Regional –based quality management of health services: the Italian approach

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The Italian healthcare system

It 's a *Beveridge-like model*: Universal, Comprehensive (almost), Free, Financed by general taxation.

It is organized in three levels :

- The national level is responsible for national health planning, including general aims and annual financial resources and for ensuring a uniform level of services, care and assistance (LEA).

- The regional level has the responsibility for planning, organizing and managing its health care system through LHA's activities in order to meet the needs of their population.

- The local level (Local Health Authorities): provides care through public and/or private hospitals, primary care and prevention services.

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
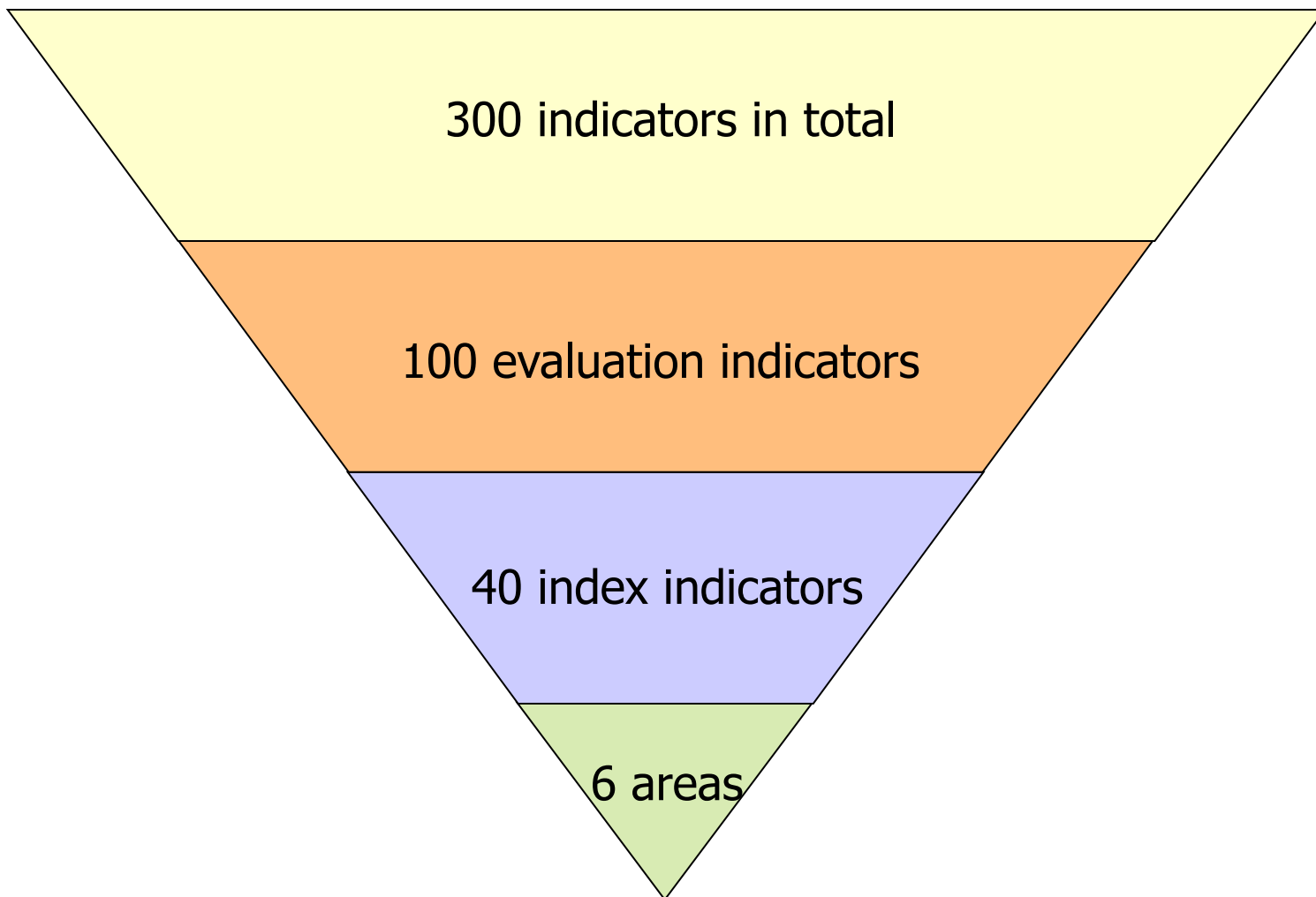- Friuli Venezia Giulia
- Lombardia
- Puglia
- Calabria

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*

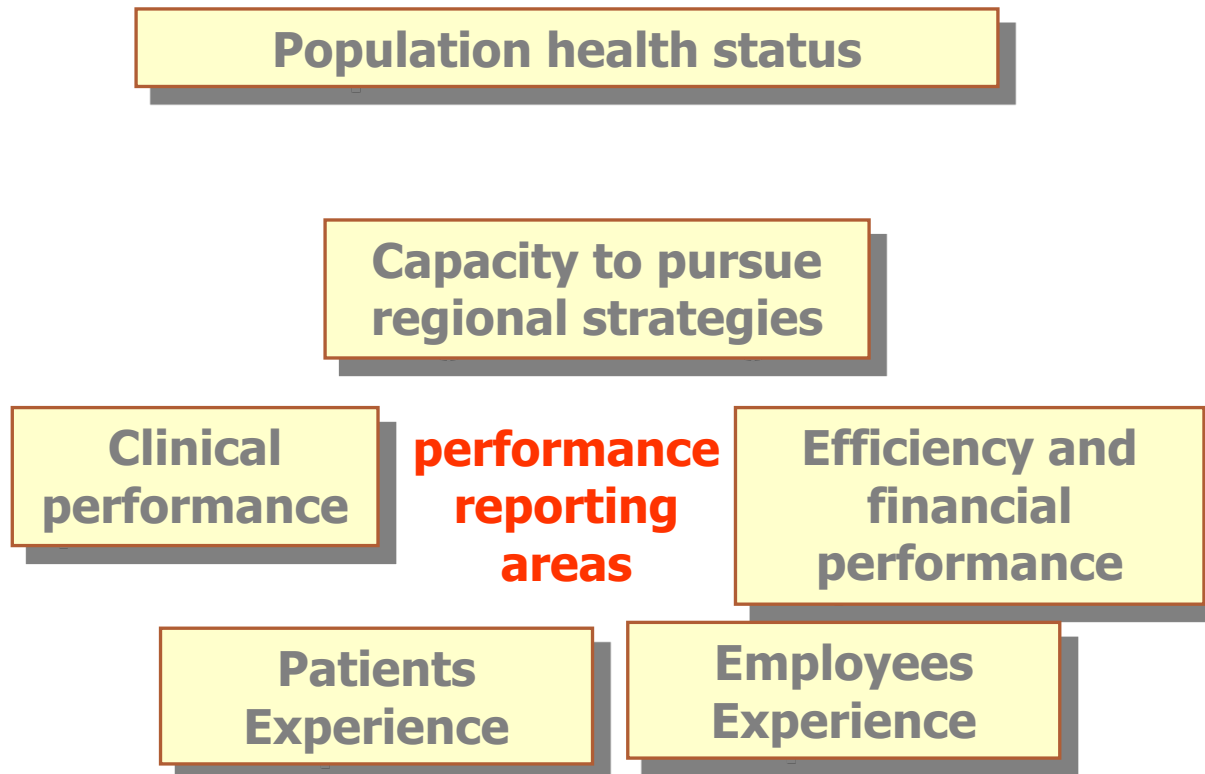# Structure of the evaluation system

300 indicators in total

100 evaluation indicators

40 index indicators

6 areas

The multidimensional reporting system shared by the network of the Italian regions

In order to describe the performance evaluation system, six areas have been identified to highlight the core results of the regional healthcare system.

Population health status

Capacity to pursue regional strategies

Clinical performance

performance reporting areas

Efficiency and financial performance

Patients Experience

Employees Experience

The Five Assessment Bands

SCORE	BAND COLOUR	PERFORMANCE
4 - 5	DARK GREEN	EXCELLENT
3 - 4	GREEN	GOOD
2 - 3	YELLOW	AVERAGE
1 - 2	ORANGE	POOR
0 - 1	RED	VERY POOR

The Reference Criteria for the Assessment Bands

1. **International standards**, if existing based on EBM

2. **Regional standards** set out by the Regional Governments

3. **The inter-regional mean**, standardized by several factors to allow comparisons across Health Authorities and Regions

code	indicator	performance score bands			
A1	**Infant mortality**				
A1.1	Infant mortality in the first year of life	1,8	2,4	3	3,6
A1.2	Early neonatal mortality (in the first 6 days of life)				
A1.3	Neonatal mortality (in the first 28 days of life)				
A2	**Cancer mortality**	150	160	170	180
A3	**Circulatory disease mortality**	138	147	156	165
A4	**Suicide mortality**	4,3	5,4	6,5	7,6
A10	**Lifestyles**				
A6.1.1	Percentage of sedentary people	15	21	27	33
A6.2.1	Percentage of overweight or obese people	34	38	42	46
A6.3.1	Percentage of high-risk alcohol consumers	10	16	22	28
A6.4.1	Percentage of smokers	24	27	30	33
B2	**Promotion of healthy lifestyles**				
A6.1.2	Percentage of sedentary people advised by their doctor or by other healthcare professionals to exercise	26	31	36	41
A6.2.2	Percentage of overweight or obese people advised by their doctor or by other healthcare professionals to lose or maintain weight	20	40	60	80
A6.2.3	Percentage of overweight or obese people advised by their doctor or by other healthcare professionals to exercise	20	40	60	80
A6.3.2	Percentage of alcohol consumers at higher risk advised by their doctor or by other healthcare professionals to reduce alcohol consumption	3	5	7	9
A6.4.2	Percentage of smokers advised by their doctor or by other healthcare professionals to quit smoking	20	40	60	80
B4	**Opioid consumption**				
B4.1.1	Opioid consumption	1,6	2,1	2,5	2,9
B5	**Invitation and uptake rates of cancer screening programmes**				
B5.1	Mammography screening				
B5.1.1	Adjusted invitation rate for mammographic screening	80	85	90	95
B5.1.2	Adjusted uptake of mammographic screening	40	50	60	70
B5.2	Cervical screening				
B5.2.1	Adjusted invitation rate to cervical screening	80	85	90	95
B5.2.2	Adjusted uptake of cervical screening	30	40	50	60
B5.3	Colorectal screening				
B5.3.1	Adjusted invitation rate for colorectal screening	80	85	90	95
B5.3.2	Adjusted uptake of colorectal screening	35	45	55	65
B7	**Vaccine coverage**				
B7.1	MMR vaccine coverage	80	85	90	95
B7.2	Flu vaccine coverage for the elderly	50	58,3	66,7	75
B7.3	Papillomavirus (HPV) vaccine coverage	62	68	74	80
B7.4	Flu vaccine coverage for workers in the healthcare sector	7	16	25	34
B7.5	Meningococcal vaccine coverage	80	85	90	95
B7.6	Pneumococcal vaccine coverage	80	85	90	95
B7.7	Hexavalent vaccine coverage	80	85	90	95
B28	**Homecare**				
B28.1.1	Percentage of elderly provided with homecare				
B28.1.2	Percentage of elderly provided with homecare, with assessment	4	6	8	10
B28.2.5	Percentage of residents over-75 discharged from hospital, receiving at least one home visit within 2 days				
B28.2.9	Percentage of home care service plans for the elderly with a care intensity coefficient of > 0.13				

code	indicator	green		lt-green		yellow		orange		red
B8	**Infectious diseases**					●				
B8.1	Invasive bacterial diseases with microbial type strain					●				
B8.2	Tuberculosis prevalence rate					●				
B8.3	Percentage of culture tests for pulmonary tuberculosis diagnosis					●				
B8.4	Confirmation of pulmonary tuberculosis diagnosis by culture					●				
C1	**Healthcare demand management capability**	●		●		●		●		●
C1.1	Standardized hospitalization rate	●	139	●	146	●	153	●	160	●
C1.1.1	Standardized hospitalization rate of acute inpatients	●	96	●	103	●	110	●	117	●
C1.1.1.1	Standardized hospitalization rate of acute medical DRGs (0-64 years)					●				
C1.1.2	Standardized hospitalization rate of acute outpatients					●				
C1.1.2.1	Standardized hospitalization rate of acute medical outpatients	●	7	●	10	●	13	●	16	●
C1.1.2.2	Standardized hospitalization rate of acute surgical outpatients					●				
C1.1.2.2.1	Standardized hospitalization rate of surgical outpatients					●				
C1.1.3	Standardized hospitalization rate for post-acute care					●				
C1.3	Per capita hospital beds					●				
C1.5	Case-mix index (teaching hospitals)					●				
C1.6	Percentage of surgical inpatient admissions					●				
C2a.M	**Performance index for average hospital length of stay of acute medical DRGs**	●	-1,2	●	-0,55	●	0,1	●	0,75	●
C2a.C	**Performance index for average hospital length of stay of acute surgical DRGs**	●	-1,2	●	-0,55	●	0,1	●	0,75	●
C3b	**Preoperative average length of stay for elective surgery**	●		●		●		●		●
C3.4	Preoperative average hospital length of stay for elective surgery of more than 1 day (teaching/research/autonomous general hospitals)	●	0,85	●	1	●	1,15	●	1,3	●
C3.5	Preoperative average length of hospital stay for elective surgery of more than 1 day (Local Health Authorities)					●				
C14	**Appropriateness of care**	●		●		●		●		●
C4.8	Medical ELC DRGs: standardized hospitalization rate	●	135	●	179	●	223	●	267	●
C14.2	Percentage of medical outpatient hospital admissions for diagnostic purposes					●				
C14.2a	DH admissions for diagnostic purposes	●	1,7	●	3,1	●	4,5	●	5,8	●
C14.2.2	Percentage of medical outpatient admissions for diagnostic purposes - paediatric					●				
C14.3	Percentage of short medical hospital stays					●				
C14.3a	Admission rate for short medical hospital stays	●	5,2	●	8,3	●	11,4	●	14,5	●
C14.3.2	Percentage of short medical hospital stays - paediatrics					●				
C14.4	Percentage of over-threshold medical admissions of patients ≥ 65 years	●	2	●	3	●	4	●	5	●
C14.5	Standardized medical outpatient admission rate					●				
C4	**Surgical appropriateness**	●		●		●		●		●
C4.1	Percentage of medical DRGs discharged from surgical wards	●	15	●	19	●	23	●	27	●
C4.1.1	Percentage of medical DRGs discharged from surgical wards: inpatient admissions	●	15	●	19	●	23	●	27	●
C4.1.2	Percentage of medical DRGs discharged from surgical wards: outpatient admissions	●	10	●	15	●	20	●	25	●
C4.4	Percentage of laparoscopic cholecystectomies performed in one day	●	10	●	30	●	50	●	70	●
C4.7	Percentage of Day Surgery admissions for "ELC surgical DRGs"	●	45	●	55	●	65	●	75	●
C4.13	DRGs at high-risk of inappropriateness					●				
C5	**Quality of the care process**	●		●		●		●		●
C5.1	Percentage of readmissions within 30 days	●	4,3	●	4,8	●	5,3	●	5,8	●
C5.2	Percentage of femoral neck fractures operated within 2 days of admission	●	41	●	54	●	67	●	80	●

code	indicator					
C5.3	Percentage of transurethral prostatectomies	● 65	● 75	● 85	● 95	●
C5.10	Percentage of laparoscopic colon resections			●		
C5.11	Percentage of laparoscopic appendectomies in women aged 15-49			●		
C5.12	Percentage of operated femur fractures of all diagnosed femur fractures			●		
C16.7	Percentage of surgical admissions from Emergency Department (ED) with surgical DRG on discharge	● 45	● 55	● 65	● 75	●
C6	**Clinical risk**			●		
C6.4.1	Postoperative sepsis in elective surgery			●		
C6.4.2	Intra-hospital mortality of low-mortality DRG patients			●		
C6.4.3	Vein thrombosis or pulmonary embolism following surgery			●		
C7	**Maternal and child care**	●	●	●	●	●
C7.1	Percentage of C-section deliveries (NTSV)	● 15	● 20	● 25	● 30	●
C7.1.2	Percentage of C-section deliveries in the 1st group of Robson's classification			●		
C7.1.3	Percentage of C-section deliveries in the 2nd group of Robson's classification			●		
C7.1.4	Percentage of elective C-section deliveries over NTSV deliveries			●		
C7.2	Percentage of induced labours			●		
C7.3	Percentage of episiotomies (NTSV)	● 15	● 25	● 35	● 45	●
C7.6	Percentage of assisted deliveries (forceps or ventouse)	● 2,5	● 5	● 7,5	● 10	●
C7.20	Percentage of severe peri-/intra-partum asphyxia			●		
C7.13	Percentage of foreign women attending the first visit late (>12th week of gestation)			●		
C7.13.1	Percentage of women with low education level attending the first visit late (>12th week of gestation)			●		
C7.14	Percentage of foreign women attending fewer than 4 visits during pregnancy			●		
C7.14.1	Percentage of women with low level of education attending fewer than 4 visits during pregnancy			●		
C7.7	Paediatric hospitalization rate (0-14 years)	● 6,4	● 8	● 9,6	● 11,2	●
C7.7.1	Admission rate during the first year of life	● 32	● 39	● 46	● 53	●
C7.7.2	Paediatric admission rate (1-5 years)			●		
C7.7.3	Paediatric admission rate (6-13 years)			●		
C17.4	Delivery volumes	● 0	● 0	● 0	● 0	●
C17.4.1	Percentage of admissions over the childbirth threshold	● 80	● 85	● 90	● 95	●
C17.4.2	Dispersion index of deliveries in facilities under the childbirth threshold	● 15	● 30	● 45	● 60	●
C8a	**Hospital-primary care integration**	●	●	●	●	●
C8b.2	Hospital admission rate with length of stay of over 30 days	● 0,9	● 1,2	● 1,5	● 1,8	●
C8a.2	Percentage of readmissions 31 -180 days following discharge			●		
C8a.3	Underage conception rate (12-17 years)			●		
C11a.4.1	Pneumonia hospitalization rate (20-74 years)			●		
C8a.19.1	Paediatric hospitalization rate for asthma (2-17 years)	● 30	● 50	● 70	● 90	●
C8a.19.2	Paediatric hospitalization rate for gastroenteritis (0-17 years)	● 60	● 120	● 180	● 240	●
C9	**Appropriate prescribing of medication**	●	●	●	●	●
C9.1	Proton pump inhibitor consumption (antacids) 	● 21	● 25	● 29	● 33	●
C9.3	Incidence of sartans (antihypertensives) on substances acting on the renin-angiotensin system	● 26	● 30	● 34	● 38	●
C9.4	Consumption of selective serotonin reuptake inhibitors (antidepressants)	● 22	● 26	● 30	● 34	●
C9.8.1.1	Consumption of antibiotics	● 13,5	● 16,5	● 19,5	● 22,5	●

| code	indicator				performance score bands				
C9.8.1.1.1	Paediatric antibiotic consumption						●		
C9.8.1.1.2	Paediatric cephalosporin consumption						●		
C9.9.2	Consumption of antipsychotics						●		
C10	**Oncological pathway**	●		●		●		●	●
C10.2.1	Percentage of breast-conserving or nipple/skin sparing surgery for breast cancer	●	65	●	70	●	75	● 80	●
C10.2.2	Percentage of women undergoing sentinel lymph node excision						●		
C10.2.2.1	Percentage of women undergoing radical axillary lymph node excision						●		
F10.2.1	Average expenditure for oncological drugs						●		
C17.1	Breast cancer surgery volumes						●		
C17.1.1	Percentage of over-threshold breast cancer admissions						●		
C17.1.2	Dispersion index of cases in wards under the breast cancer threshold						●		
C17.5	Prostate cancer surgery volumes	●		●		●		●	●
C17.5.1	Percentage of over- threshold prostate cancer admissions	●	60	●	70	●	80	● 90	●
C17.5.2	Dispersion index of cases in wards under the prostate cancer threshold	●	10	●	20	●	30	● 40	●
C11a	**Effectiveness of chronic care management**	●		●		●		●	●
C11a.1.1	Heart failure hospitalization rate (50-74 years)	●	155	●	205	●	255	● 305	●
C11a.1.1.1	Standardized heart failure hospitalization rate (over 18 years)						●		
C11a.2.1	Diabetes hospitalization rate (35-74 years)	●	20	●	30	●	40	● 50	●
C11a.2.1.1	Standardized hospitalization rate for diabetes complications (over 18 years)						●		
C11a.2.4	Major amputation rate for diabetes	●	31	●	53	●	75	● 97	●
C11a.3.1	COPD hospitalization rate (50-74 years)	●	38	●	53	●	68	● 83	●
C11a.3.1.1	Standardized COPD hospitalization rate (over 18 years)						●		
C13a	**Diagnostic appropriateness**	●		●		●		●	●
C13.1	Standardized ambulatory service rate						●		
C13.2	Standardized medical imaging rate						●		
C13.2.1	Standardized CT scan rate						●		
C13.2.2	Standardized magnetic resonance imaging (MRI) scan rate						●		
C13a.2.2.1	Musculoskeletal MRI scan rate (≥ 65 years)	●	15	●	20	●	25	● 30	●
C13a.2.2.1.1	Standardized musculoskeletal and spine MRI scan rate (over 18 years)								
C13a.2.2.2	Percentage of patients repeating lumbar MRI scan within 12 months	●	5,8	●	6,8	●	7,8	● 8,8	●
C15	**Mental health**	●		●		●		●	●
C8a.13a	Percentage of psychiatric patient readmissions 8 - 30 days following discharge	●		●		●		●	●
C8a.13.2	Percentage of psychiatric patient readmissions within 7 days from discharge	●	0,6	●	2,4	●	4,1	● 5,9	●
C8a.5	Hospitalization rate for psychiatric disorders	●	175,2	●	281,3	●	387,4	● 493,5	●
C8a.5.1	Hospitalization rate for schizophrenia and psychotic disorders						●		
C8a.5.2	Hospitalization rate for mood disorders						●		
C8a.5.3	Hospitalization rate for mild to moderate depression						●		
C8a.5.4	Hospitalization rate for anxiety and adjustment disorders						●		
C8a.5.5	Hospitalization rate for personality disorders						●		
C8a.5.6	Hospitalization rate for other mental health diagnoses						●		
C8a.5.7	Hospitalization rate for dementia						●		
C8a.5.8	Hospitalization rate for substance-induced mental disorders						●		
C15.8	Performance index for average length of stay for psychiatric disorders						●		
C15.2	Contact with the department of mental health within 7 days from discharge						●		

code	indicator								
C15.9.1	Output of the therapy process: percentage of patients dropping out of the project (mental health)					●			
C15.9.2	Output of the therapy process: percentage of patients dropping out of the project (addictions)					●			
C8a.7	Hospitalization rate for psychiatric disorders (0-17 years)					●			
C15.11	Dropout from primary care services for severe neuropsychiatric disorders					●			
C16	**Emergency Department**	●		●		●		●	●
C16.1	Percentage of yellow code patients visited within 30 minutes	●	60	●	70	●	80	●	90	●
C16.2	Percentage of green code patients visited within 1 hour	●	60	●	70	●	80	●	90	●
C16.3	Percentage of green code patients not referred to hospital and with a length of stay <=4h	●	75	●	80	●	85	●	90	●
C16.4	Percentage of patients referred to hospital with a length of stay <=8h	●	80	●	85	●	90	●	95	●
C16.11	Emergency vehicle response time	●	14	●	18	●	22	●	26	●
C18	**Appropriateness of elective surgery**	●		●		●		●	●
C18.1	Standardized hospitalization rate for tonsillectomy	●	114,1	●	199,7	●	285,3	●	370,9	●
C18.2	Standardized hospitalization rate for cholecystectomy					●			
C18.3	Standardized hospitalization rate for laparoscopic cholecystectomy					●			
C18.4	Standardized hospitalization rate for knee replacement surgery					●			
C18.5	Standardized hospitalization rate for hip replacement surgery					●			
C18.6	Standardized hospitalization rate for vein stripping	●	55	●	90	●	125	●	160	●
C18.7	Standardized hospitalization rate for percutaneous coronary interventions (PCI)					●			
C18.8	Standardized hospitalization rate for transurethral prostatectomy for benign prostatic hyperplasia					●			
C18.9	Standardized hospitalization rate for hysterectomy					●			
C18.10	Standardized hospitalization rate for knee arthroscopy					●			
C21	**Pharmaceutical compliance**	●		●		●		●	●
C21.1.1	Percentage of AMI patients prescribed beta blockers following discharge					●			
C21.1.2	Percentage of AMI patients prescribed statins following discharge					●			
C21.1.3	Percentage of AMI patients prescribed ACE inhibitors or sartans following discharge					●			
C21.1.4	Percentage of AMI patients prescribed antiplatelet therapy following discharge					●			
C9.2	Percentage of statin-treated patients abandoning drug therapy	●	8,3	●	9,8	●	11,4	●	12,9	●
C9.9.1.1	Percentage of antidepressant-treated patients abandoning drug therapy	●	18,5	●	21,5	●	24,5	●	27,5	●
D9	**Patients leaving the Emergency Department without being seen (LWBS)**	●	1,25	●	2,5	●	3,75	●	5	●
D18	**Percentage of hospitalized patients leaving against medical advice**	●	0,35	●	0,7	●	1,05	●	1,4	●
F10b	**Governance of pharmaceutical and medical device expenditure**	●		●		●		●	●
F10.1	Local per capita pharmaceutical expenditure 	●	155,1	●	165,3	●	175,5	●	185,8	●
F10.2	Public pharmaceutical expenditure (hospitals)					●			
F10.2.2	Average expenditure for TNF-alpha inhibitors					●			
F10.3	Public expenditure on medical devices (hospitals)					●			
F10.3.1	Public expenditure on extensively used medical devices					●			
F12a	**Drug prescription efficiency**	●		●		●		●	●
F12a.2	Prescription of off-patent statins	●	78,3	●	81,7	●	85,1	●	88,4	●
F12a.6	Prescription of off-patent dihydropyridine derivatives (antihypertensives)	●	86,6	●	89,1	●	91,7	●	94,3	●
F12a.7	Prescription of off-patent ACE inhibitors (antihypertensives), in combination with other drugs	●	76	●	80	●	84	●	88	●

code	indicator			performance score bands					
F12a.9	Prescription of off-patent fluoroquinolones (antibiotics)	🔴	84,1	🟠	87,2	🟡	90,4	🟢	93,6	🟢
F12.11a	Prescription of off-patent sartans (alone or in combination with other drugs)	🔴	64,1	🟠	74,4	🟡	84,7	🟢	95	🟢
F12a.14	Prescription of off-patent drugs	🔴	74,4	🟠	75,6	🟡	76,7	🟢	77,9	🟢
F15	**Health and Safety at the workplace**	🔴		🟠		🟡		🟢		🟢
F15.1.1	Number of accident investigations with findings of infringements/ number of accident investigations					🔵				
F15.1.2	Number of occupational disease investigations with findings of infringements /number of occupational disease investigations					🔵				
F15.2	Inspection coverage	🔴		🟠		🟡		🟢		🟢
F15.2.1	Number of companies inspected /number of companies with employees	🔴	2,25	🟠	5	🟡	7,75	🟢	10,5	🟢
F15.2.2	Number of construction companies inspected /number of registered construction companies	🔴	13	🟠	27	🟡	41	🟢	55	🟢
F15.2.3	Number of construction sites inspected /number of registered construction sites	🔴	5	🟠	14	🟡	23	🟢	32	🟢
F15.3	Productivity	🔴		🟠		🟡		🟢		🟢
F15.3.1	Number of companies inspected /number of Health and Safety at the workplace and Judicial Police operators	🔴	16	🟠	37	🟡	58	🟢	79	🟢
F15.3.2	Number of inspections/ number of Health and Safety at the workplace and Judicial Police operators	🔴	18	🟠	67	🟡	116	🟢	165	🟢
F17	**Per capita health expenditure (Regions)**	🟢	1740	🟢	1889	🟡	2039	🟠	2189	🔴
F17	**Per capita health expenditure (Local Health Authorities)**	🟢	1476	🟢	1641	🟡	1806	🟠	1971	🔴
F17.1	Per capita expenditure for hospital care					🔵				
F17.1.1	Per capita expenditure for acute inpatient hospital admissions/day hospital/day surgery					🔵				
F17.2	Per capita expenditure for public health in living and working environments					🔵				
F17.3	Per capita expenditure for primary and specialist care					🔵				
F17.3.1	Per capita expenditure for specialist healthcare					🔵				
F17.3.1.1	Per capita expenditure for diagnostic medical imaging					🔵				
F17.3.2	Per capita expenditure for general practice					🔵				
F18	**Average cost for hospital care**	🟢		🟢		🟡		🟠		🔴
F18.1	Average hospital cost per weighted case	🟢	3202,43	🟢	4050,86	🟡	4899,29	🟠	5747,72	🔴
F19	**Cost for diagnostic tests**	🟢	0,69	🟢	0,97	🟡	1,25	🟠	1,53	🔴

The PES system

C10.4.1 Average waiting before surgery for breast cancer - 2016
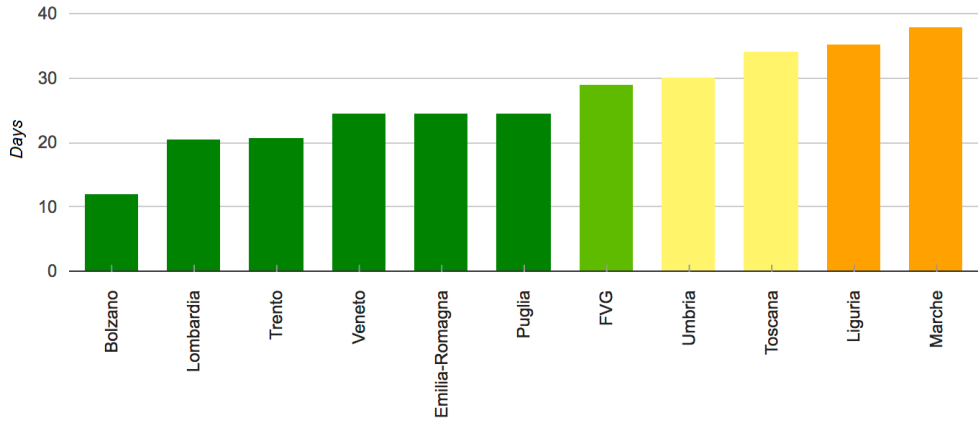
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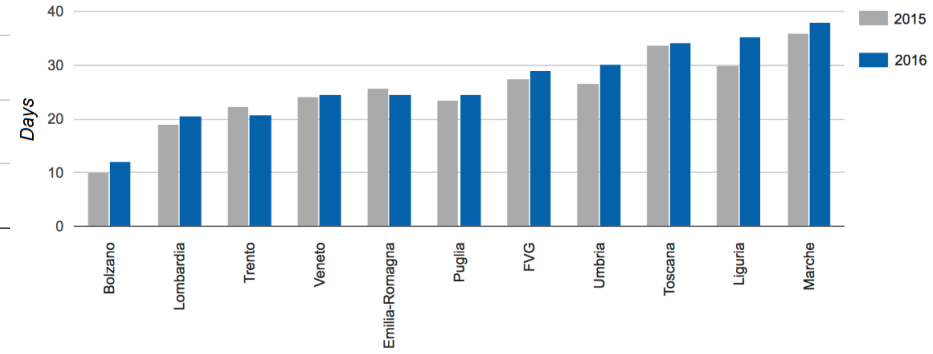
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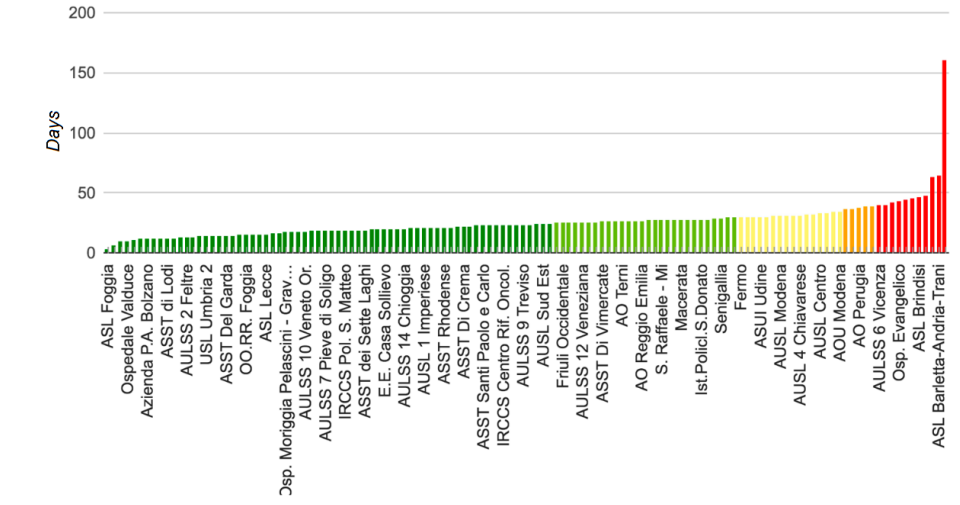
The PES system
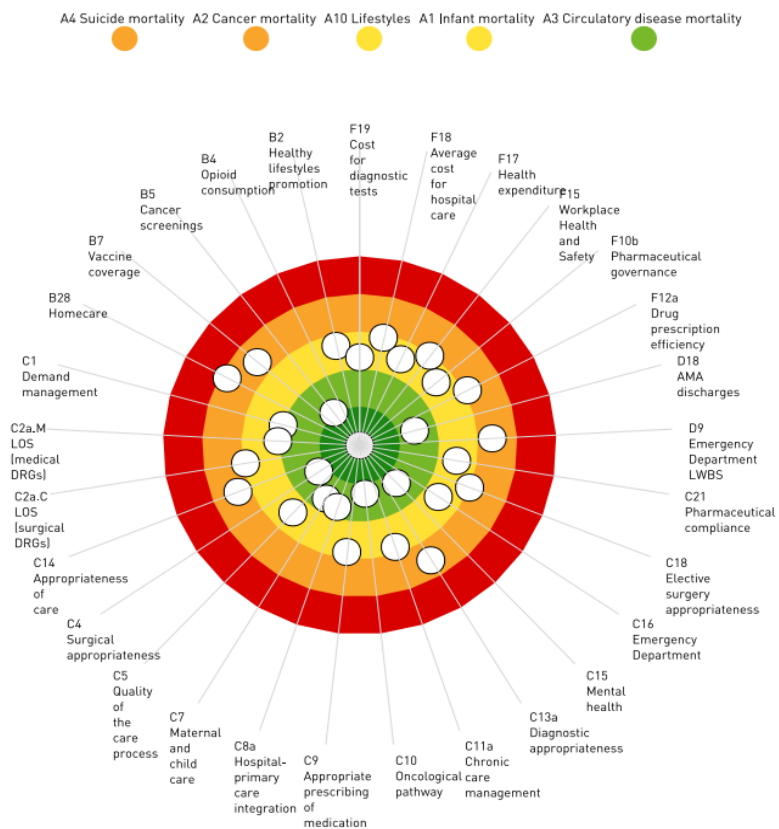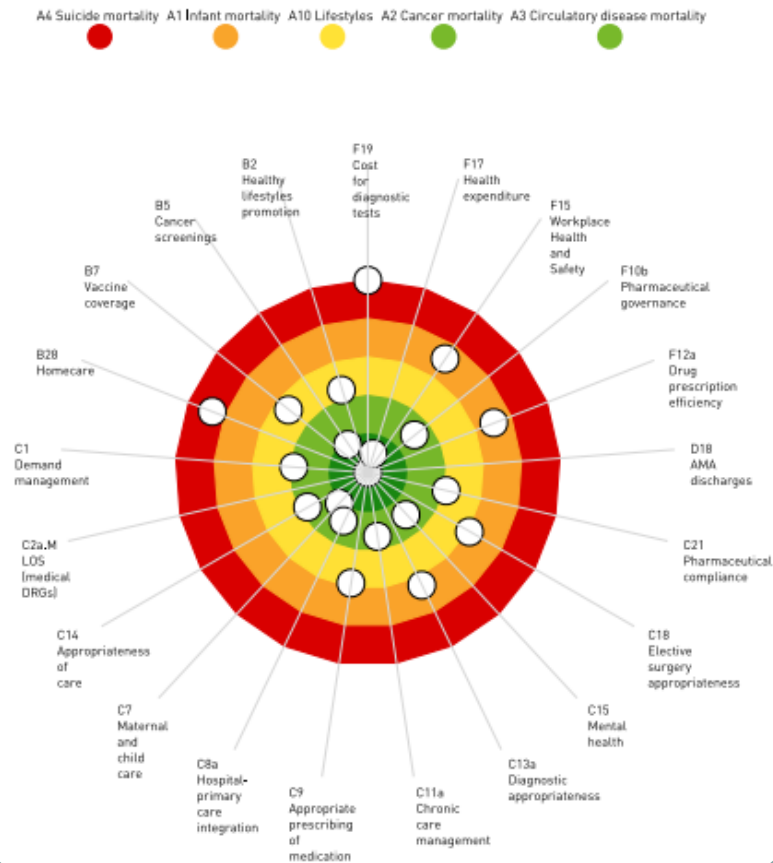
Basilicata

Valutazione dello stato di salute della popolazione. Anni 2012-2014

A1 Mortalita' infantile	A3 Mortalita' per malattie circolatorie	A10 Stili di vita (PASSI)	A4 Mortalita' per suicidi	A2 Mortalita' per tumori
🟠	🟠	🟡	🟢	🟢

Bersaglio 2016

Analisi trend 2016

- 🟢 Migliorati (A): trend positivo
- 🟡 Stazionari (B)
- 🔴 Peggiorati (C): trend negativo

54,7%
34%
11,3%

Totale indicatori: 53

Emilia-Romagna

Valutazione dello stato di salute della popolazione. Anni 2012-2014

A2 Mortalita' per tumori	A1 Mortalita' infantile	A4 Mortalita' per suicidi	A10 Stili di vita (PASSI)	A3 Mortalita' per malattie circolatorie
🟠	🟡	🟡	🟡	🟢

Bersaglio 2016

Analisi trend 2016

- 🟢 Migliorati (A): trend positivo
- 🟡 Stazionari (B)
- 🔴 Peggiorati (C): trend negativo

34,3%   34,3%   31,4%
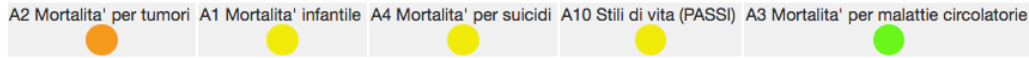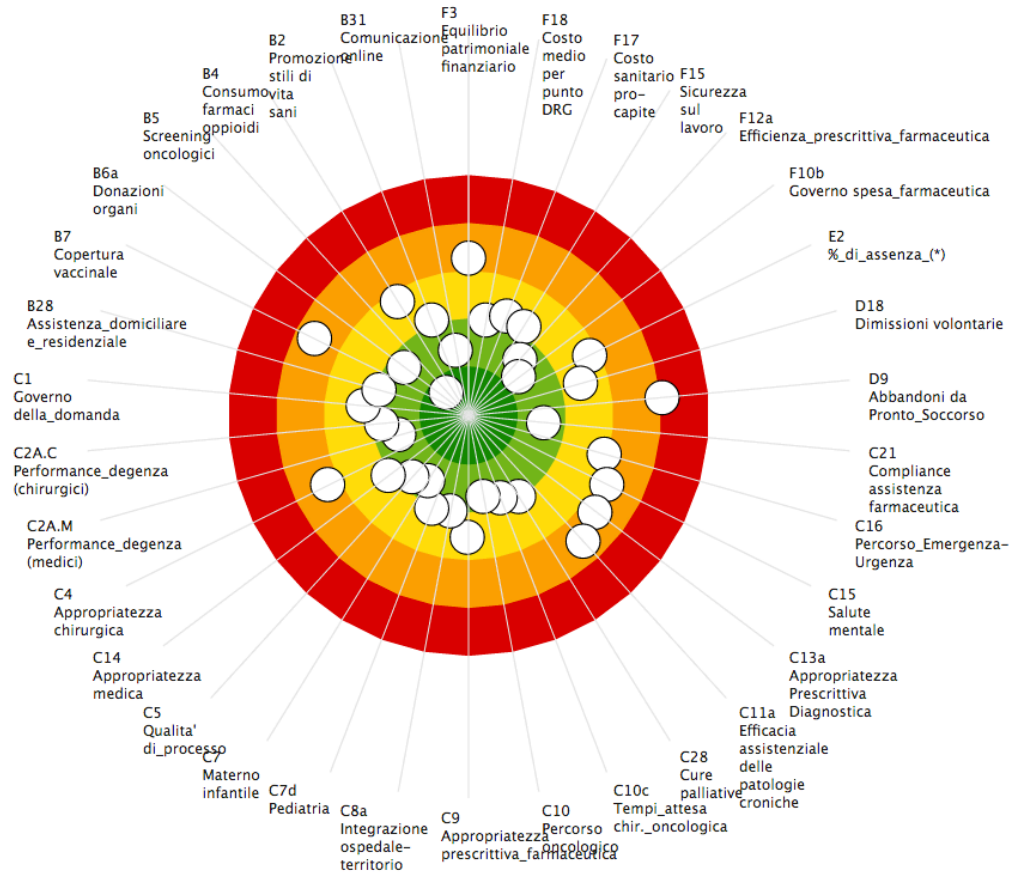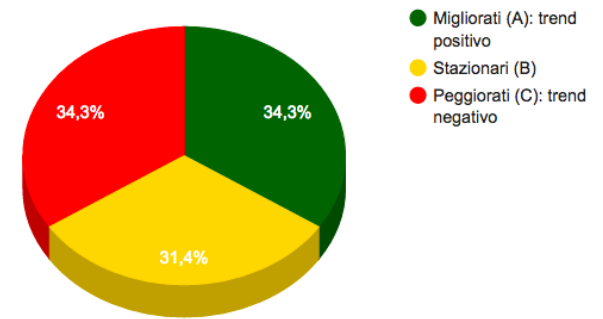
Totale indicatori: 105

FVG

Valutazione dello stato di salute della popolazione. Anni 2012-2014

A2 Mortalita' per tumori	A4 Mortalita' per suicidi	A10 Stili di vita (PASSI)	A1 Mortalita' infantile	A3 Mortalita' per malattie circolatorie
🟠	🟠	🟡	🟢	🟢

Bersaglio 2016

Analisi trend 2016

- 🟢 Migliorati (A): trend positivo
- 🟡 Stazionari (B)
- 🔴 Peggiorati (C): trend negativo
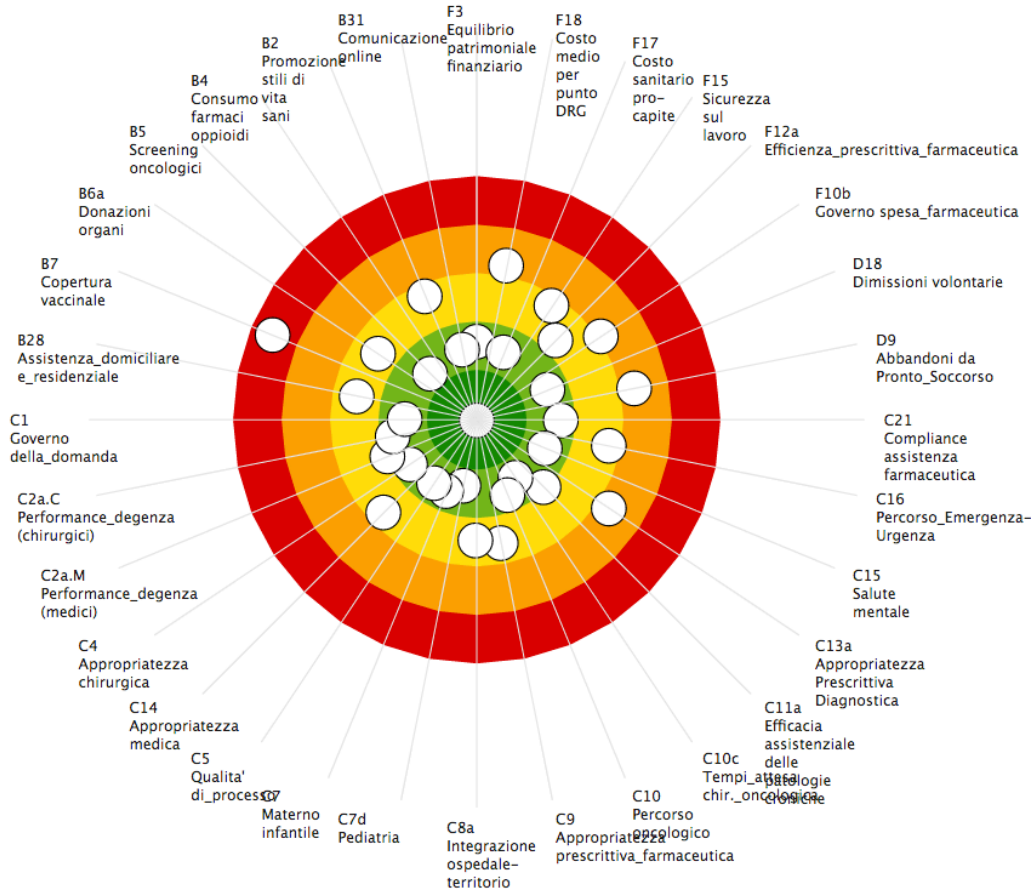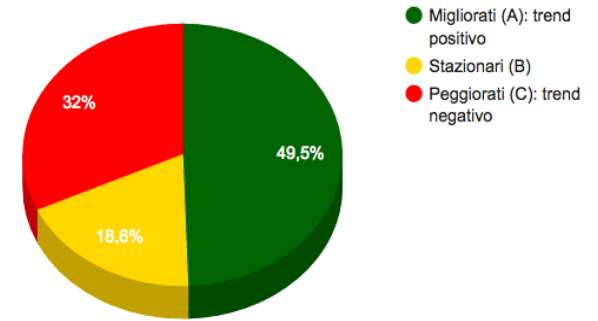
Totale indicatori: 97

Liguria

Valutazione dello stato di salute della popolazione. Anni 2012-2014

A10 Stili di vita (PASSI)

Bersaglio 2016

Analisi trend 2016

- Migliorati (A): trend positivo
- Stazionari (B)
- Peggiorati (C): trend negativo

32%

48,5%

19,4%

Totale indicatori: 103

Lombardia

Valutazione dello stato di salute della popolazione. Anni 2012-2014

A1 Mortalita' infantile

Bersaglio 2016

Analisi trend 2016

- Migliorati (A): trend positivo
- Stazionari (B)
- Peggiorati (C): trend negativo

46,8%
33,9%
19,4%

Totale indicatori: 62

- B4 Consumo farmaci oppioidi
- F15 Sicurezza sul lavoro
- F12a Efficienza_prescrittiva_farmaceutica
- B5 Screening oncologici
- D18 Dimissioni volontarie
- B7 Copertura vaccinale
- D9 Abbandoni da Pronto_Soccorso
- B28 Assistenza_domiciliare e_residenziale
- C21 Compliance assistenza farmaceutica
- C1 Governo della_domanda
- C16 Percorso_Emergenza–Urgenza
- C2a.C Performance_degenza (chirurgici)
- C15 Salute mentale
- C2a.M Performance_degenza (medici)
- C13a Appropriatezza Prescrittiva Diagnostica
- C4 Appropriatezza chirurgica
- C11a Efficacia assistenziale delle patologie croniche
- C14 Appropriatezza medica
- C10c Tempi_attesa chir._oncologica
- C5 Qualita' di_processo
- C10 Percorso oncologico
- C7 Materno infantile
- C9 Appropriatezza prescrittiva_farmaceutica
- C7d Pediatria
- C8a Integrazione ospedale–territorio

Marche

Valutazione dello stato di salute della popolazione.

A10 Stili di vita (PASSI)

Bersaglio 2016

- 🟢 Migliorati (A): trend positivo — 42,9%
- 🟡 Stazionari (B) — 18,7%
- 🔴 Peggiorati (C): trend negativo — 38,5%

Totale indicatori: 91

B2 Promozione stili di vita sani
B31 Comunicazione online
F3 Equilibrio patrimoniale finanziario
F18 Costo medio per punto DRG
F17 Costo sanitario pro-capite
F15 Sicurezza sul lavoro
B4 Consumo farmaci oppioidi
F12a Efficienza_prescrittiva_farmaceutica
B7 Copertura vaccinale
F10b Governo spesa_farmaceutica
B28 Assistenza_domiciliare e_residenziale
E2 %_di_assenza_(*)
C1 Governo della_domanda
D18 Dimissioni volontarie
C2a.C Performance_degenza (chirurgici)
D9 Abbandoni da Pronto_Soccorso
C2a.M Performance_degenza (medici)
C21 Compliance assistenza farmaceutica
C4 Appropriatezza chirurgica
C16 Percorso_Emergenza–Urgenza
C14 Appropriatezza medica
C15 Salute mentale
C5 Qualita' di_processo
C13a Appropriatezza Prescrittiva Diagnostica
C7 Materno infantile
C11a Efficacia assistenziale delle patologie croniche
C7d Pediatria
C10c Tempi_attesa chir._oncologico
C8a Integrazione ospedale–territorio
C10 Percorso oncologico
C9 Appropriatezza prescrittiva_farmaceutica

Puglia

Valutazione dello stato di salute della popolazione. Anni 2012-2014

A1 Mortalita' infantile	A10 Stili di vita (PASSI)	A3 Mortalita' per malattie circolatorie	A2 Mortalita' per tumori	A4 Mortalita' per suicidi
🟠	🟡	🟡	🟢	🟢

Bersaglio 2016

Analisi trend 2016

- 🟢 Migliorati (A): trend positivo
- 🟡 Stazionari (B)
- 🔴 Peggiorati (C): trend negativo

27,4%
54,8%
17,8%

Totale indicatori: 73

B31 Comunicazione online
F3 Equilibrio patrimoniale finanziario
F17 Costo sanitario pro-capite
F12a Efficienza_prescrittiva_farmaceutica
F10b Governo spesa_farmaceutica
B2 Promozione stili di vita sani
B4 Consumo farmaci oppioidi
E2 %_di_assenza_(*)
B6a Donazioni organi
D18 Dimissioni volontarie
B7 Copertura vaccinale
D9 Abbandoni da Pronto_Soccorso
B28 Assistenza_domiciliare e_residenziale
C21 Compliance assistenza farmaceutica
C1 Governo della_domanda
C16 Percorso_Emergenza–Urgenza
C2a.C Performance_degenza (chirurgici)
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C2a.M Performance_degenza (medici)
C13a Appropriatezza Prescrittiva Diagnostica
C4 Appropriatezza chirurgica
C11a Efficacia assistenziale delle patologie croniche
C14 Appropriatezza medica
C28 Cure palliative
C5 Qualita' di_processo
C10c Tempi_attesa chir._oncologica
C7 Materno infantile
C7d Pediatria
C8a Integrazione ospedale–territorio
C9 Appropriatezza prescrittiva_farmaceutica
C10 Percorso oncologico

Toscana

Valutazione dello stato di salute della popolazione. Anni 2012-2014

A2 Mortalita' per tumori	A10 Stili di vita (PASSI)	A4 Mortalita' per suicidi	A1 Mortalita' infantile	A3 Mortalita' per malattie circolatorie
🟡	🟡	🟢	🟢	🟢

Bersaglio 2016

Analisi trend 2016

- 🟢 Migliorati (A): trend positivo
- 🟡 Stazionari (B)
- 🔴 Peggiorati (C): trend negativo

43,3%

38,5%

18,3%

Totale indicatori: 104

B31 Comunicazione online
B2 Promozione stili di vita sani
B4 Consumo farmaci oppioidi
F3 Equilibrio patrimoniale finanziario
F18 Costo medio per punto DRG
F17 Costo sanitario pro-capite
F15 Sicurezza sul lavoro
F12a Efficienza_prescrittiva_farmaceutica
B5 Screening oncologici
B6a Donazioni organi
E2 %_di_assenza_(*)
B7 Copertura vaccinale
D18 Dimissioni volontarie
B28 Assistenza_domiciliare e_residenziale
D9 Abbandoni da Pronto_Soccorso
C1 Governo della_domanda
C21 Compliance assistenza farmaceutica
C2a.C Performance_degenza (chirurgici)
C16 Percorso_Emergenza–Urgenza
C2a.M Performance_degenza (medici)
C15 Salute mentale
C4 Appropriatezza chirurgica
C13a Appropriatezza Prescrittiva Diagnostica
C14 Appropriatezza medica
C11a Efficacia assistenziale delle patologie croniche
C5 Qualita' di_processo
C28 Cure palliative
C6 Materno infantile
C10c Tempi_attesa chir._oncologica
C7d Pediatria
C10 Percorso oncologico
C8a Integrazione ospedale–territorio
C9 Appropriatezza prescrittiva_farmaceutica

Umbria

Valutazione dello stato di salute della popolazione. Anni 2012-2014

A4 Mortalita' per suicidi	A2 Mortalita' per tumori	A1 Mortalita' infantile	A3 Mortalita' per malattie circolatorie
🟡	🟢	🟢	🟢

Bersaglio 2016

Analisi trend 2016

- 🟢 Migliorati (A): trend positivo
- 🟡 Stazionari (B)
- 🔴 Peggiorati (C): trend negativo

48%
33,3%
18,7%

Totale indicatori: 75

Indicatori del bersaglio:

- F12a Efficienza_prescrittiva_farmaceutica
- F10b Governo spesa_farmaceutica
- D18 Dimissioni volontarie
- D9 Abbandoni da Pronto_Soccorso
- C21 Compliance assistenza farmaceutica
- C16 Percorso_Emergenza-Urgenza
- C15 Salute mentale
- C13a Appropriatezza Prescrittiva Diagnostica
- C11a Efficacia assistenziale delle patologie croniche
- C28 Cure palliative
- C10c Tempi_attesa chir._oncologica
- C10 Percorso oncologico
- C9 Appropriatezza prescrittiva_farmaceutica
- C8a Integrazione ospedale-territorio
- C7d Pediatria
- C7 Materno infantile
- C5 Qualita' di_processo
- C14 Appropriatezza medica
- C4 Appropriatezza chirurgica
- C2a.M Performance_degenza (medici)
- C2a.C Performance_degenza (chirurgici)
- C1 Governo della_domanda
- B28 Assistenza_domiciliare e_residenziale
- B4 Consumo farmaci oppioidi
- B31 Comunicazione online

26

Veneto

Valutazione dello stato di salute della popolazione. Anni 2012-2014

A2 Mortalita' per tumori	A4 Mortalita' per suicidi	A10 Stili di vita (PASSI)	A1 Mortalita' infantile	A3 Mortalita' per malattie circolatorie
🟡	🟡	🟡	🟢	🟢

Bersaglio 2016

Analisi trend 2016

- 🟢 Migliorati (A): trend positivo
- 🟡 Stazionari (B): trend negativo
- 🔴 Peggiorati (C): trend negativo

53,5%
23,8%
22,8%

Totale indicatori: 101

Indicatori del bersaglio:

B31 Comunicazione online
F3 Equilibrio patrimoniale finanziario
F18 Costo medio per punto DRG
F17 Costo sanitario pro-capite
F15 Sicurezza sul lavoro
F12a Efficienza_prescrittiva_farmaceutica
F10b Governo spesa_farmaceutica
E2 %_di_assenza_(*)
D18 Dimissioni volontarie
D9 Abbandoni da Pronto_Soccorso
C21 Compliance assistenza farmaceutica
C16 Percorso_Emergenza–Urgenza
C15 Salute mentale
C13a Appropriatezza Prescrittiva Diagnostica
C11a Efficacia assistenziale delle patologie croniche
C28 Cure palliative
C10c Tempi_attesa chir._oncologica
C10 Percorso oncologico
C9 Appropriatezza prescrittiva_farmaceutica
C8a Integrazione ospedale–territorio
C7d Pediatria
C7 Materno infantile
C5 Qualita' di_processo
C14 Appropriatezza medica
C4 Appropriatezza chirurgica
C2a.M Performance_degenza (medici)
C2a.C Performance_degenza (chirurgici)
C1 Governo della_domanda
B28 Assistenza_domiciliare e_residenziale
B7 Copertura vaccinale
B6a Donazioni organi
B5 Screening oncologici
B4 Consumo farmaci oppioidi
B2 Promozione stili di vita sani

Lessons learned…

To include variation management in the regional governance systems…

To set priorities in the planning phase…

4) Setting challening targets and conducting fair evaluation

ARTICLE IN PRESS

How to set challenging goals and conduct fair evaluation in regional public health systems. Insights from Valencia and Tuscany Regions

Milena Vainieri [a,*], Federico Vola [a], Gregorio Gomez Soriano [b], Sabina Nuti [a]

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[b] Conselleria de Sanidad Universal y Salud Pública, Valencia Region, Spain

ARTICLE INFO

ABSTRACT

The definition of "the right targets" and the way the evaluation of results is performed affect the willingness to commit to new challenges, which is a factor that influences the relationship between goal setting and performance results. Indeed, some authors claim that the choice of an inappropriate goal-setting procedure is a major cause of failure of management control systems. Goal setting theorists found that assigning a specific and challenging goal leads to higher performance than (a) an easy goal, (b) a general goal or (c) no goal setting. Despite this evidence, yet, few proposals concern the definition of what is "challenging". This paper focuses on two issues: (a) what is to be considered a challenging goal and (b) what is a "fair evaluation" in the health care sector. This work suggests that benchmarking is a valid support to solve the previous dilemmas. Relying on two Regional European advanced experiences – Valencia in Spain and Tuscany in Italy –, this paper aims to provide conceptual methods that can help managers define challenging goals and conduct fair evaluation about their achievement. Although these Regions adopted different governance models, both of them applied very similar techniques, which seem to be associated to an improvement of their performance and a reduction of unwarranted variation.

1. Introduction

Goals have pervasive influence on employees' behavior and in turn on organizational performance. This basic assumption of goal setting theory – developed by Locke and Latham at the end of the 80s for the individual level –, has been analyzed for the organization and system levels by control management scholars. Literature and experience

on goal setting showed that assigning targets is not sufficient. For instance, the experience of Health for all program, launched by the WHO in mid-80s [1], that set targets to member states and renewed them in the mid-1990s with the Health21 policy framework [2], flawed in some countries and in some areas [3]. Scholars that analyzed this case [4] stated that some strategies were not met because of: the lack of involvement of key actors at the grass-roots levels; the shift of power and responsibilities from the central to the regional level [5]; the lack of the "right targets" in terms of prioritization, reflecting the specificity of countries and in terms of identification of the correct effort to be required. All these elements are also found in general literature on performance management [6]. Indeed, the adoption

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E-mail address: m.vainieri@sssup.it (M. Vainieri).

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

- Massa LHA 107.9
- Prato LHA 44.0
- Lucca LHA 53.5
- Pistoia LHA 54.6
- Viareggio LHA 41.3
- Firenze LHA 40.1
- Empoli LHA 33.2
- Pisa LHA 108.8
- Arezzo LHA 20.0
- Livorno LHA 50.9
- Siena LHA 44.0
- Grosseto LHA 48.2

Legend:
- > 79.39
- 63.18 - 79.39
- 46.98 - 63.18
- 30.77 - 46.98
- < 30.77
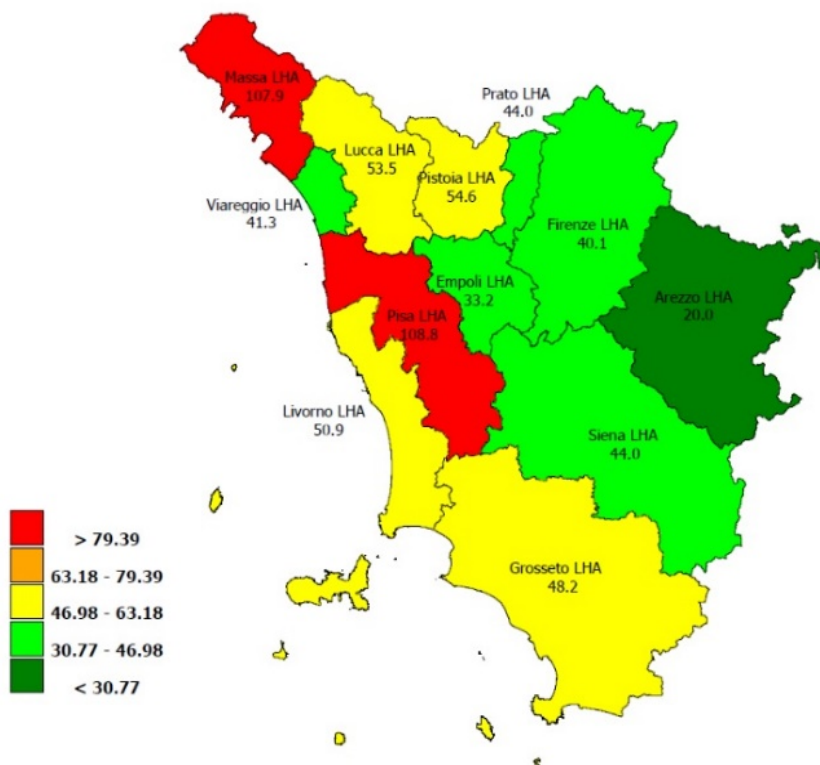
Major diabetes-related major amputation rate per million residents in Tuscan Local Health Authorities (LHAs), 2009-2011
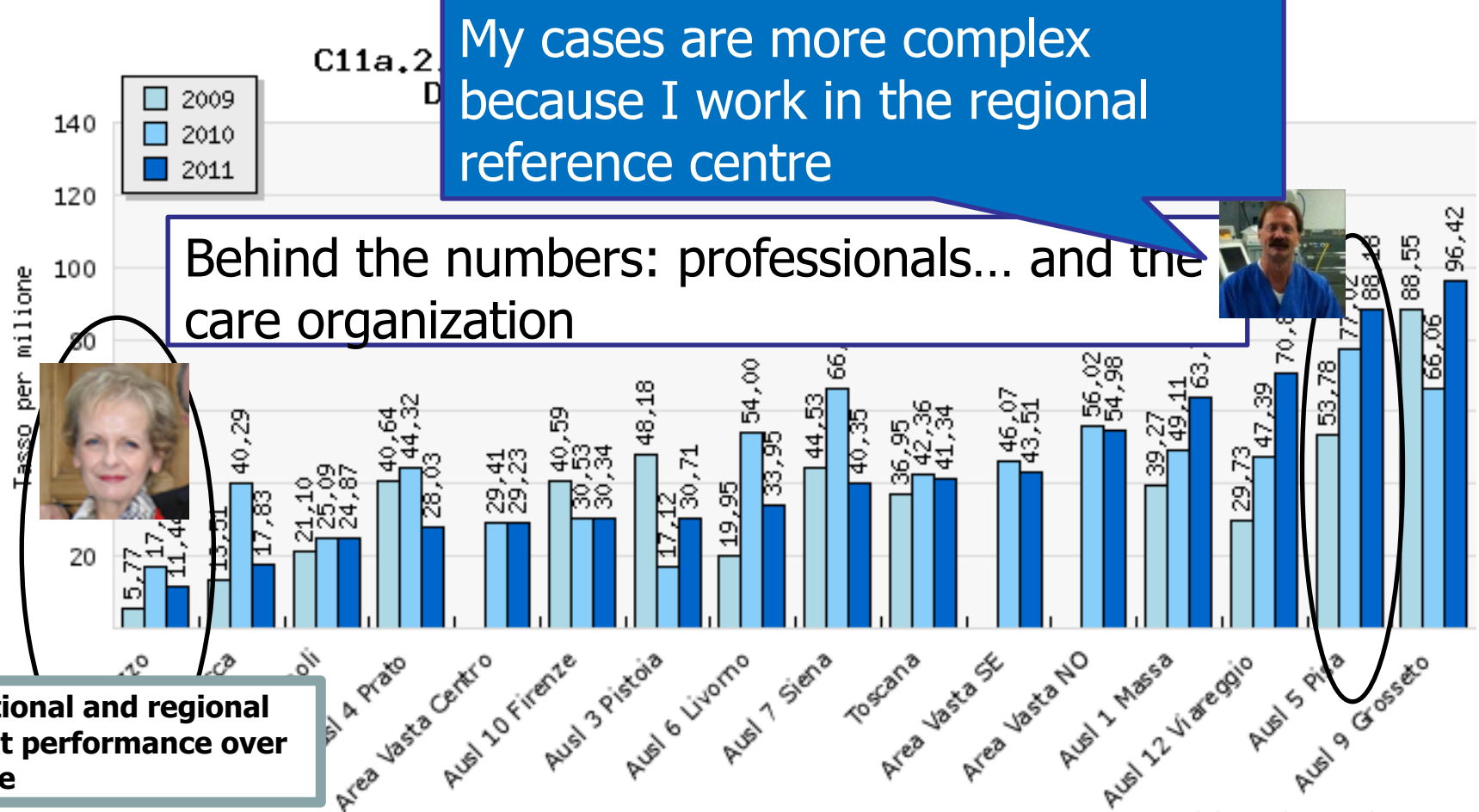
Differences could not be fully explained by the diabetes prevalence across LHAs

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

RESEARCH AND THEORY

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

Sabina Nuti*, Barbara Bini*, Tommaso Grillo Ruggieri*, Alberto Piaggesi† and Lucia Ricci†

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
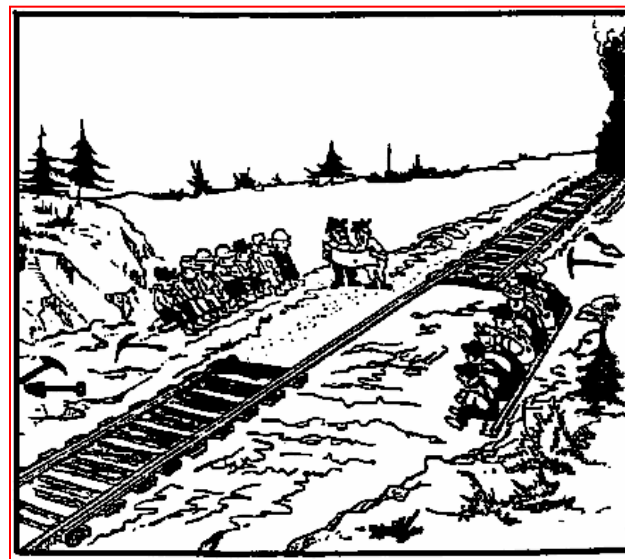
The impact on the performance evaluation system…

Strategy ⟷ assessment

value for patients and population

Performance Evaluation Systems (PES)
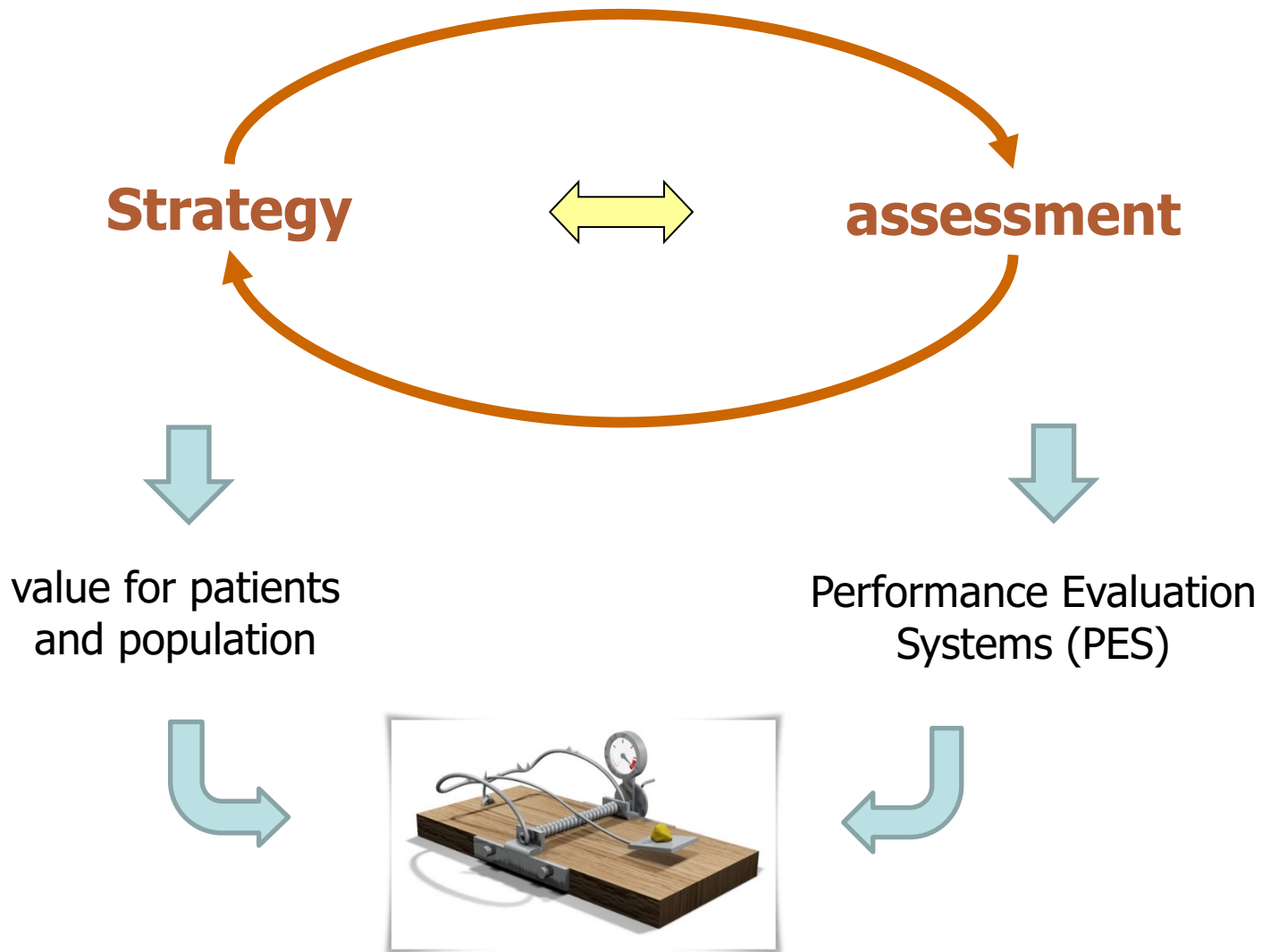
PARADIGM SHIFTs

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
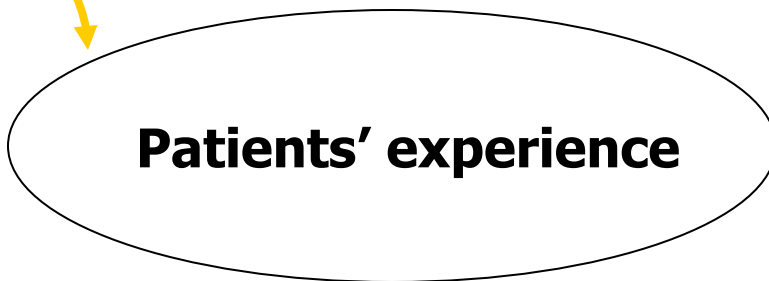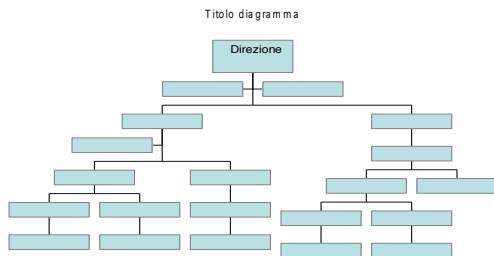
The quality and safety paradigm

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).

Gray (2013), The Art of Medicine. The shift to personalised and population medicine. The Lancet, 382: 200-201
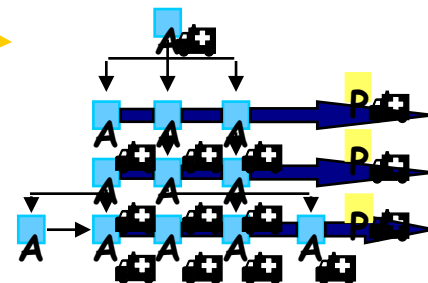
Patient experience should be the starting point to achieve a high quality care. Coherently, healthcare performance evaluation systems, driving the change in line with the main strategic goals, should be designed considering the patient perspective.

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).

© Canadian Partnership Against Cancer Corporation

Coulter A, Fitzpatrick R, Cornwell J.*The Point of Care Measures of patients' experience in hospital: purpose, methods and uses. The Kings Fund July 2009 https://www.kingsfund.org.uk/sites/files/kf/*
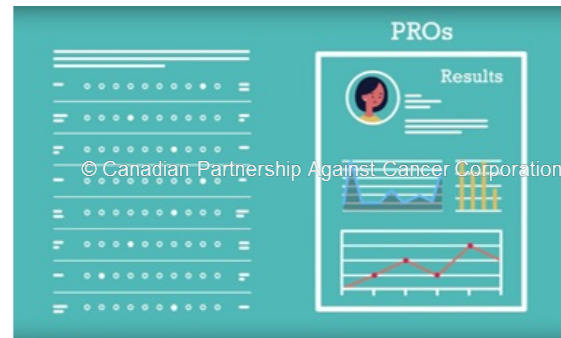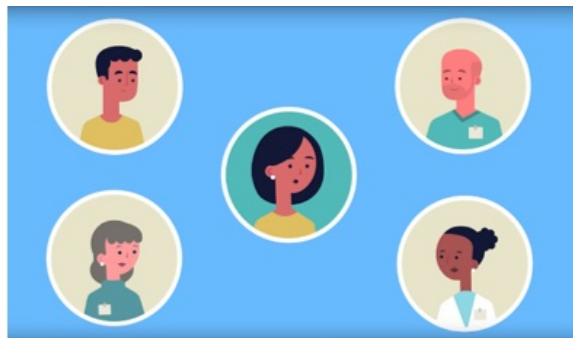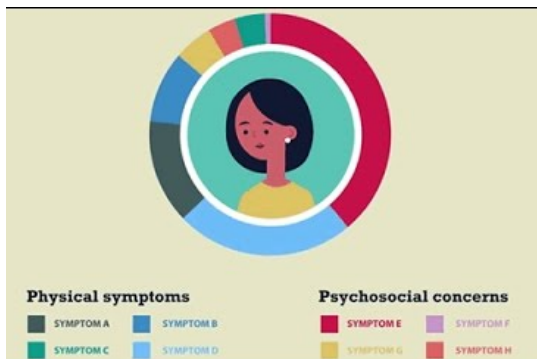
Let's play the patient's music....

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

From Siloes to Pathway
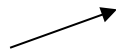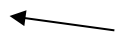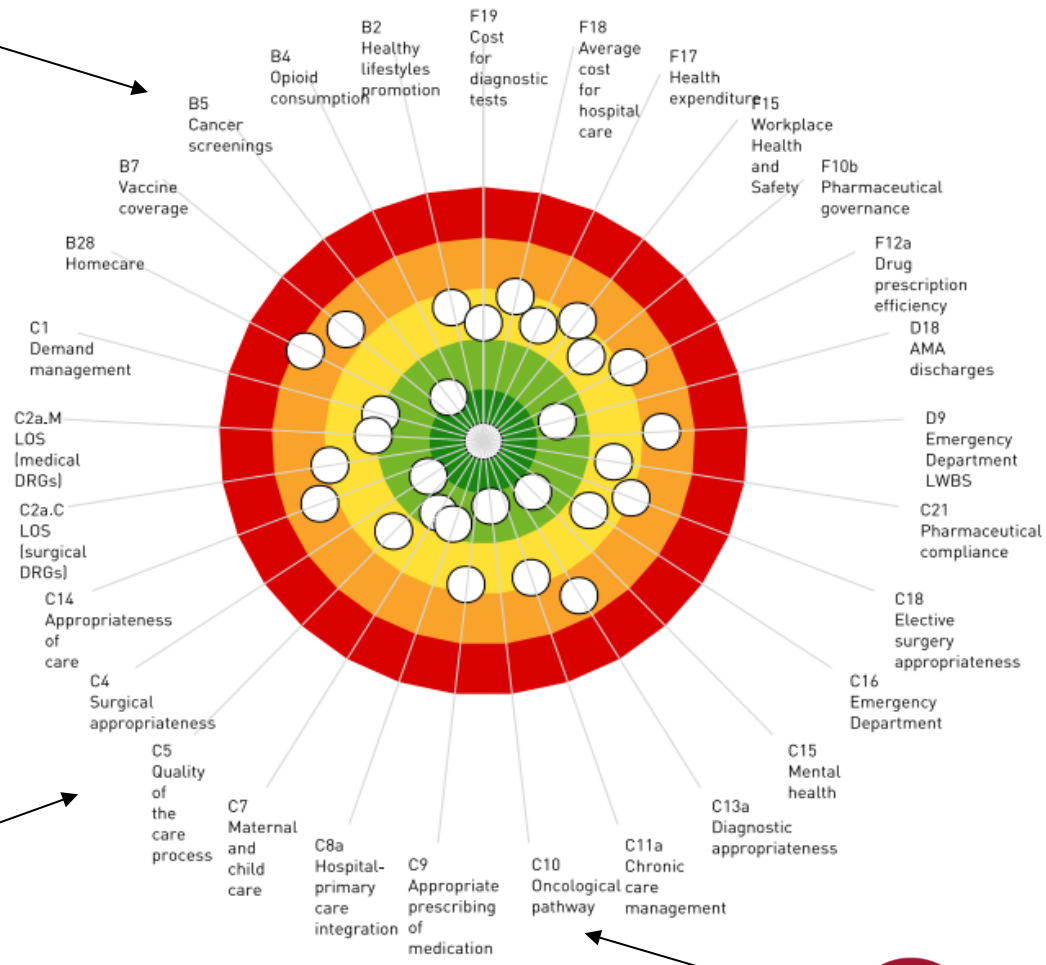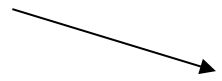
Teaching Hospitals

Hospitals

Primary care
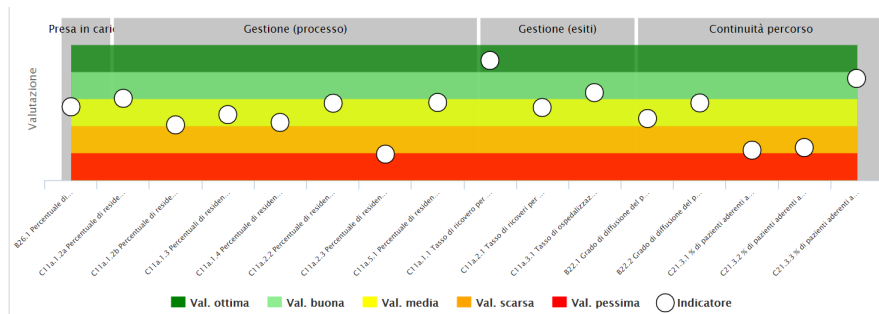
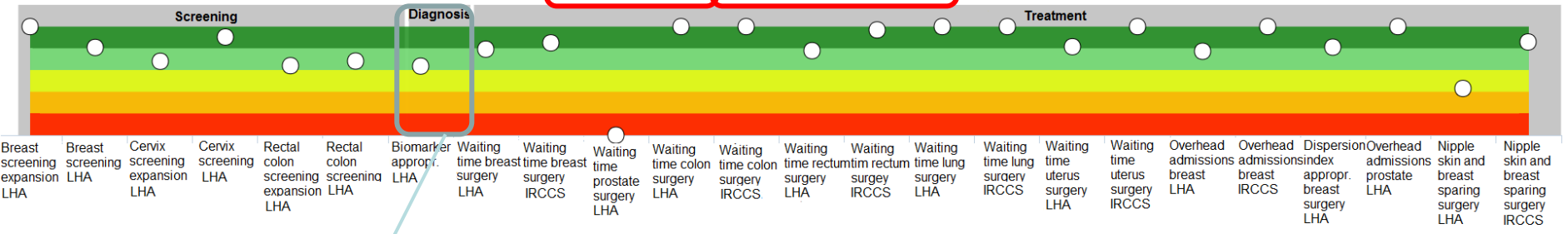|	Experience	Outcome	Adherence
Patients	PREMs	PROMs	…
Caregivers	…	…	…
Professionals	…	…	…

Reframing the PES system: The Oncologic Care Pathway
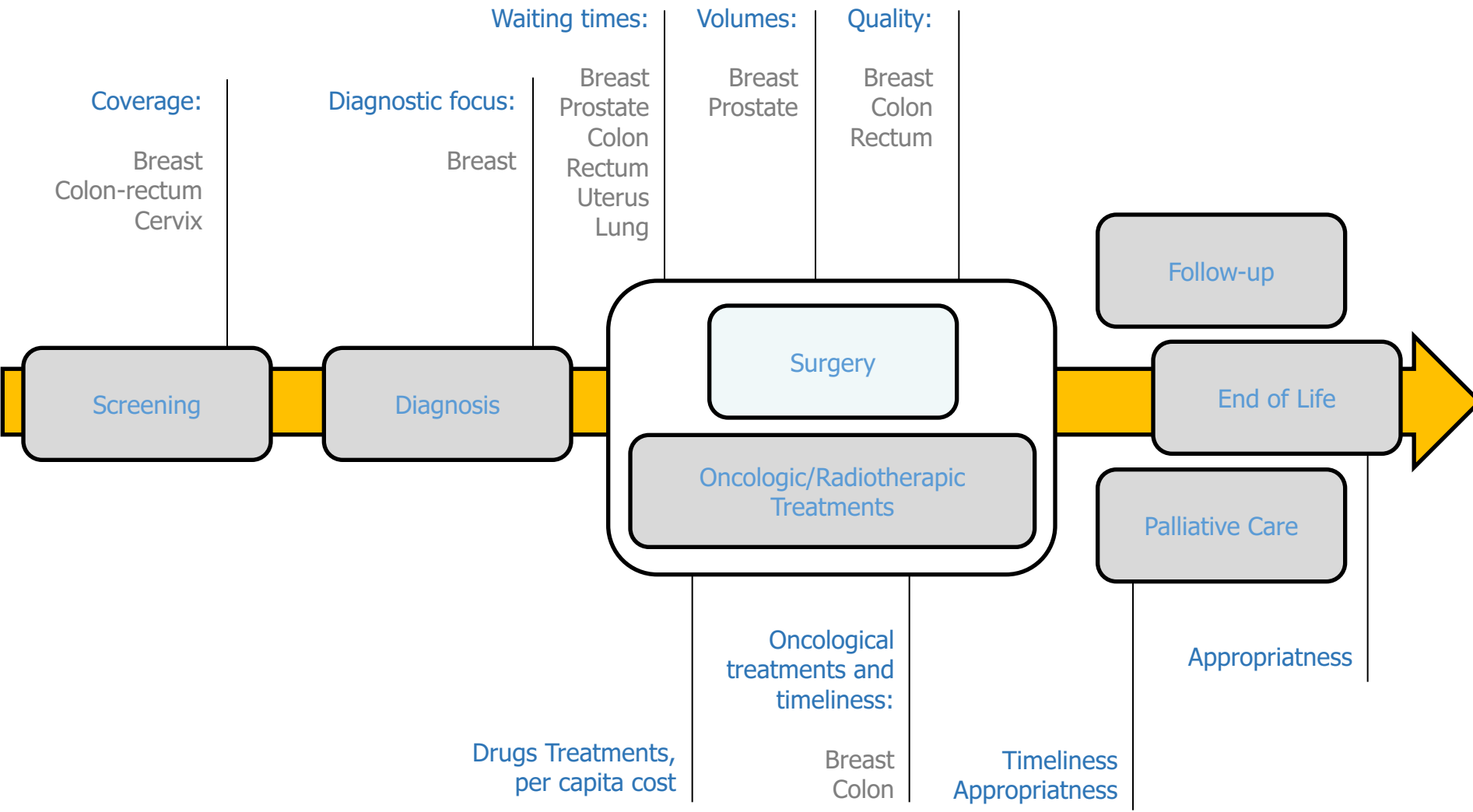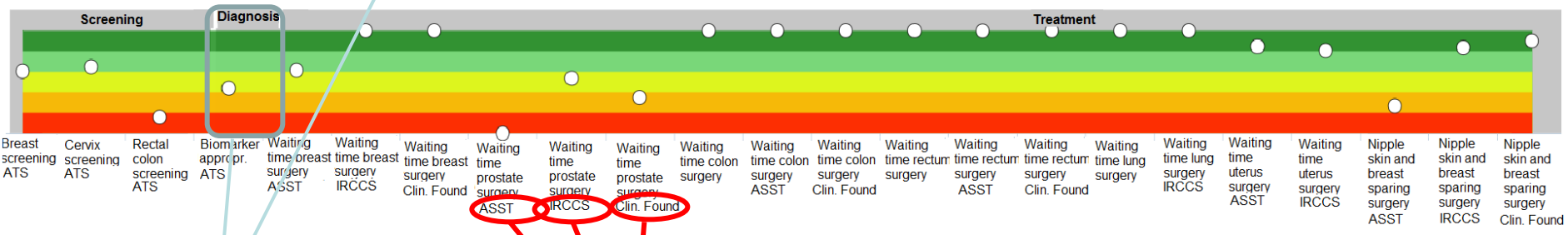
Reframing the PES system - The «Stave»

Unit of analysis: geographic area

Set of indicators selected based on a **patient perspective**
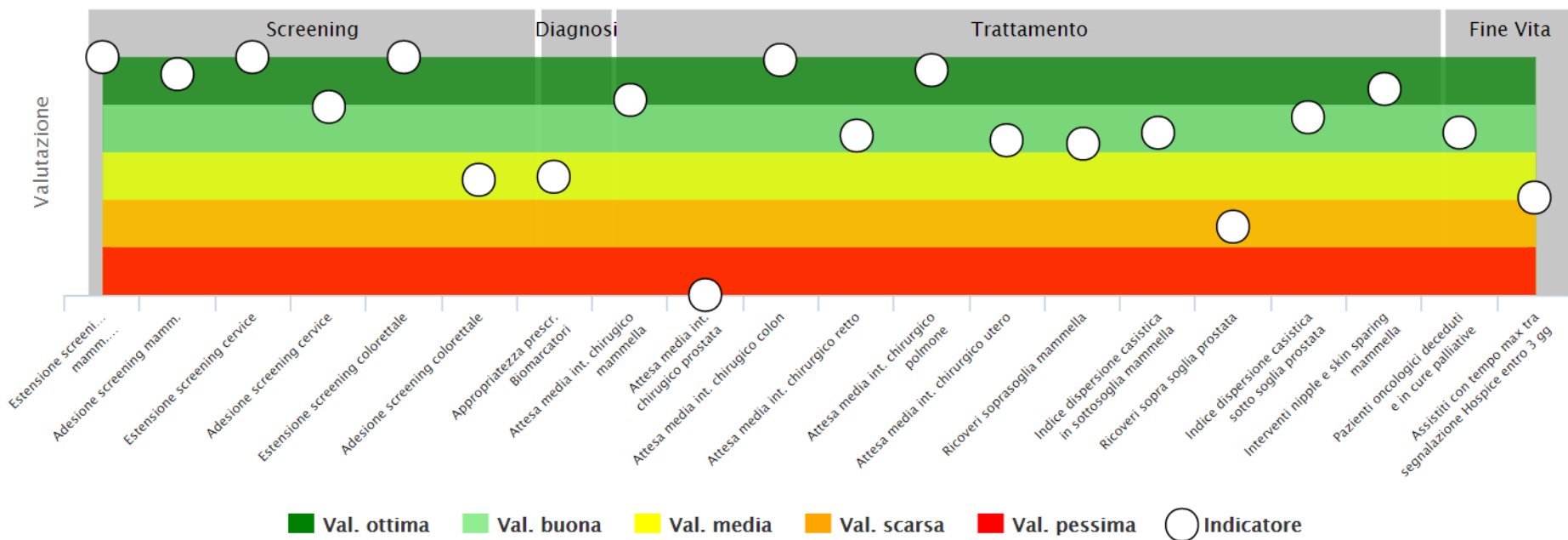
Western FVG   Oncological Pathway

Possibility to focus on each **pathway phase**

- **Multiple providers involved** in the service delivery
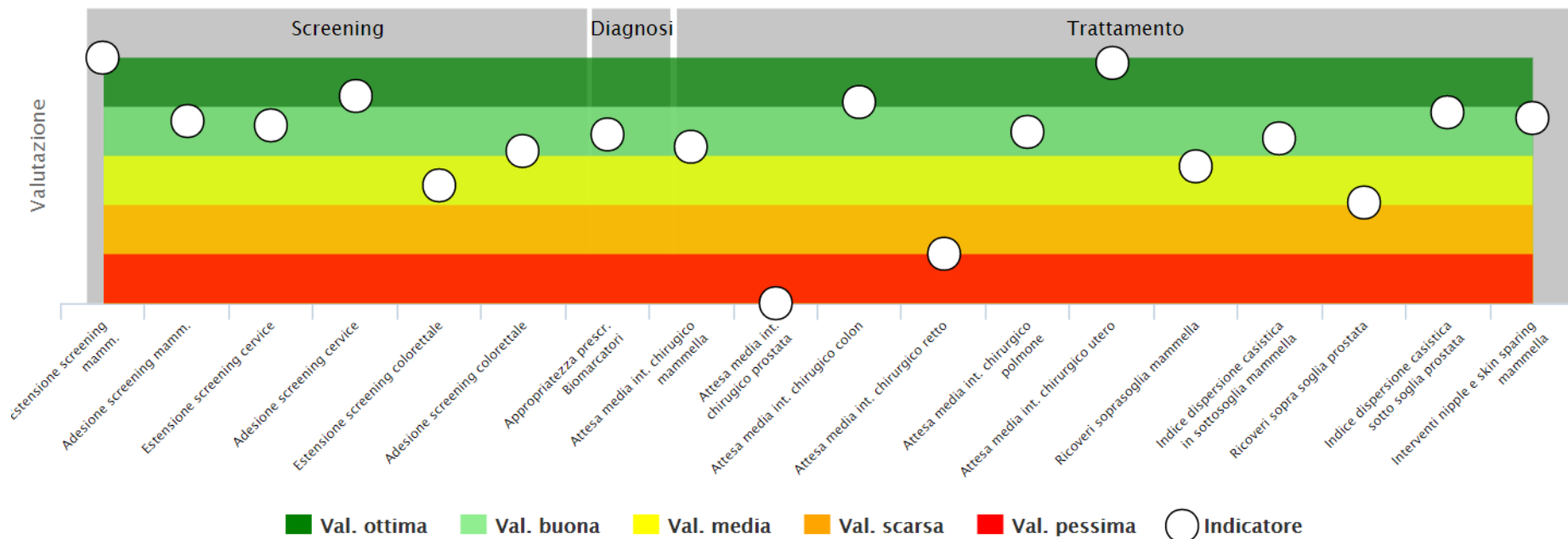- Multiple providers providing the **same services** in a specific geographic area
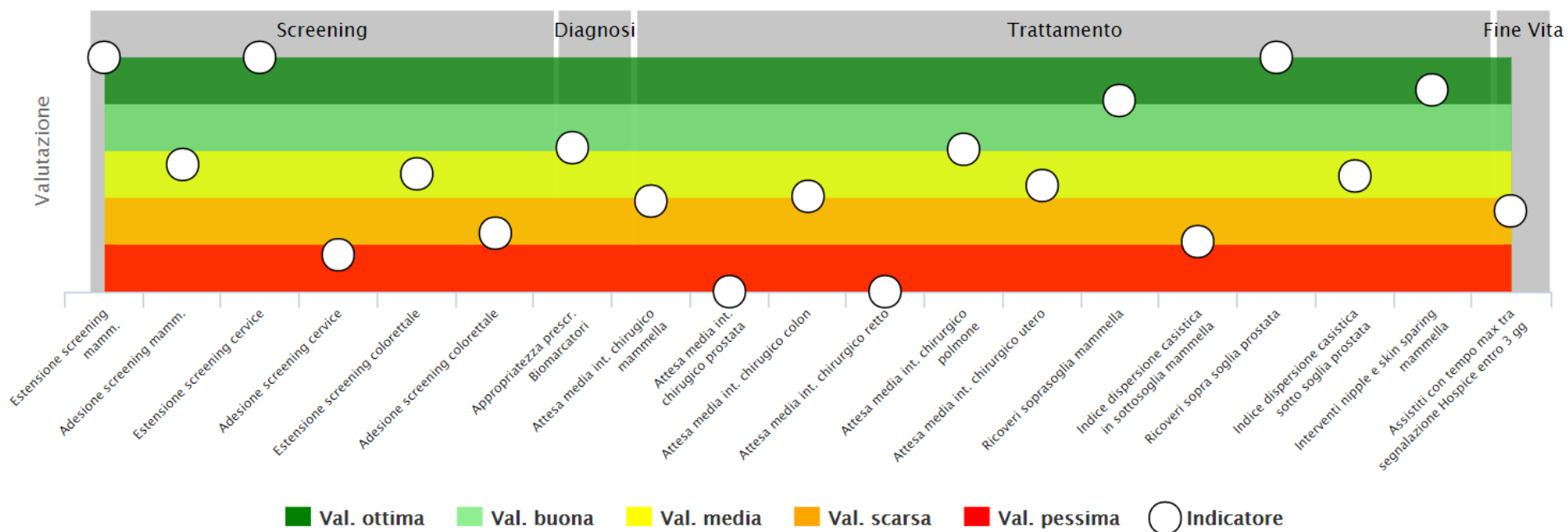
Emilia–Romagna – Il percorso Oncologico
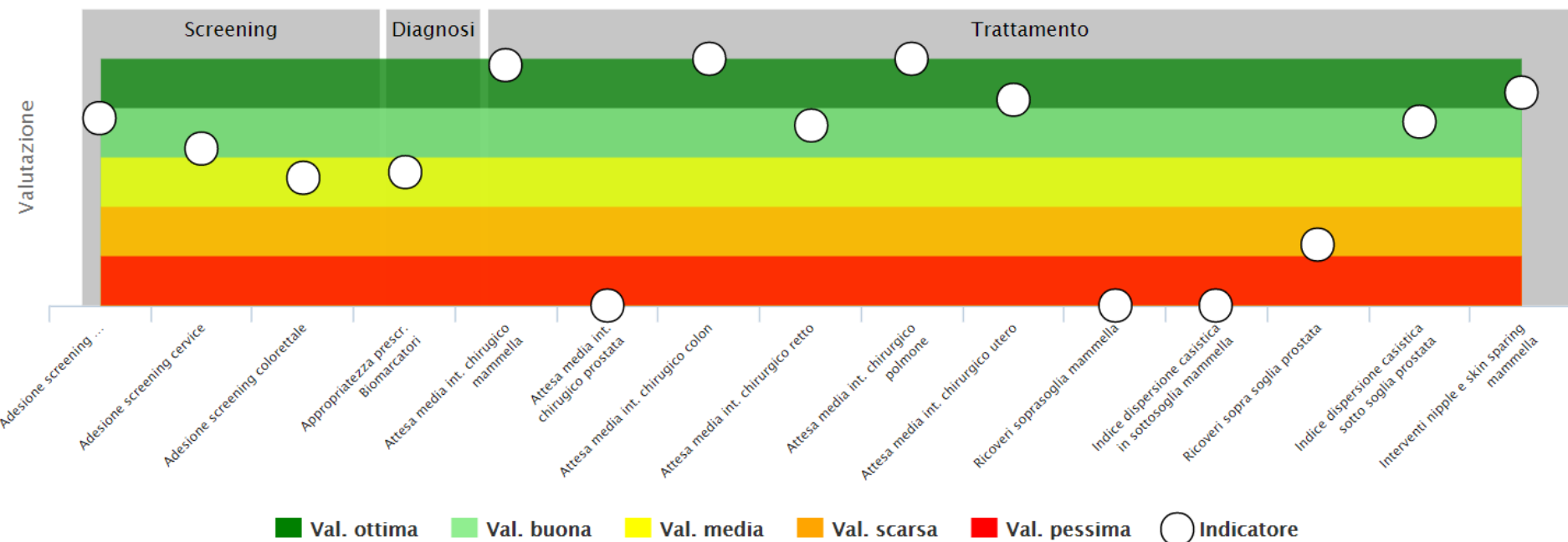
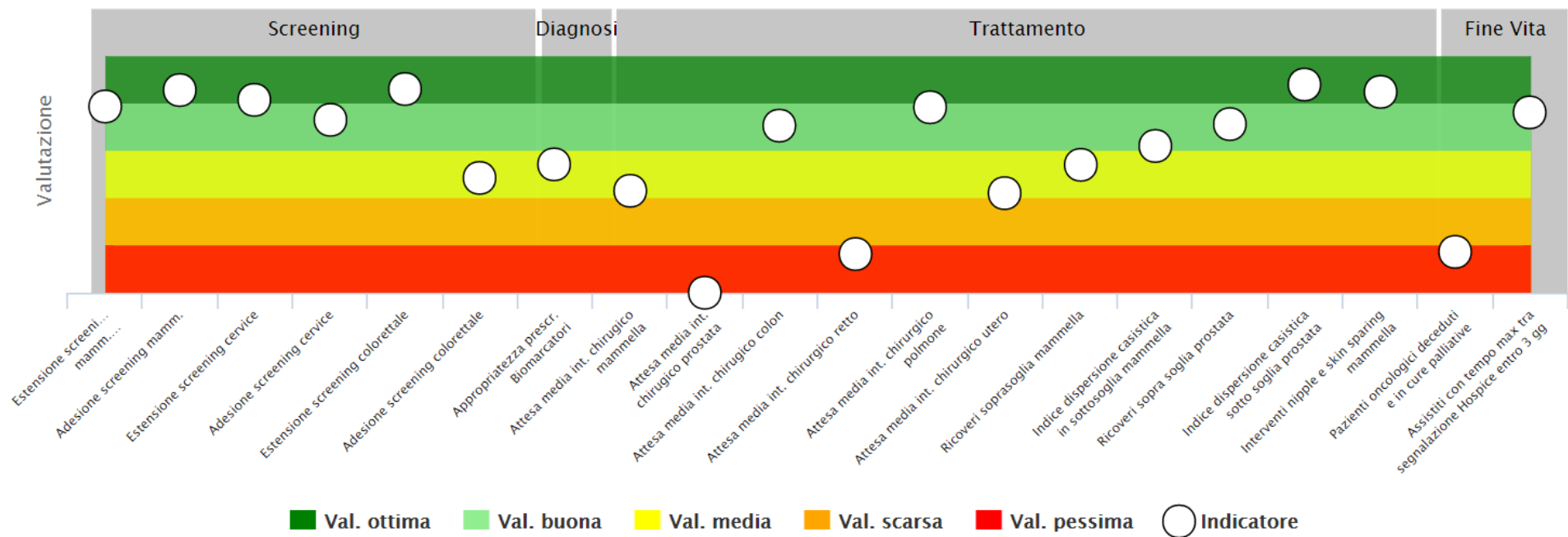FVG – Il percorso Oncologico

Liguria – Il percorso Oncologico

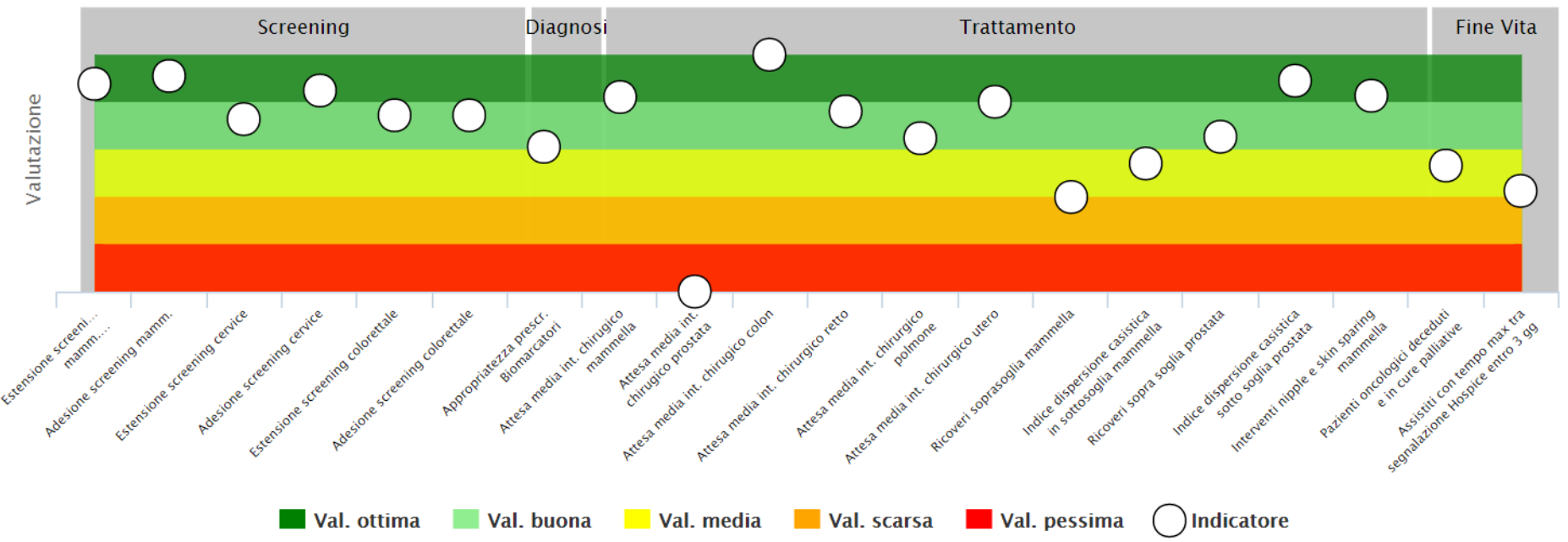Lombardia – Il percorso Oncologico

Toscana – Il percorso Oncologico

Veneto – Il percorso Oncologico

*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

Care-pathway

Multiple-providers
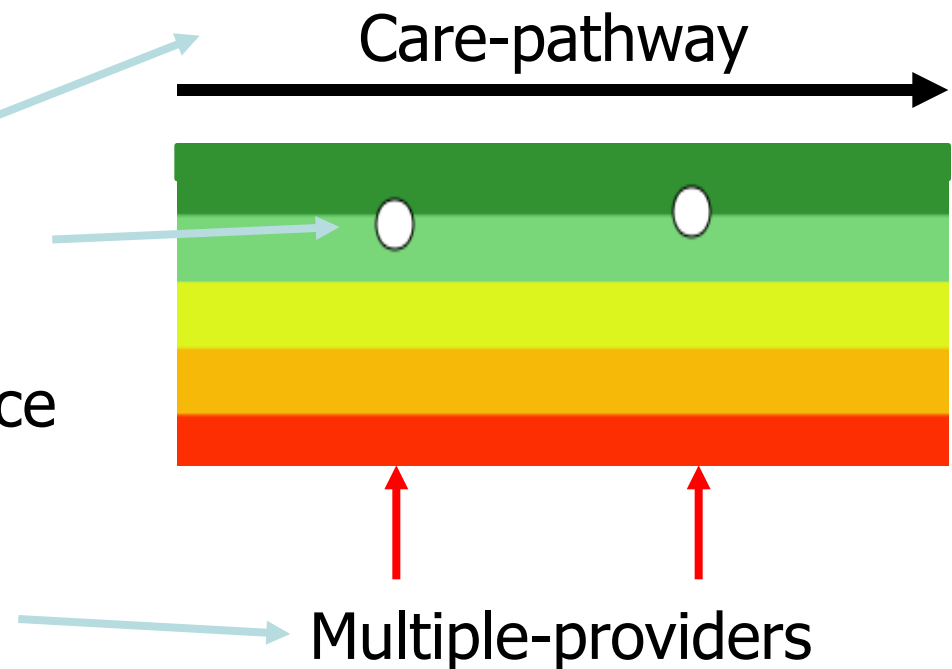
Reccomendations

- 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

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