



Measuring Avoidable Variation Following the patient Care Path. The Italian Experience

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First of all...

Thanks to WIC!!!



What have we learned about variation in healthcare? ...

The starting point...

3 main categories of geographic variation determinants:

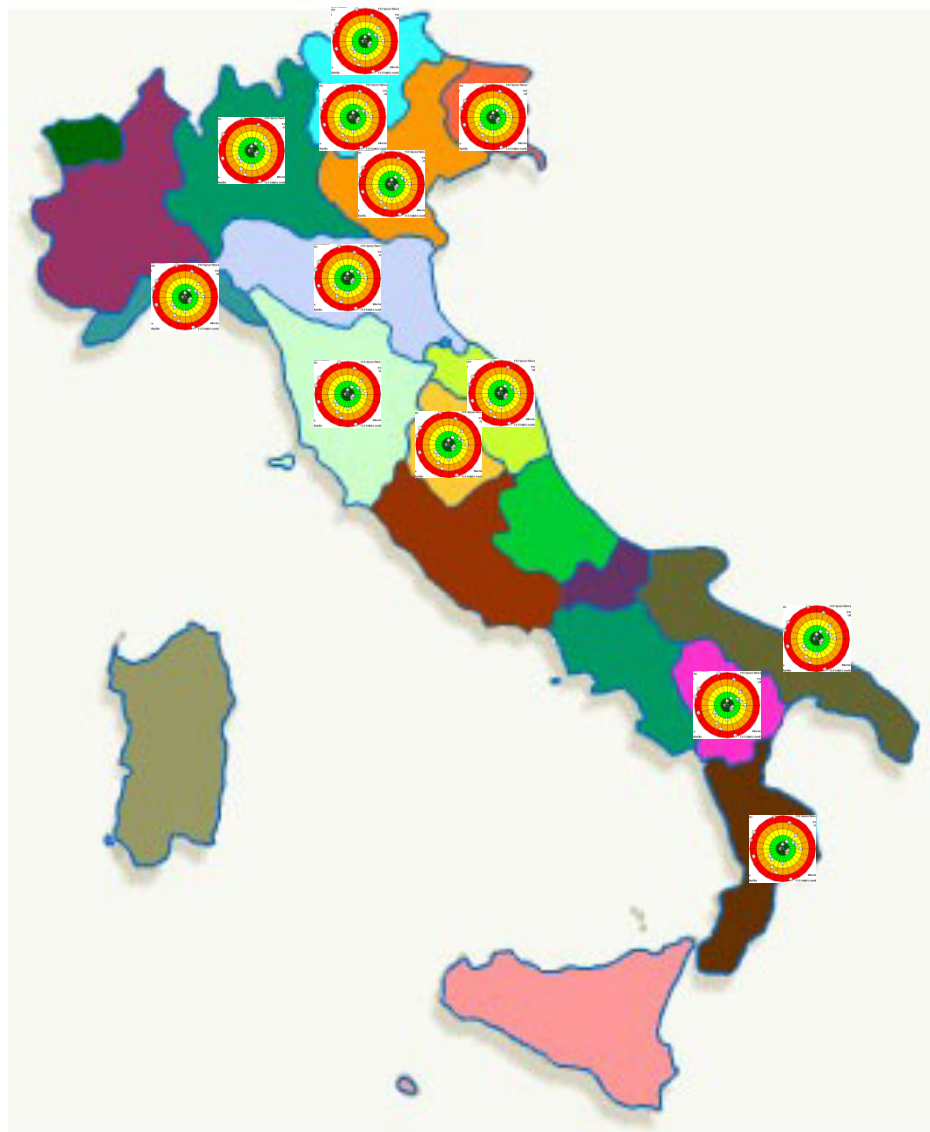
- effective care,
- supply-sensitive care,
- preference-sensitive care

Categories of variation in medical care		Suggested actions
Effective Care	Refers to services of proven values and without significant trade-offs: the benefits of these services outweigh the risks	Reduction
Supply-sensitive care	Represents service for which human and the availability of technical resources (e.g. physicians, hospital beds) strongly influence the amount of care delivered	Reduction
Preference-sensitive care	Comprises care for conditions that have more than one treatment option, each with its own benefits and trade-offs	Follow patient preferences

See Wennberg & Gittelsohn 1973, Wennberg 1999, Wennberg et al. 2002

Since 2008 Regions involved in the Sant'Anna network sharing the performance evaluation system:

- Veneto
- Toscana
- Liguria
- Umbria
- PA Trento
- PA Bolzano
- Marche
- Basilicata
- Emilia Romagna
- Friuli Venezia Giulia
- Lombardia
- Puglia
- Calabria



<http://performance.sssup.it/network>

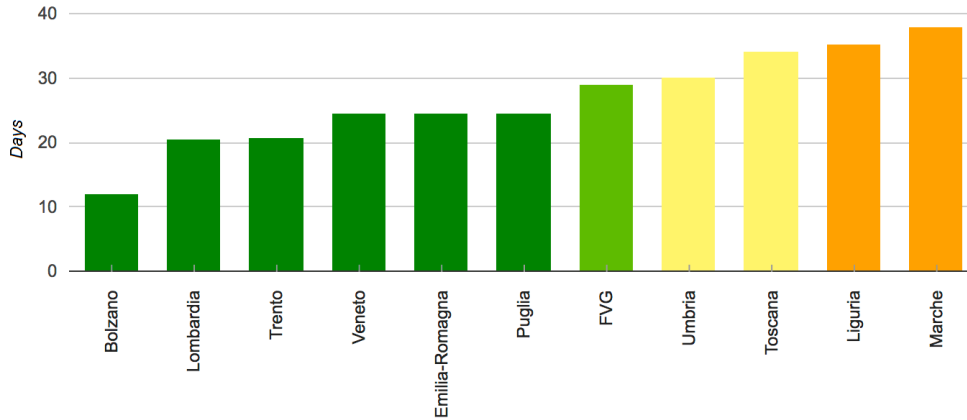
The PES system adopted by the network of the Italian regions...

- ***multidimensional***
- ***evidence-based data***
- ***systematic benchmarking***
- ***transparent disclosure***
- ***timely based***

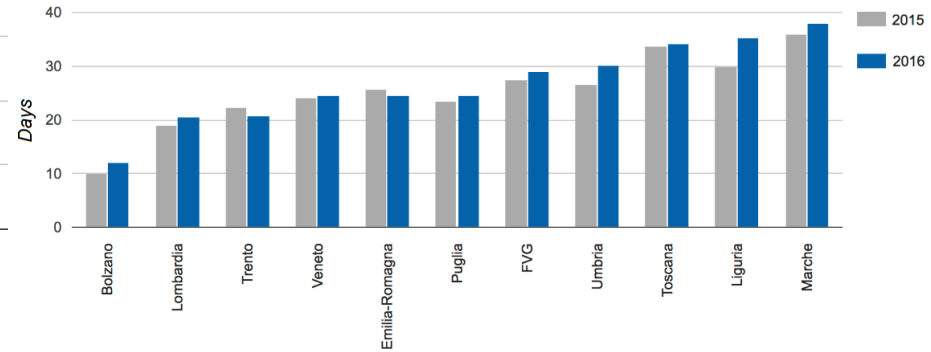
It works when is linked to health professionals engagement...

The PES system

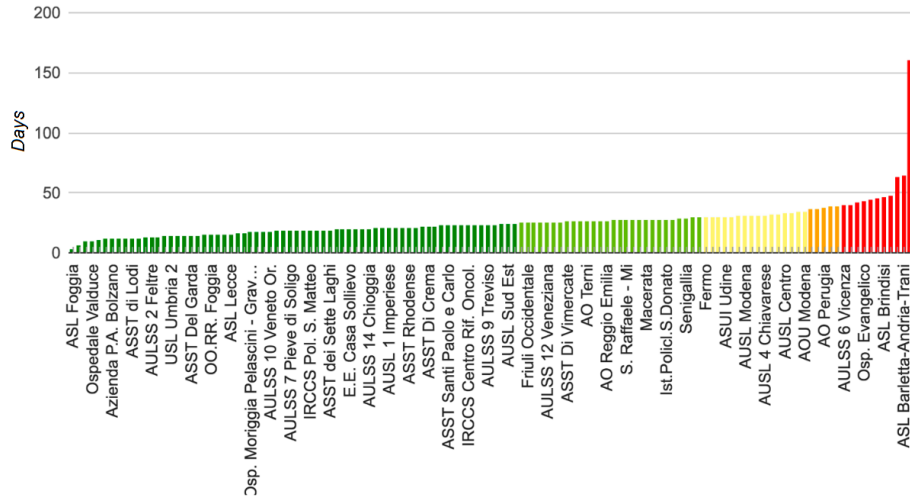
C10.4.1 Average waiting before surgery for breast cancer - 2016



C10.4.1 Average waiting before surgery for breast cancer - 2016



C10.4.1 Average waiting before surgery for breast cancer - 2016

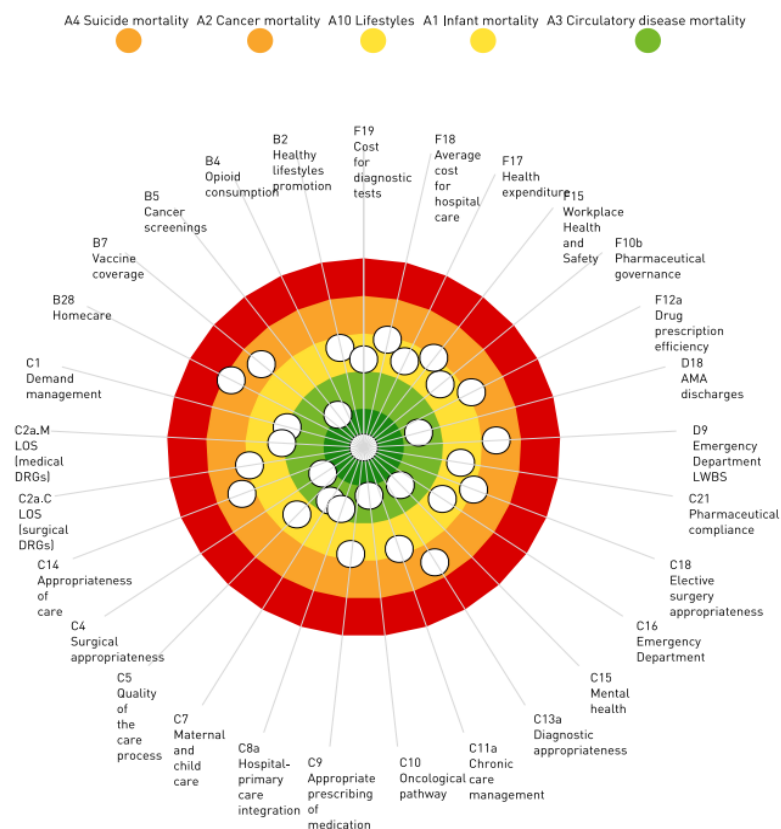


The PES system

Region level

Friuli Venezia Giulia

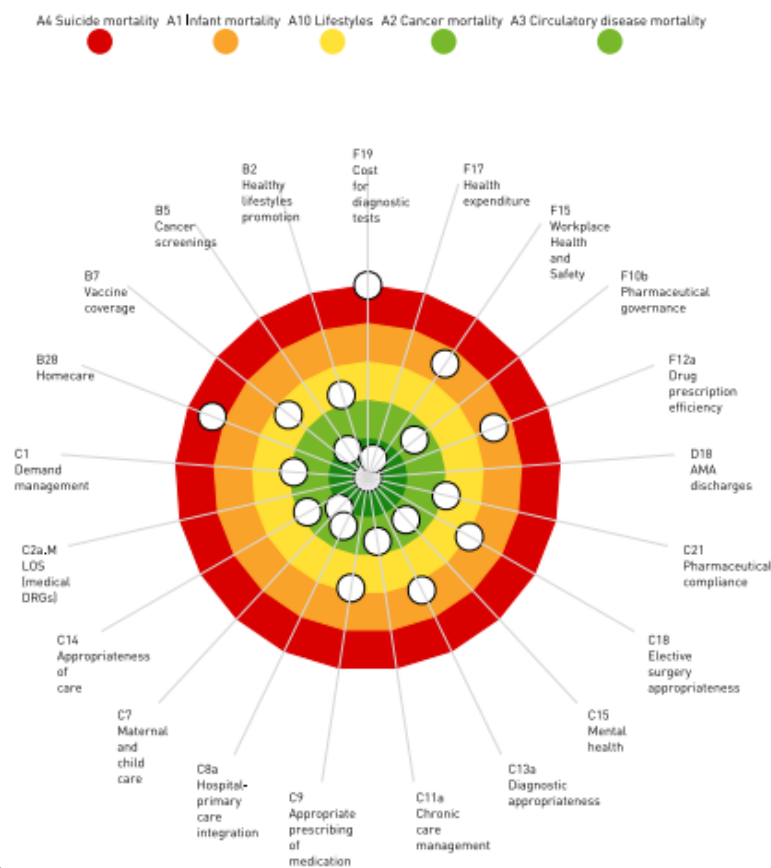
Population's health - 2010-2012



Local authority level

ASS6 Friuli Occidentale

Population's health - 2010-2012





Lessons learned...

To include variation management in the regional governance systems...



1. Introduction

Geographic variation in health care among both large (countries and regions) and small areas (hospital service areas) has been extensively confirmed and found to occur across all dimensions of performance, including quality, access, utilization and health behavior. Moreover, it has been found to be common across different healthcare systems and, in general, to have a relevant impact on the wealth of nations and the health of their populations [1–3].

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Strategies and Tools to Manage Variation in Regional Governance Systems

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Abstract

The recent economic crisis has led to concerns about healthcare on two fronts: financial austerity may lead to increasing health disparities related to socioeconomic status, and the economic crisis has obliged decision-makers to contain costs. For both reasons, the issue of practice variation deserves attention.

In most countries, the global financial crisis has contributed to reduced resources and cost containment for healthcare. This situation has forced policy-makers and managers to implement various efficiency controls, in the hopes of providing the same level of quality of health service at lower cost. At the same time, decision-makers are faced with the risk that financial austerity may lead to decreased health and increased health disparities among residents based on their socioeconomic status or place of residence. For both these reasons, central and local governments have needed to adopt managerial tools capable of supporting decision-making processes, including the management of medical practice variations. Different management tools have been developed to respond to the four categories of variations, that is, variations in evidence-based care, setting-sensitive care, preference-sensitive care, and supply-sensitive care.

Evidence-based medicine (EBM) standards, such as those adopted by the Tuscany performance evaluation system, may be appropriate tools for managing performance and reducing unwarranted variation in both evidence-based and setting-sensitive care. In these cases, financial incentives may help to reinforce the performance evaluation system. However, other kinds of mechanisms are required to manage variation in preference-sensitive and supply-sensitive care. In these situations, intrinsic incentives such as reports or direct feedback as opposed to financial incentives may serve to align the goals of providers with those of health authorities.

Introduction

Unwarranted variation is defined as medical practice variations across regions, hospitals, or physicians that are not explained by illness, patient risk factors, or patient preferences. Reduction in unwarranted variation in health services can be achieved both through strategies to reduce overuse, underuse, and misuse and occasionally through cost containment measures. Reducing variation holds the promise not only of reducing costs, an issue that has become increasingly important due to the financial crisis, but also of leading to better quality care.

This chapter aims to identify and provide insights into the tools that may best support the management of medical practice variations, with the goal of decreasing unwarranted variation. It is informed by research conducted by the Dartmouth Institute for Health Policy and Clinical Practice, which identified three categories of services that exhibit unwarranted variation (Wennberg et al. 2002): effective care (variation in adherence to evidence-based medicine); preference-sensitive care (variation associated with patients' own preferences); and supply-sensitive care (variations where the regional supply of a resource has a major influence on regional utilization rates in the absence of evidence for additional services).

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To consider regional variation in the planning phase...

Priorities and targets: supporting target-setting in healthcare

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Management by objectives requires selecting the appropriate number of indicators to measure objectives and then defining high-priority indicators. Failing to address these two issues often results in the so-called 'performance paradox'. This paper describes an algorithm applied in the healthcare sector in the Italian regions. The resulting performance evaluation system is able to detect priority indicators in the target-setting phase, improving management and saving costs.

Keywords: Healthcare; management by objective; performance evaluation; performance paradox; priority-setting.

Governance based on planning and control systems with performance indicators (PIs) and targets is a form of indirect control that is widely deemed necessary to administer any complex system (Beer, 1966; Pollitt, 1986; Carter *et al.*, 1992; Bird *et al.*, 2005). However, managing by objectives requires tackling at least two issues:

- Defining the appropriate number of indicators.
- Choosing a rigorous principle to define which indicators should be considered as high priorities.

Regarding the first point, the process of governance by PIs and targets relies on a set of measures representing social complex phenomena. This translation process—from social phenomena to quantitative measures—requires careful design. Only a part of the phenomena can be represented by quantitative figures, because indicators portray the 'measurable' part of the observed object. In addition, the measurement process has different degrees of accuracy. Inaccuracy in the measurement process may bring about false positives and false negatives.

The process of governance by PIs and targets relies on the assumption that available indicators are both representative and accurate. The so-called 'synecdoche' principle assumes that the measurable part will satisfy both these conditions, by accurately representing the whole object (Carter *et al.*, 1992). However, measurement systems almost never comply with the 'synecdoche' principle, because the set of selected indicators is rarely able to portray the complexity of the evaluated processes (Bevan and Hood, 2006) and may cause

distortions and stimulate undesired behaviours on the part of the agents who are controlled by the system.

Studies on the distorting effects of control systems are extensive (Birnberg *et al.*, 1983; Briers and Hirst, 1990; Le Grand and Bartlett, 1993). The basic point is that, in order to make the planning and control scheme meaningful, the measures used should be consistent with the performance targets (which should, in turn, be representations of organizational objectives) so that the behavioural responses of the agents are matched to the requirements of the principal (Smith, 1995). The selection of the indicators and the consequent target-setting phase are therefore crucial, since they can potentially generate incoherent behaviours in the system and lead the organizations towards undesired goals (Bubbio, 1988; Ferreira and Oxley, 2009; Locke and Latham, 2013).

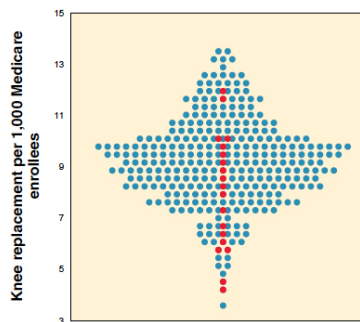
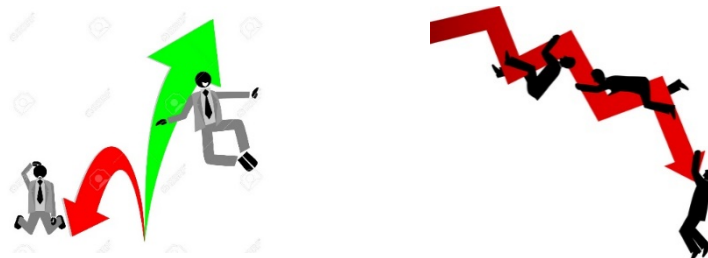
Since the 1950s, scholars have been studying the dysfunctional consequences of measurement; many of them have looked at 'output distortions', i.e. the attempts to achieve single targets at the cost of significant but unmeasured aspects of performance (Nove, 1958; Ridgway, 1956; Miller, 1993; Kornai, 1994; Smith, 1995; Heinrich, 2002; Hood, 2002; Propper and Wilson, 2003; Bird *et al.*, 2005; Bevan and Hood, 2006).

In 1991, Bouckaert and Balk described '13 diseases' of public productivity measurement, which resulted from wrong assumptions and problems concerning the content, position and amount of measures (Bouckaert and Balk, 1991). Similarly, Smith wrote about eight potential and unintended behavioural consequences of performance data use (Smith, 1995). These problems are all the result of ignoring the 'synecdoche' principle, which causes an

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Which results have been achieved?...



QUALITY OF CARE

SUSTAINABILITY

EQUITY



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Making governance work in the health care sector: evidence from a 'natural experiment' in Italy

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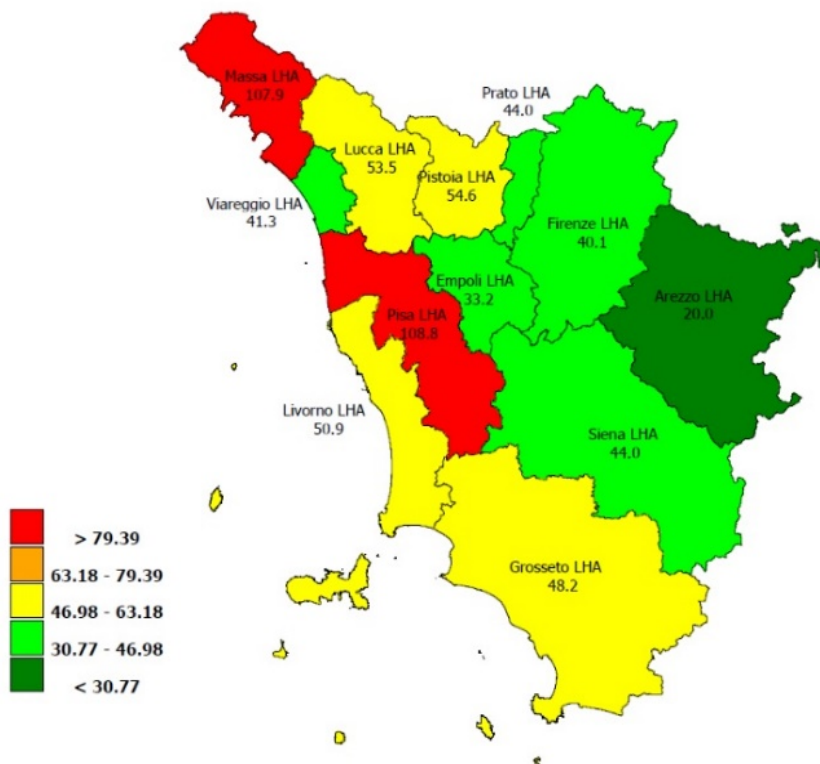
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But to improve quality of care and create value for patients we need to work on the determinants...

Diabetes-Related Major Amputation at lower limbs Rate per million residents – MeS-Lab Tuscany PES
results, 2012. Source: MeS-Lab

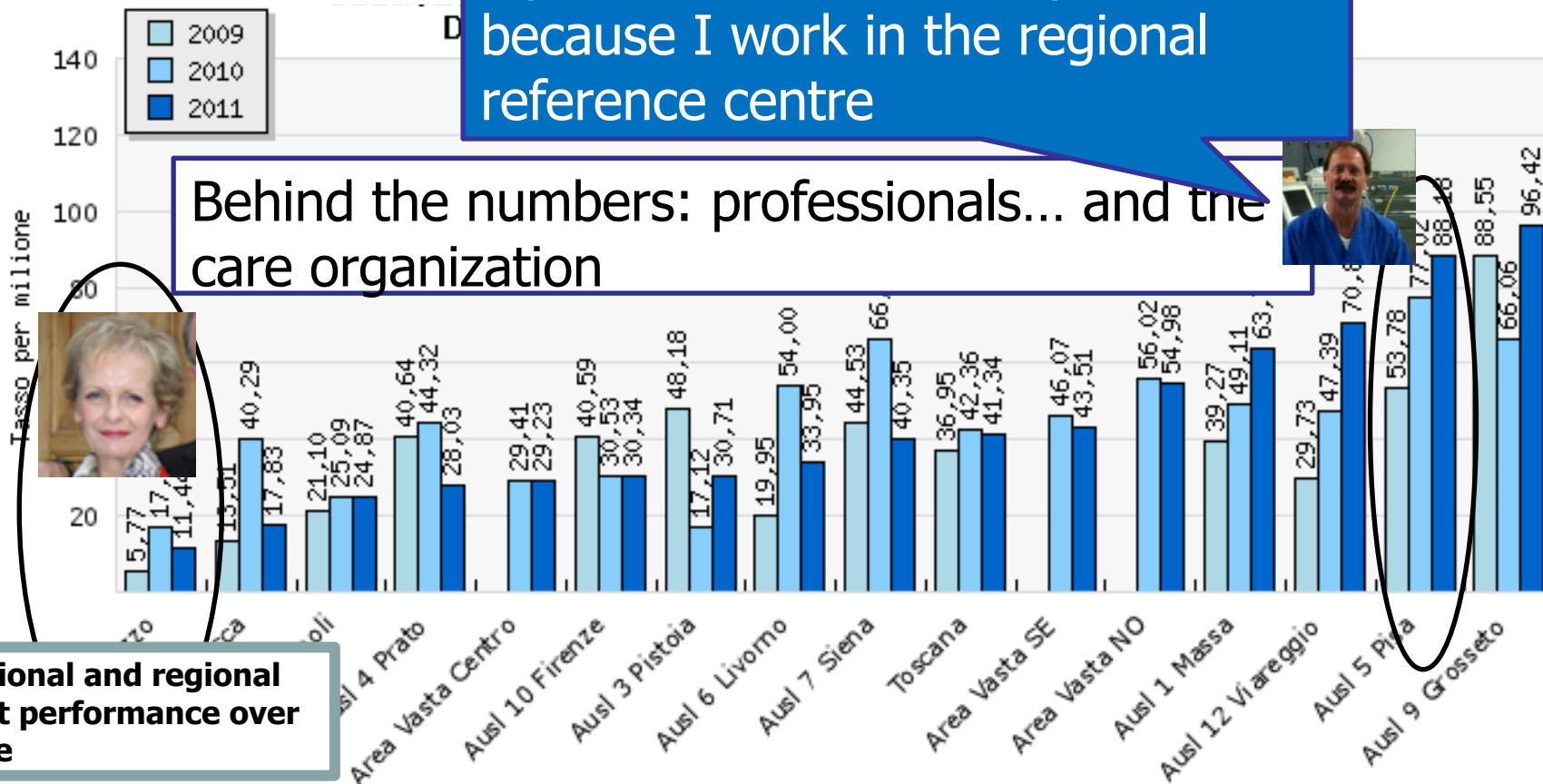
Diabetes-Related Major Amputation at lower limbs rate per milion residents - Tuscany LHAs
PES results 2012



Major diabetes-related major amputation rate per million residents in Tuscan Local Health Authorities (LHAs), 2009-2011.

My cases are more complex because I work in the regional reference centre

Behind the numbers: professionals... and the care organization



National and regional best performance over time

Differences could not be fully explained by the diabetes prevalence across LHAs

But sometimes outcome unwarranted variation is determined by the absence of integrated care...



Nuti, S et al 2016 Bridging the Gap between Theory and Practice in Integrated Care: The Case of the Diabetic Foot Pathway in Tuscany. *International Journal of Integrated Care*, X(X): X, pp.1-14, DOI: <http://dx.doi.org/10.5334/ijic.1991>

RESEARCH AND THEORY

Bridging the Gap between Theory and Practice in Integrated Care: The Case of the Diabetic Foot Pathway in Tuscany

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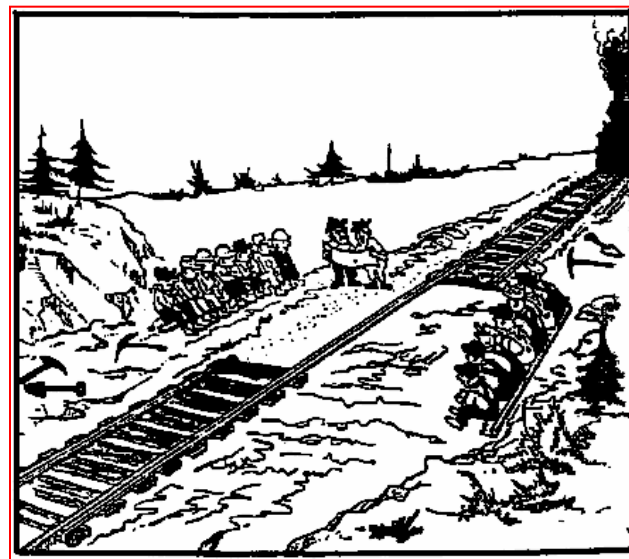
Introduction and Background: As diabetic foot (DF) care benefits from integration, monitoring geographic variations in lower limb Major Amputation rate enables to highlight potential lack of Integrated Care. In Tuscany (Italy), these DF outcomes were good on average but they varied within the region. In order to stimulate an improvement process towards integration, the project aimed to shift health professionals' focus on the geographic variation issue, promote the Population Medicine approach, and engage professionals in a community of practice.

Method: Three strategies were thus carried out: the use of a transparent performance evaluation system based on benchmarking; the use of patient stories and benchmarking analyses on outcomes, service utilization and costs that cross-checked delivery- and population-based perspectives; the establishment of a stable community of professionals to discuss data and practices.

Results: The project enabled professionals to shift their focus on geographic variation and to a joint accountability on outcomes and costs for the entire patient pathways. Organizational best practices and gaps in integration were identified and improvement actions towards Integrated Care were implemented.

Conclusion and Discussion: For the specific category of care pathways whose geographic variation is related to a lack of Integrated Care, a comprehensive strategy to improve outcomes and reduce equity gaps by diffusing integration should be carried out.

Keywords: diabetes; diabetic foot; geographic variation; performance evaluation; benchmarking; sentinel events; engagement



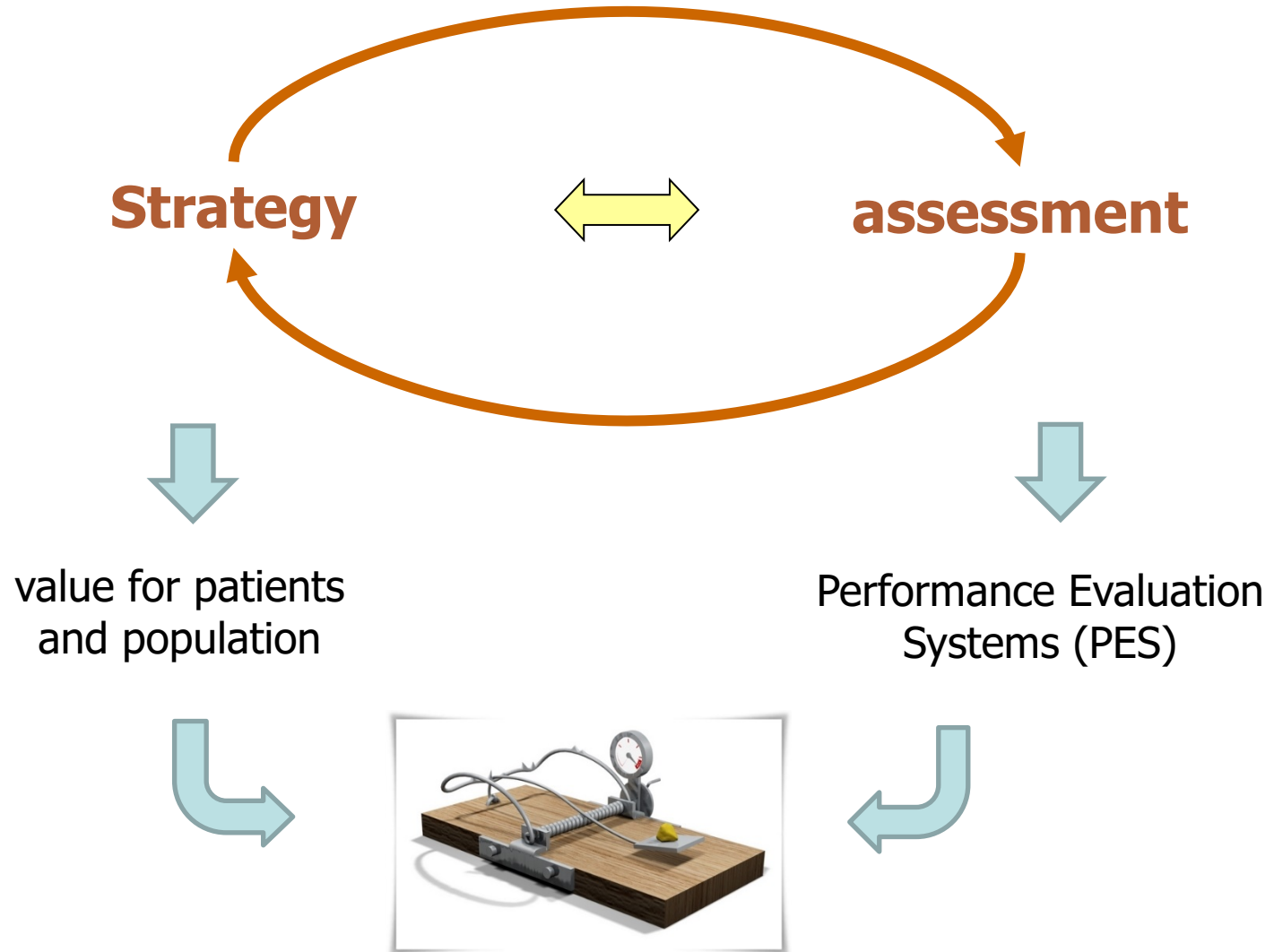
Nuti et al: Bridging the Gap between Theory and Practice in Integrated Care

2016

Categories of variation in medical care		Actions
Effective Care of an individual service or procedure (e.g. minimal volumes for specific surgical procedures to ensure patients' safety and better outcomes)	Refers to services of proven values and without significant tradeoffs: the benefits of these services outweigh the risks	Reduction
Effective care of an Integrated Care pathway	Refers to services whose variation is due to a lack of integration through the entire care pathway	Reduction
Supply-sensitive care	Represents service for which human and the availability of technical resources (e.g. physicians, hospital beds) strongly influence the amount of care delivered	Reduction
Preference-sensitive care	Comprises care for conditions that have more than one treatment option, each with its own benefits and tradeoffs	Follow patient preferences

Table 2: The determinants of geographic variation [adapted from 17–24, 68].

The impact on the performance evaluation system...



PARADIGM SHIFTS

20th century

The effectiveness and evidence-based paradigm

Provide care that meets patients' needs and is based on the best scientific knowledge, that is evidence from the study of groups/samples of patients (randomized controlled trials) or from the systematic review of randomized controlled trials

The quality and safety paradigm

Clinicians can know if they were practicing well and safely, by **comparing their work with performance standards** derived from the analysis of services provided to a larger number of patients than any single clinician could see.

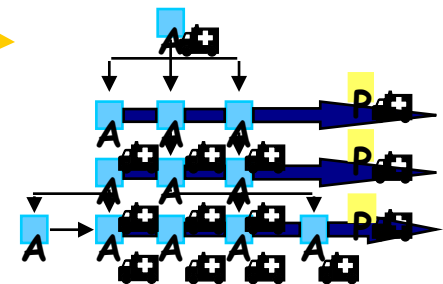
The value paradigm

Value is defined around the **patient**, and the aim is **to increase value for individuals/population by allocating and using resources to maximize benefit and minimize harm and waste** (anything that does not add value to the outcome).

TITOLO diagramma

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graph TD; Direzione[Direzione] --> N1[ ]; Direzione --> N2[ ]; N1 --> N1_1[ ]; N1 --> N1_2[ ]; N2 --> N2_1[ ]; N1_1 --> N1_1_1[ ]; N1_1 --> N1_1_2[ ]; N1_2 --> N1_2_1[ ]; N1_2 --> N1_2_2[ ]; N2_1 --> N2_1_1[ ]; N2_1 --> N2_1_2[ ]; N2_1_1 --> N2_1_1_1[ ]; N2_1_1 --> N2_1_1_2[ ]; N2_1_2 --> N2_1_2_1[ ]; N2_1_2 --> N2_1_2_2[ ]; N2_1_1_1 --> N2_1_1_1_1[ ]; N2_1_1_1 --> N2_1_1_1_2[ ]; N2_1_1_2 --> N2_1_1_2_1[ ]; N2_1_1_2 --> N2_1_1_2_2[ ]; N2_1_2_1 --> N2_1_2_1_1[ ]; N2_1_2_1 --> N2_1_2_1_2[ ]; N2_1_2_2 --> N2_1_2_2_1[ ]; N2_1_2_2 --> N2_1_2_2_2[ ]; N2_1_1_1_1 --> N2_1_1_1_1_1[ ]; N2_1_1_1_1 --> N2_1_1_1_1_2[ ]; N2_1_1_1_2 --> N2_1_1_1_2_1[ ]; N2_1_1_1_2 --> N2_1_1_1_2_2[ ]; N2_1_1_2_1 --> N2_1_1_2_1_1[ ]; N2_1_1_2_1 --> N2_1_1_2_1_2[ ]; N2_1_1_2_2 --> N2_1_1_2_2_1[ ]; N2_1_1_2_2 --> N2_1_1_2_2_2[ ]; N2_1_2_1_1 --> N2_1_2_1_1_1[ ]; N2_1_2_1_1 --> N2_1_2_1_1_2[ ]; N2_1_2_1_2 --> N2_1_2_1_2_1[ ]; N2_1_2_1_2 --> N2_1_2_1_2_2[ ]; N2_1_2_2_1 --> N2_1_2_2_1_1[ ]; N2_1_2_2_1 --> N2_1_2_2_1_2[ ]; N2_1_2_2_2 --> N2_1_2_2_2_1[ ]; N2_1_2_2_2 --> N2_1_2_2_2_2[ ]; N2_1_1_1_1_1 --> N2_1_1_1_1_1_1[ ]; N2_1_1_1_1_1 --> N2_1_1_1_1_1_2[ ]; N2_1_1_1_1_2 --> N2_1_1_1_1_2_1[ ]; N2_1_1_1_1_2 --> N2_1_1_1_1_2_2[ ]; N2_1_1_1_2_1 --> N2_1_1_1_2_1_1[ ]; N2_1_1_1_2_1 --> N2_1_1_1_2_1_2[ ]; N2_1_1_1_2_2 --> N2_1_1_1_2_2_1[ ]; N2_1_1_1_2_2 --> N2_1_1_1_2_2_2[ ]; N2_1_2_1_1_1 --> N2_1_2_1_1_1_1[ ]; N2_1_2_1_1_1 --> N2_1_2_1_1_1_2[ ]; N2_1_2_1_1_2 --> N2_1_2_1_1_2_1[ ]; N2_1_2_1_1_2 --> N2_1_2_1_1_2_2[ ]; N2_1_2_2_1_1 --> N2_1_2_2_1_1_1[ ]; N2_1_2_2_1_1 --> N2_1_2_2_1_1_2[ ]; N2_1_2_2_1_2 --> N2_1_2_2_1_2_1[ ]; N2_1_2_2_1_2 --> N2_1_2_2_1_2_2[ ]; N2_1_2_2_2_1 --> N2_1_2_2_2_1_1[ ]; N2_1_2_2_2_1 --> N2_1_2_2_2_1_2[ ]; N2_1_2_2_2_2 --> N2_1_2_2_2_2_1[ ]; N2_1_2_2_2_2 --> N2_1_2_2_2_2_2[ ]; N2_1_1_1_1_1_1 --> N2_1_1_1_1_1_1_1[ ]; N2_1_1_1_1_1_1 --> N2_1_1_1_1_1_1_2[ ]; N2_1_1_1_1_1_2 --> N2_1_1_1_1_1_2_1[ ]; N2_1_1_1_1_1_2 --> N2_1_1_1_1_1_2_2[ ]; N2_1_1_1_1_2_1 --> N2_1_1_1_1_2_1_1[ ]; N2_1_1_1_1_2_1 --> N2_1_1_1_1_2_1_2[ ]; N2_1_1_1_1_2_2 --> N2_1_1_1_1_2_2_1[ ]; N2_1_1_1_1_2_2 --> N2_1_1_1_1_2_2_2[ ]; N2_1_2_1_1_1_1 --> N2_1_2_1_1_1_1_1[ ]; N2_1_2_1_1_1_1 --> N2_1_2_1_1_1_1_2[ ]; N2_1_2_1_1_1_2 --> N2_1_2_1_1_1_2_1[ ]; N2_1_2_1_1_1_2 --> N2_1_2_1_1_1_2_2[ ]; N2_1_2_2_1_1_1 --> N2_1_2_2_1_1_1_1[ ]; N2_1_2_2_1_1_1 --> N2_1_2_2_1_1_1_2[ ]; N2_1_2_2_1_1_2 --> N2_1_2_2_1_1_2_1[ ]; N2_1_2_2_1_1_2 --> N2_1_2_2_1_1_2_2[ ]; N2_1_2_2_2_1_1 --> N2_1_2_2_2_1_1_1[ ]; N2_1_2_2_2_1_1 --> N2_1_2_2_2_1_1_2[ ]; N2_1_2_2_2_1_2 --> N2_1_2_2_2_1_2_1[ ]; N2_1_2_2_2_1_2 --> N2_1_2_2_2_1_2_2[ ]; N2_1_2_2_2_2_1 --> N2_1_2_2_2_2_1_1[ ]; N2_1_2_2_2_2_1 --> N2_1_2_2_2_2_1_2[ ]; N2_1_2_2_2_2_2 --> N2_1_2_2_2_2_2_1[ ]; N2_1_2_2_2_2_2 --> N2_1_2_2_2_2_2_2[ ]; N2_1_1_1_1_1_1_1 --> N2_1_1_1_1_1_1_1_1[ ]; N2_1_1_1_1_1_1_1 --> N2_1_1_1_1_1_1_1_2[ ]; N2_1_1_1_1_1_1_2 --> N2_1_1_1_1_1_1_2_1[ ]; N2_1_1_1_1_1_1_2 --> N2_1_1_1_1_1_1_2_2[ ]; N2_1_1_1_1_1_2_1 --> N2_1_1_1_1_1_2_1_1[ ]; N2_1_1_1_1_1_2_1 --> N2_1_1_1_1_1_2_1_2[ ]; N2_1_1_1_1_1_2_2 --> N2_1_1_1_1_1_2_2_1[ ]; N2_1_1_1_1_1_2_2 --> N2_1_1_1_1_1_2_2_2[ ]; N2_1_2_1_1_1_1_1 --> N2_1_2_1_1_1_1_1_1[ ]; N2_1_2_1_1_1_1_1 --> N2_1_2_1_1_1_1_1_2[ ]; N2_1_2_1_1_1_1_2 --> N2_1_2_1_1_1_1_2_1[ ]; N2_1_2_1_1_1_1_2 --> N2_1_2_1_1_1_1_2_2[ ]; N2_1_2_2_1_1_1_1 --> N2_1_2_2_1_1_1_1_1[ ]; N2_1_2_2_1_1_1_1 --> N2_1_2_2_1_1_1_1_2[ ]; N2_1_2_2_1_1_1_2 --> N2_1_2_2_1_1_1_2_1[ ]; N2_1_2_2_1_1_1_2 --> N2_1_2_2_1_1_1_2_2[ ]; N2_1_2_2_2_1_1_1 --> N2_1_2_2_2_1_1_1_1[ ]; N2_1_2_2_2_1_1_1 --> N2_1_2_2_2_1_1_1_2[ ]; N2_1_2_2_2_1_1_2 --> N2_1_2_2_2_1_1_2_1[ ]; N2_1_2_2_2_1_1_2 --> N2_1_2_2_2_1_1_2_2[ ]; N2_1_2_2_2_2_1_1 --> N2_1_2_2_2_2_1_1_1[ ]; N2_1_2_2_2_2_1_1 --> N2_1_2_2_2_2_1_1_2[ ]; N2_1_2_2_2_2_1_2 --> N2_1_2_2_2_2_1_2_1[ ]; N2_1_2_2_2_2_1_2 --> N2_1_2_2_2_2_1_2_2[ ]; N2_1_2_2_2_2_2_1 --> N2_1_2_2_2_2_2_1_1[ ]; N2_1_2_2_2_2_2_1 --> N2_1_2_2_2_2_2_1_2[ ]; N2_1_2_2_2_2_2_2 --> N2_1_2_2_2_2_2_2_1[ ]; N2_1_2_2_2_2_2_2 --> N2_1_2_2_2_2_2_2_2[ ]; N2_1_1_1_1_1_1_1_1 --> N2_1_1_1_1_1_1_1_1_1[ ]; N2_1_1_1_1_1_1_1_1 --> N2_1_1_1_1_1_1_1_1_2[ ]; N2_1_1_1_1_1_1_1_2 --> N2_1_1_1_1_1_1_1_2_1[ ]; N2_1_1_1_1_1_1_1_2 --> N2_1_1_1_1_1_1_1_2_2[ ]; N2_1_1_1_1_1_1_2_1 --> N2_1_1_1_1_1_1_2_1_1[ ]; N2_1_1_1_1_1_1_2_1 --> N2_1_1_1_1_1_1_2_1_2[ ]; N2_1_1_1_1_1_1_2_2 --> N2_1_1_1_1_1_1_2_2_1[ ]; N2_1_1_1_1_1_1_2_2 --> N2_1_1_1_1_1_1_2_2_2[ ]; N2_1_2_1_1_1_1_1_1 --> N2_1_2_1_1_1_1_1_1_1[ ]; N2_1_2_1_1_1_1_1_1 --> N2_1_2_1_1_1_1_1_1_2[ ]; N2_1_2_1_1_1_1_1_2 --> N2_1_2_1_1_1_1_
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Management per pathways





Patient experience should be the starting point to achieve a high quality care. Coherently, healthcare performance evaluation systems, driving the change in line with the main strategic goals, should be designed considering the patient perspective. Instead, **they are traditionally defined according the healthcare services providers point of view.** Consequently, they reproduce a 'silo-vision' characterised by a clear responsibilities separation and limitation to the specific setting of care or to the single organization

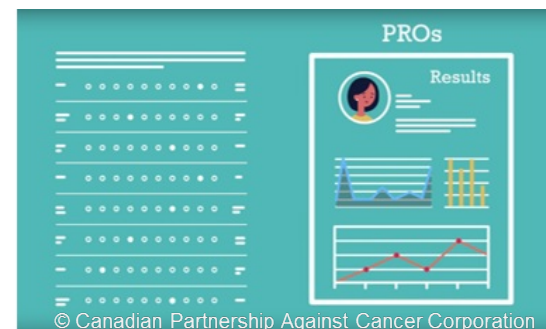
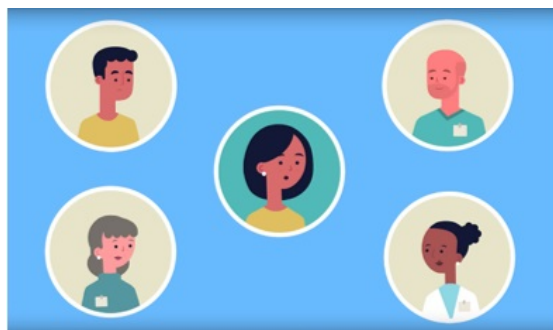


PREMs

Patient are asked to report about their experiences on what actually occurred (not satisfaction)

PROMs

Standardized validated instruments to measure patients' perceptions of their health status (impairment), their functional status (disability), and their health-related quality of life (well-being).



Self-efficacy, self-management and patient adherence
(additional items in PREMs and PROMs surveys)

the positive metaphor of the "stave"



Let's play the patient's music....

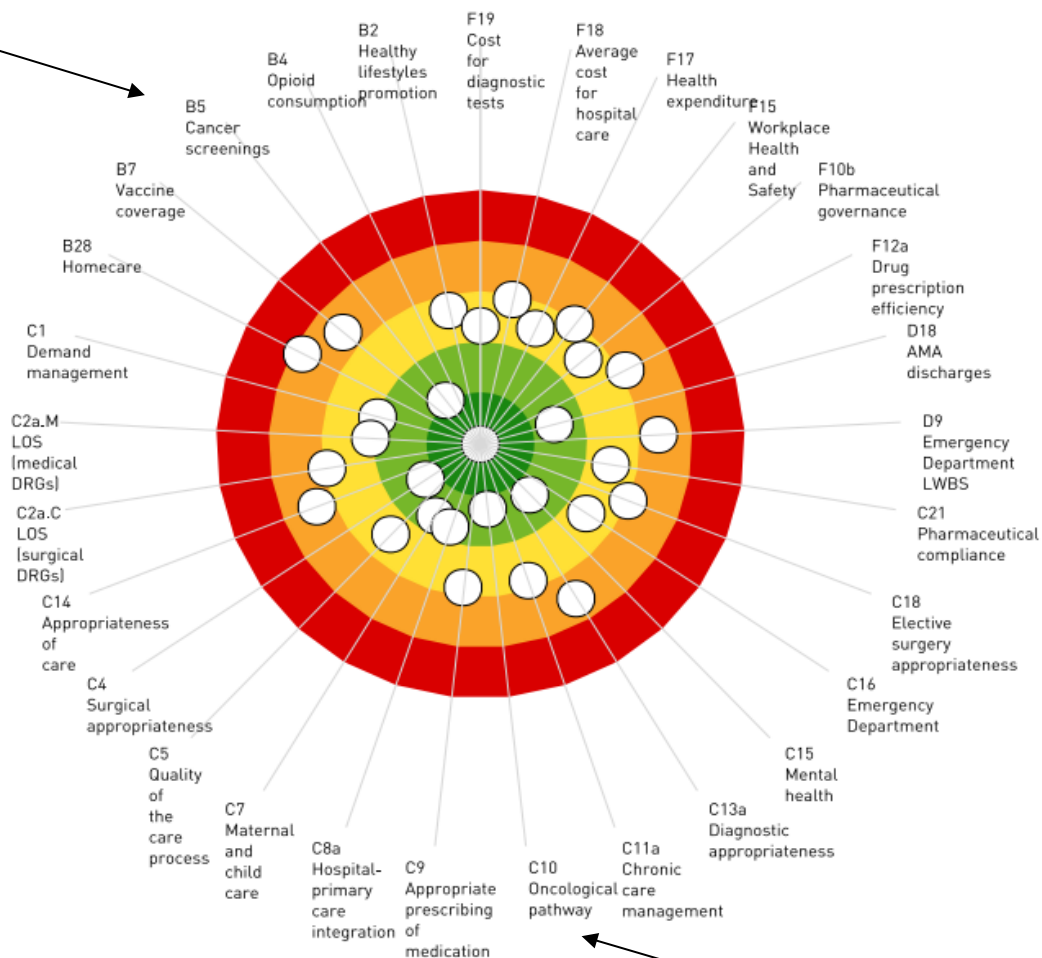
The stave, as well as the dartboard, relies on the five colour bands (from red to dark-green). These bands are now displayed horizontally and are framed to represent the different phases of care pathways. This view allows users to focus on strengths and weaknesses characterizing the healthcare service delivery in the different pathway phases.

Population's health - 2010-2012

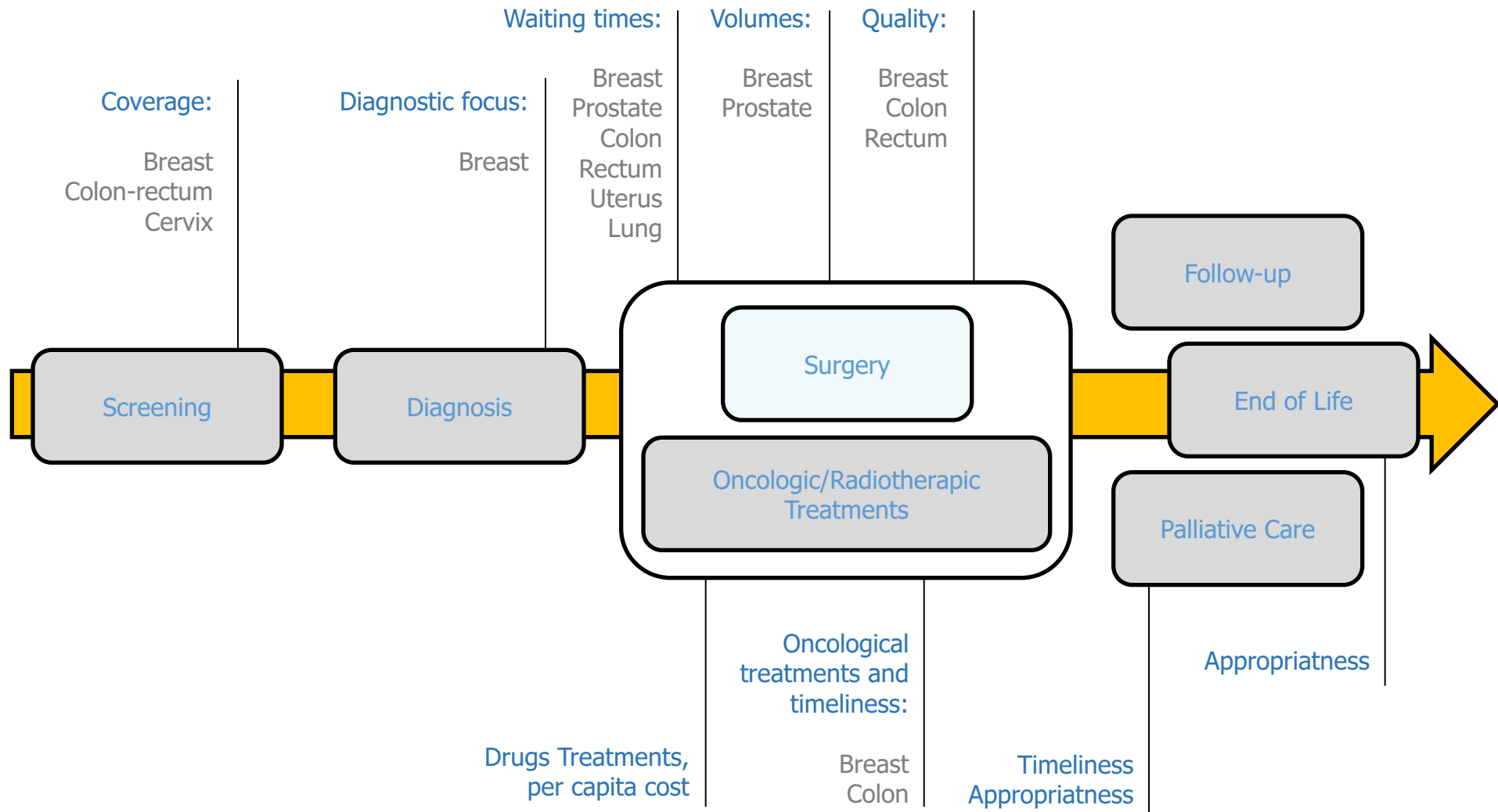
A4 Suicide mortality A2 Cancer mortality A10 Lifestyles A1 Infant mortality A3 Circulatory disease mortality

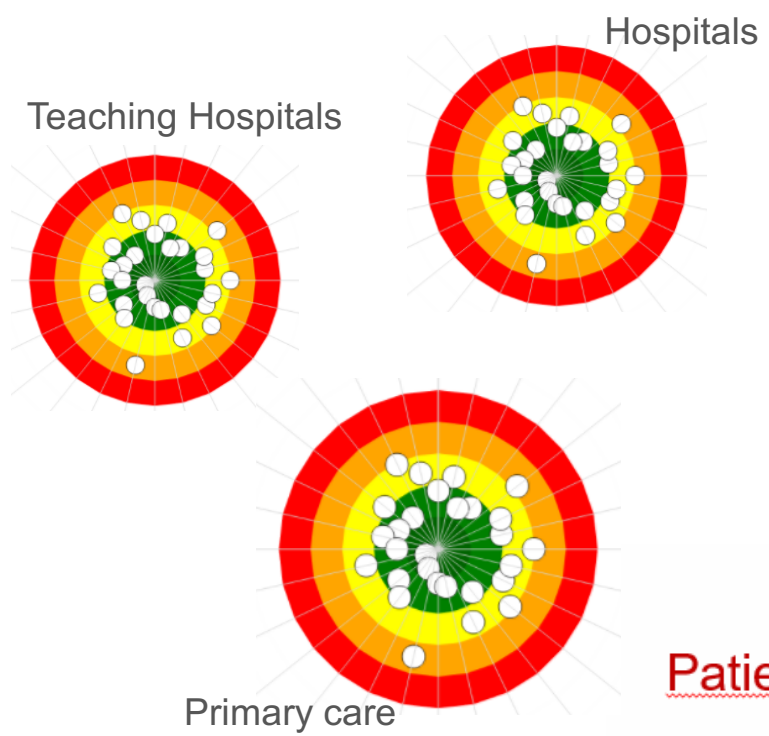


Screening



Reframing the PES system: The Oncologic Care Pathway



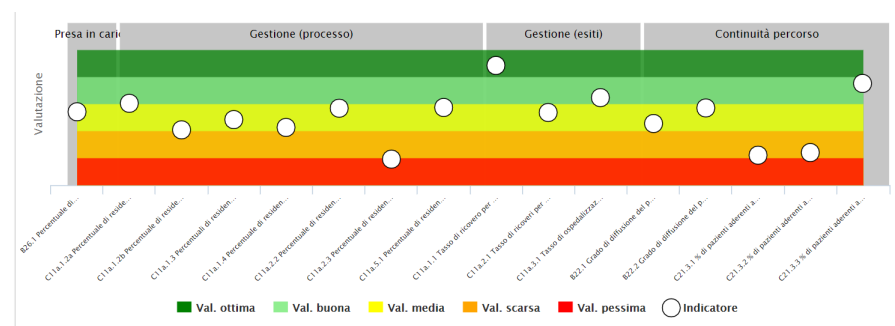


Patients

Caregivers

Professionals

From Siloes to Pathway

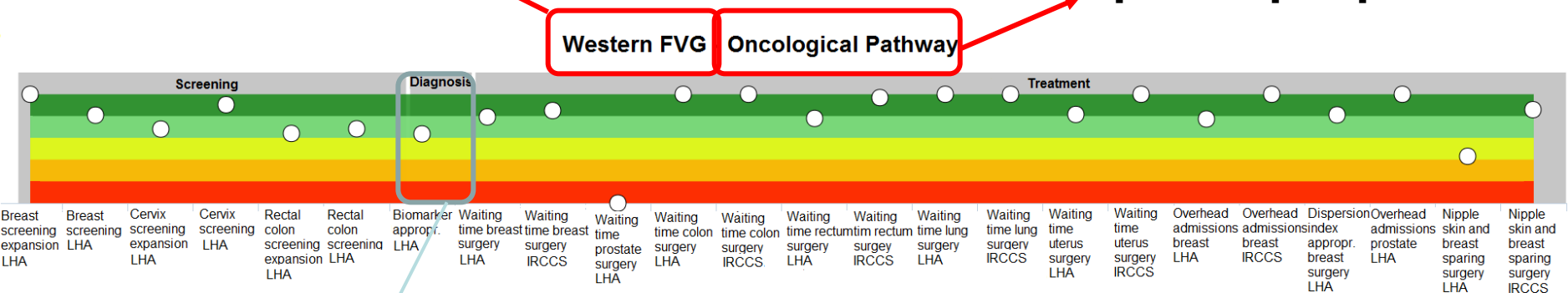


Experience	Outcome	Adherence
<u>PREMs</u>	<u>PROMs</u>	...
...
...

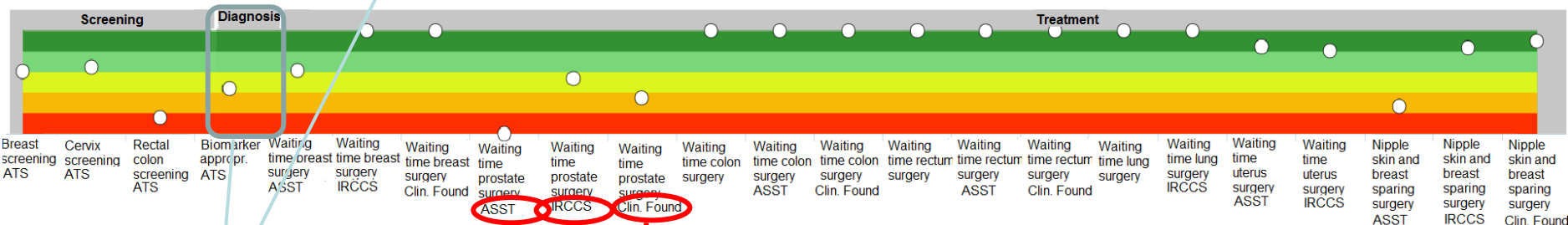
Reframing the PES system - The «Stave»

Unit of analysis: geographic area

Set of indicators selected based on a **patient perspective**



Pavia - Oncological Pathway



Possibility to focus on each **pathway phase**

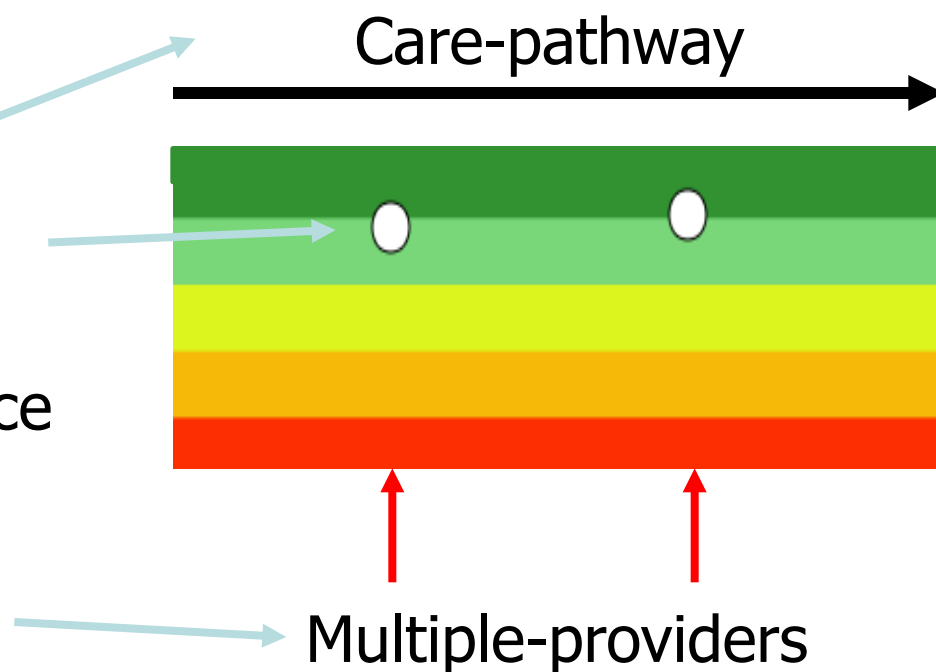
- **Multiple providers involved** in the service delivery
- Multiple providers providing the **same services** in a specific geographic area

*the setting-related evaluation system should be substituted by a cross-sectoral pathway-based evaluation, where indicators of performance include also measures reported by patients. The use of PREs and PROs to understand patient perspectives will help providers deliver more **patient-centered care**, and thus improve the quality of care*

At **the strategic level**

current PMS lack of:

- Patient-based perspective
- Assessment of performance at the inter-institutional level



Reccomendations

- Dealing with variation in effective care, requires to distinguish between individual services/procedures and **integrated care pathways**
- Integrated care implies the aim to create and delivery **value** according to a **patient and population based perspective**
- In order to avoid the so-called “performance traps”, it is pivotal to find **consistency between strategies and PMSs**
- PMSs of integrated care pathways should be reframed in order to both adopt a patient perspective and consider the **inter-institutional structure of providers** characterizing the service value-chain