and promotion of themes and clinical groups for development of action research on healthcare services

✓ Support of action-research projects
  ✓ Improve design and launching of initiatives by health professionals
  ✓ Guarantee assessment and production of evidence with a research perspective
  ✓ Assess reach and potential for extension of initiatives
  ✓ Disseminate best practices through the Basque health system
  Through:
  - Methodological support
  - Economical evaluation
  - Contact and with management in healthcare organisations
  - Ensure coherence with financing mechanisms

✓ Strengthen capacity of healthcare organizations in the system on organizational innovation
Identification and follow up of bottom-up innovation projects

Identification
- Quality support staff
- Contracting process (within financing process of providers)
- Action-research grants (annual call from regional Health Ministry)

73 projects identified in 2010
7 months to 3 years
Maximum budget per project 170,000 € (average annual budget 36,500 €)

Follow up
- Project assessment:
  - Launching of project
  - Every 6 months
  - Closure
- Evaluation committee: assessment of potential for extension to the whole system:
  - Team responsible for implementation of Chronicity Strategy within Basque Health Service
  - O+Berri, Basque Institute for Healthcare Innovation
  - To meet at least once per year
  - Recommendations to be forwarded to Ministry of Health and top management of Basque Health Service

Others actions to support innovation projects by frontline teams

Training on IHI’s Collaborative Model for Improvement to 25 Basque health professionals

First improvement collaborative project to start in 2011 in COPD
Others actions to support innovation projects by frontline teams

- Visits of Basque Health Minister to healthcare organisations (hospitals and primary healthcare areas) to promote and learn at first hand about innovation projects being developed in the field.

- Regular follow up meetings between health minister, top managers of health Ministry and health Service with leaders on strategic innovation projects within Basque Strategy for Chronicity

- Training on leadership development

Hobe-bi: An example in a primary healthcare province

Innovation structure of the primary healthcare area of the province of Bizkaia, for the identification, definition and development of innovative ideas with potential to generate changes in healthcare.

Based on pre-existing web-based social network for sharing knowledge, information and ideas among primary healthcare professionals in the province.

Social network

- **Knowledge Group**: Promotes generation and definition of ideas through social network.
- **Innovation Group**: Manages and decides on actions about the innovation process.
- **Project Group**: At demand of the innovation group, it names the technical team in charge of feasibility study on an idea.
- **Development Group**: Implements/tests an idea.
Others actions to support innovation projects by frontline teams

*Inspiration forum: An example in a primary healthcare area*

Exchange of ideas and information in a primary care area (1,014 health professionals)

*From top-down quality improvement to bottom-up clinical innovation*

*The experience in the Basque Health System*
III Spanish Conference on Care for Chronic Patients

19-20 May 2011
San Sebastian
Information: http://cronicidad.euskadi.net/

International speakers at III Spanish Conference on Care for Chronic Patients

Jörgen Tholstrup
Jonköping Council
Sweden
Clinical Microsystems

Thomas Bodenheimer
University of California
US
Care management

Geraint Lewis
Nuffield Trust
UK
Stratification models

Xiao Shaobo
Beijing Institute of Technology
China
eHealth

Laura Adams
Rhode Island Quality Institute
US
Health information

Harvey Skinner
York University
Canada
Health promotion and ICT

Alex Jadad
Centre for Global eHealth Innovation
Canada
eHealth, EBM
Additional information

“A Strategy for Tackling the Challenge of Chronicity in the Basque Country”
http://cronicidad.euskadi.net

Webpage of O+Berri:
http://oberri.bioef.org/

E-mail:
regina@bioef.org

THANKS FOR YOUR ATTENTION