



The State of Care Integration in Estonia

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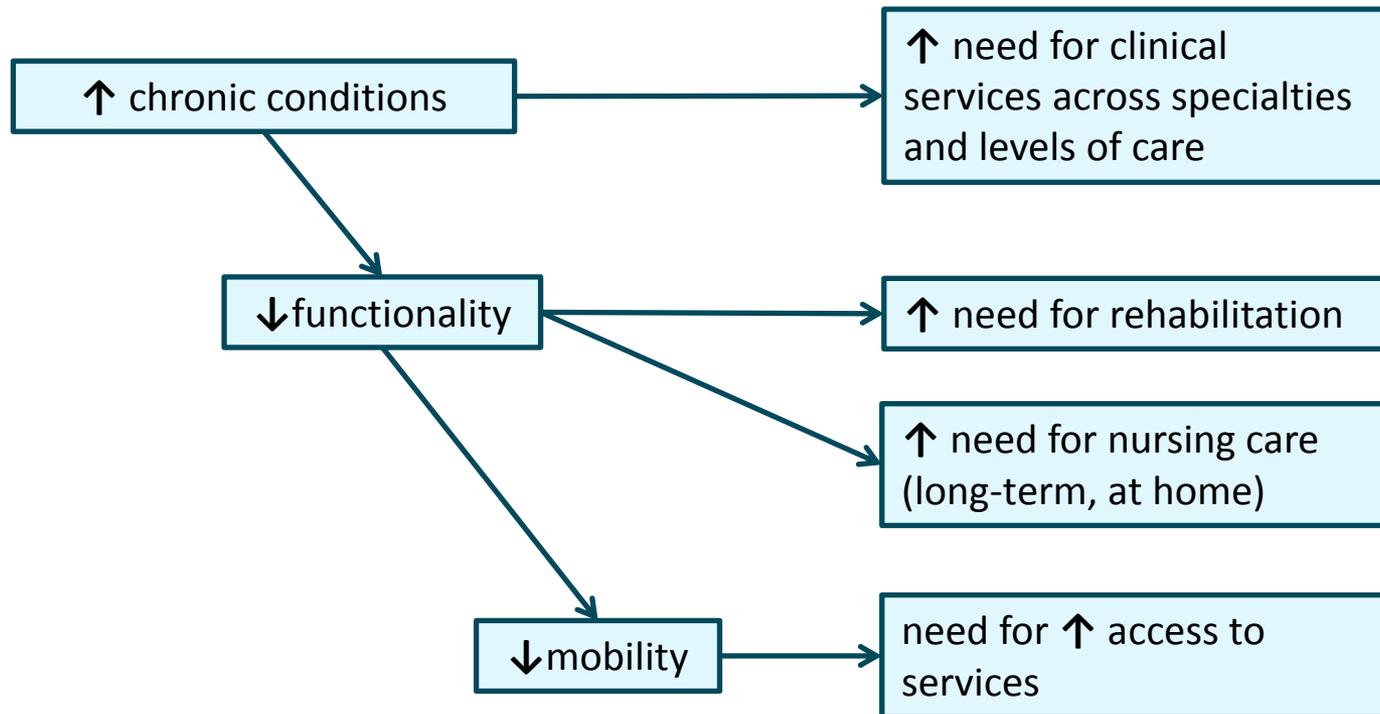
Good health at low cost



Health outcomes:
Close to EU-15 average
Health expenditure:
Lowest among EU15

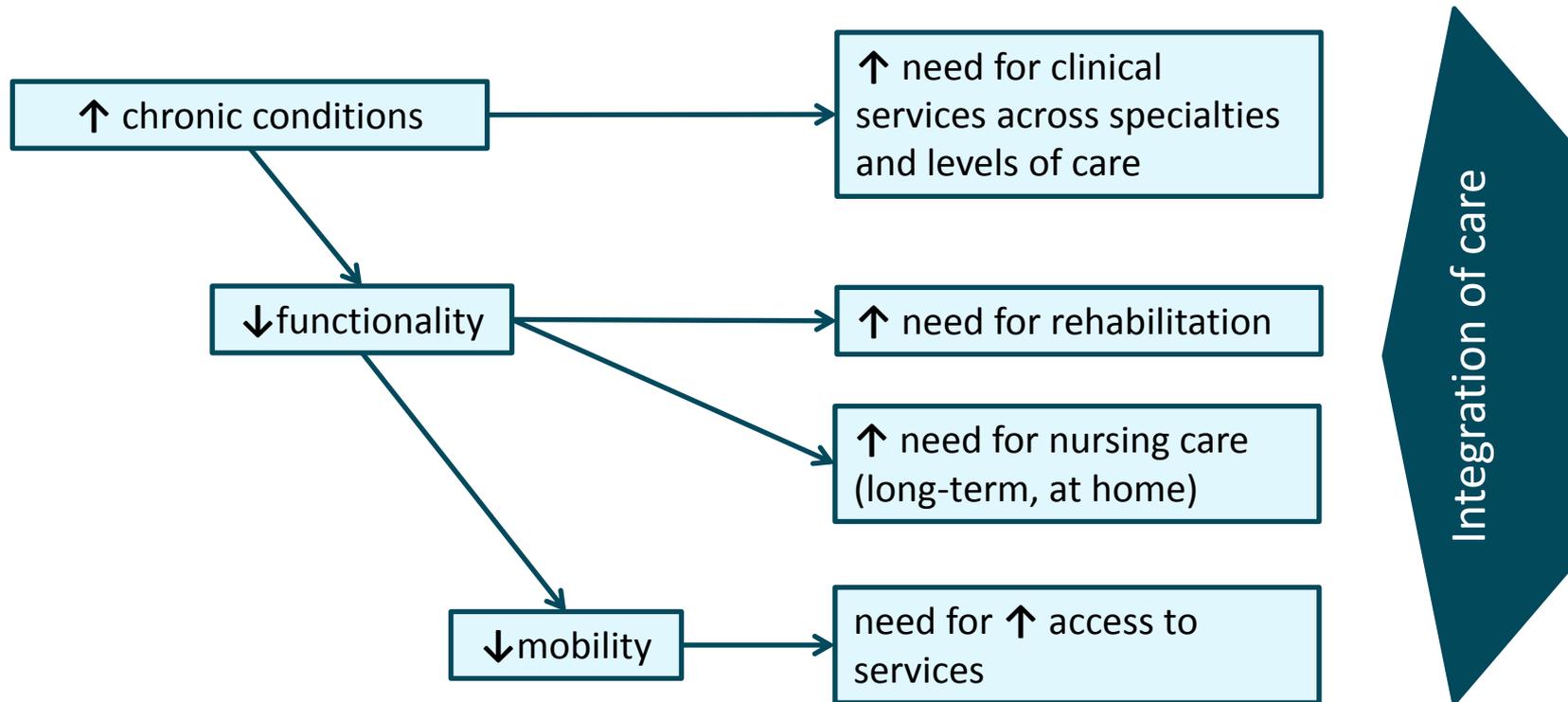


Changes in demand for health care due to population ageing and rise of non-communicable diseases



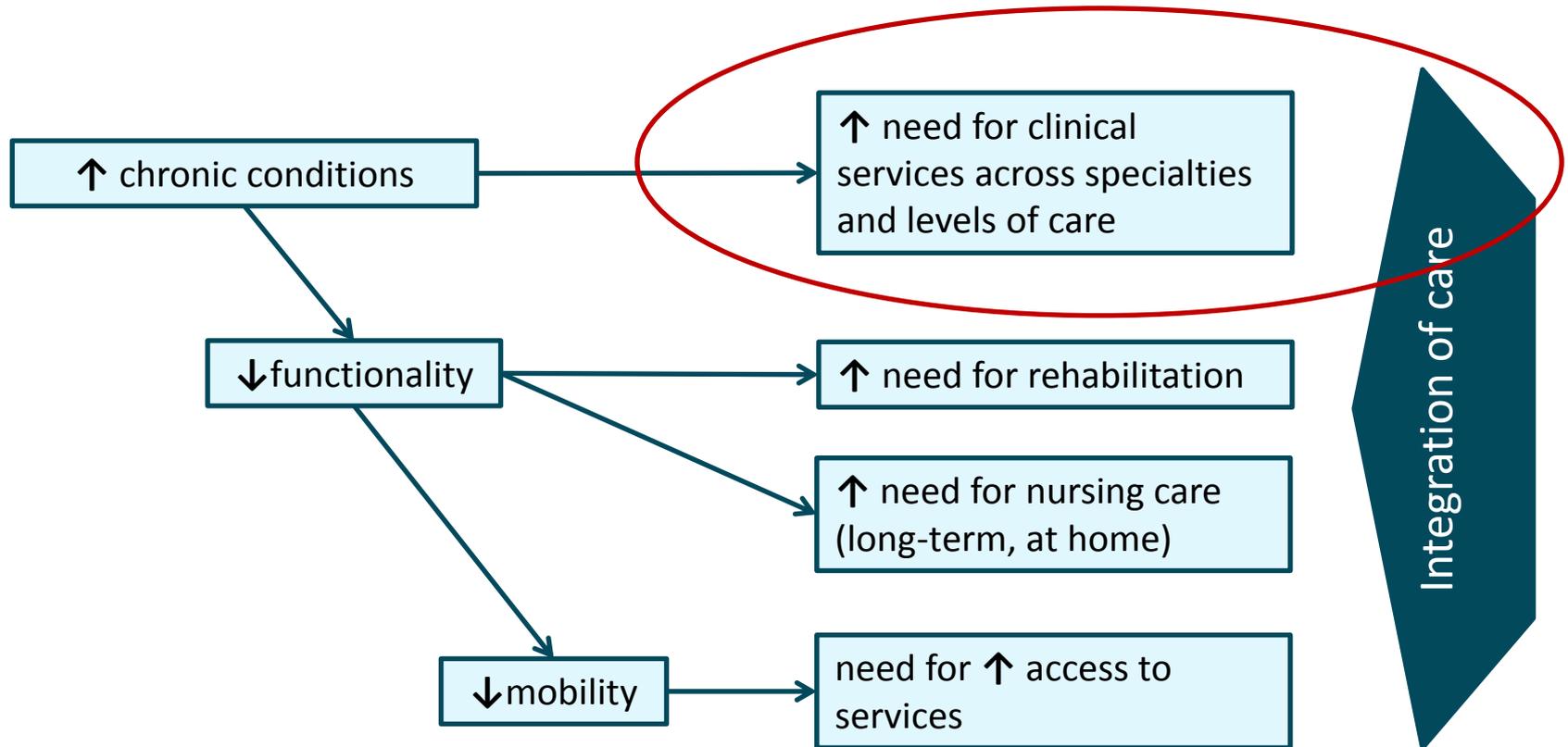


... require integration of care.



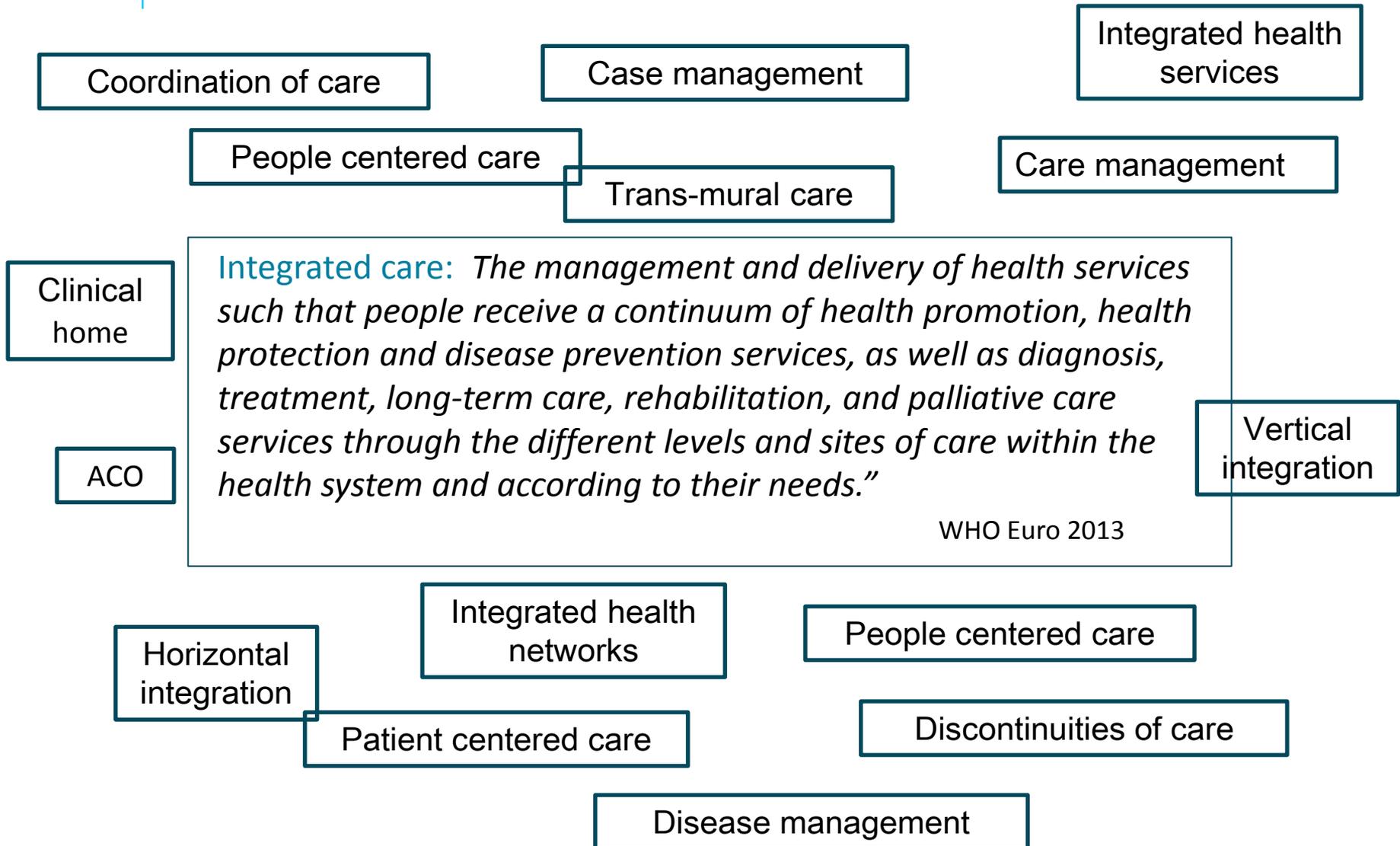


Study focus





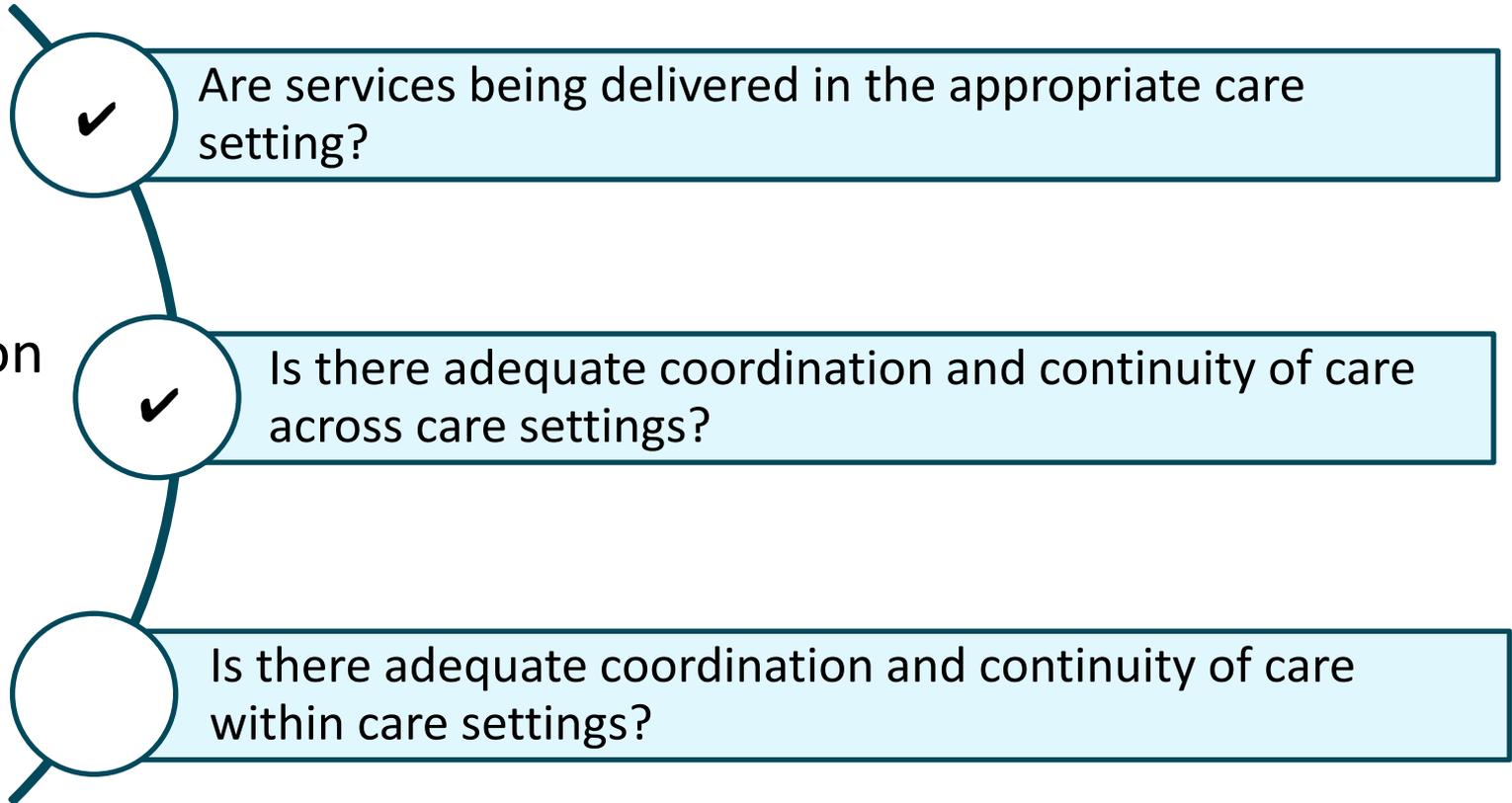
The state of care integration – uncharted territory





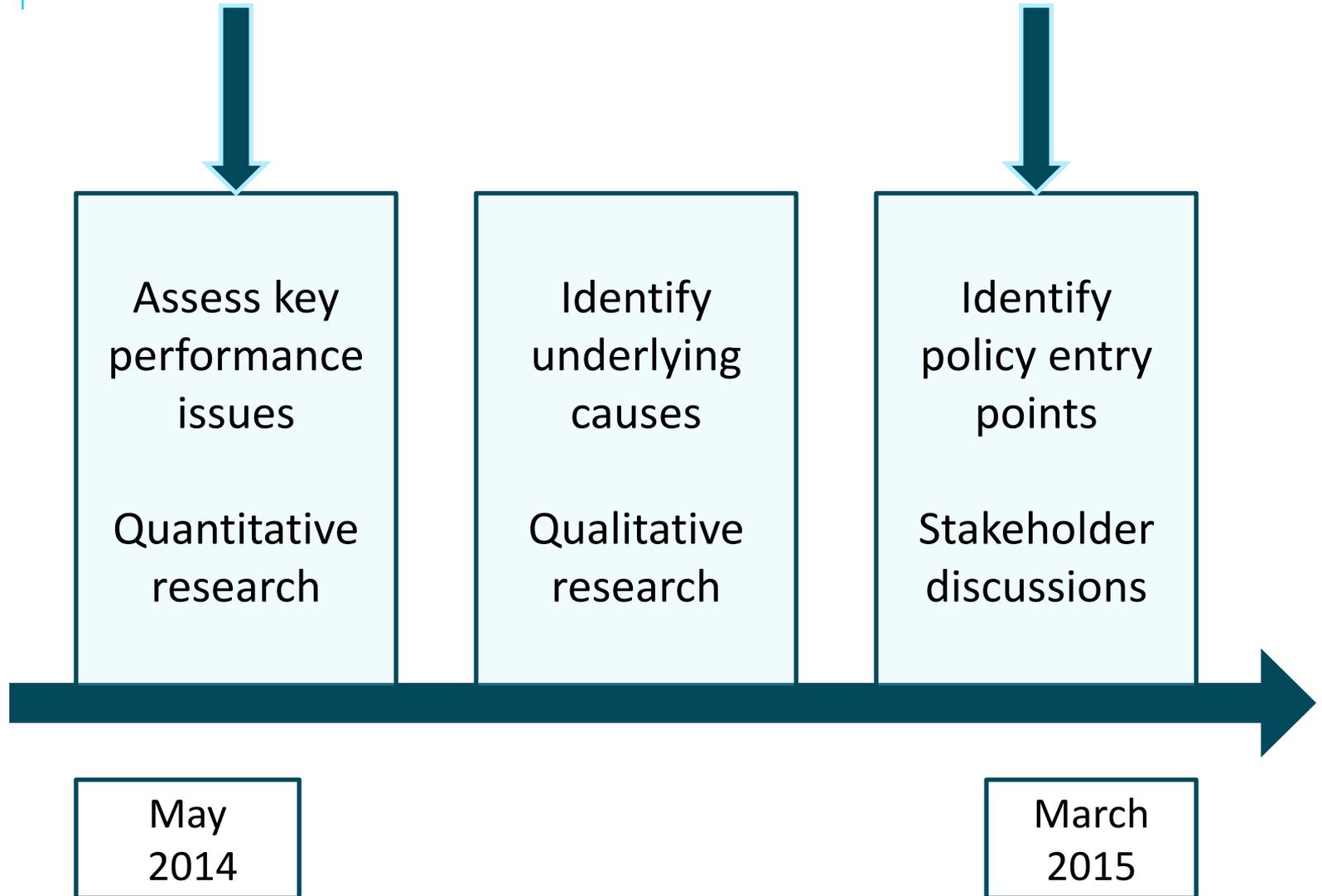
Integration of care - Analytical roadmap

Integration
of care





Study approach





Outline

Assessment of key performance issues

- Service delivery in the appropriate care setting
 - Is hospital-based care avoidable?

- Appropriate coordination and continuity of care
 - Are there coordination issues before and after acute inpatient care?
 - Is there adequate provider continuity, coordination and quality of ambulatory care?

Performance indicators according to international research protocols

Tracer conditions, e.g.:

- Diabetes mellitus
- Hypertension

2013

Endnotes



Outline

Assessment of key performance issues

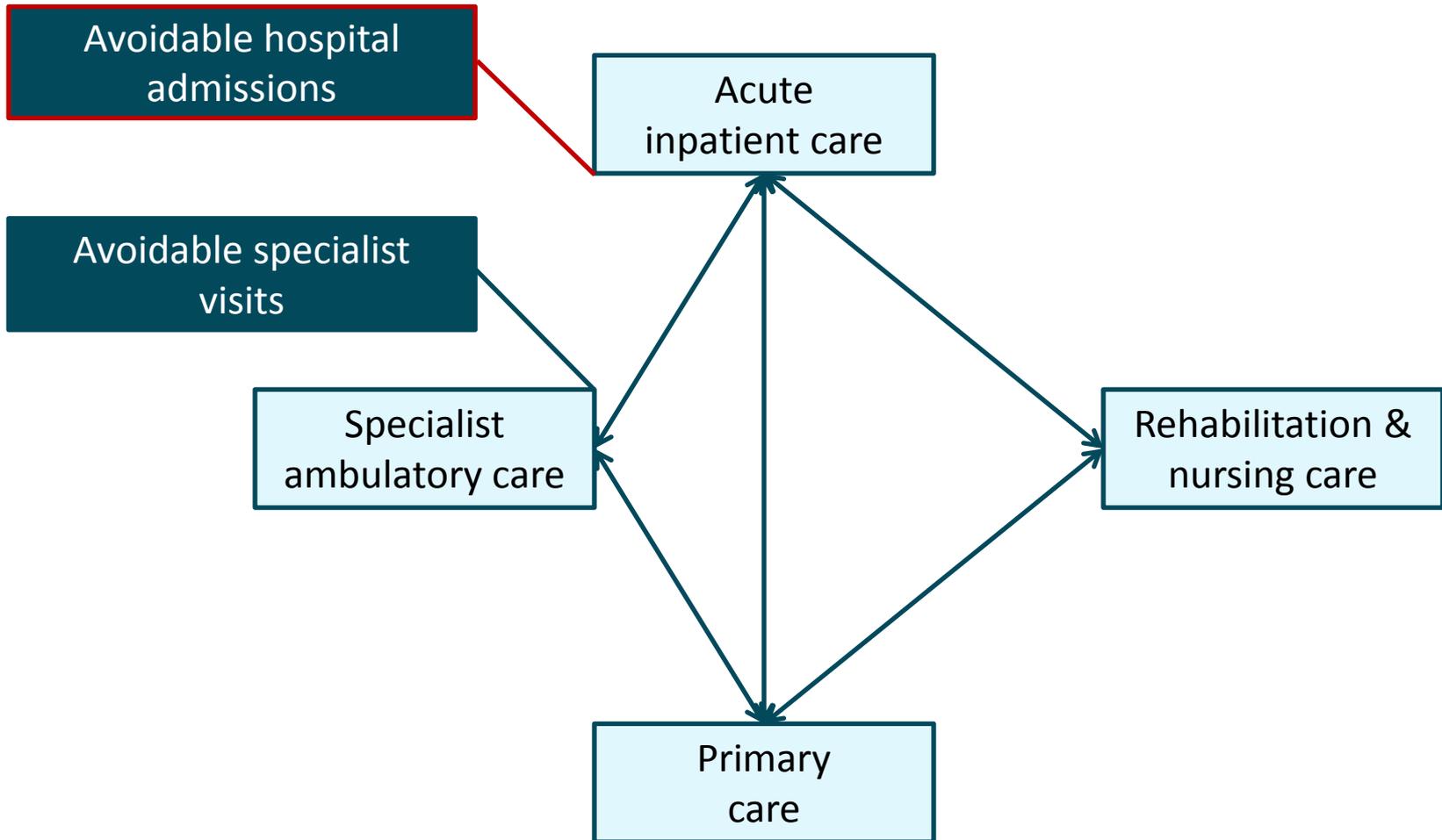
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Performance indicators





Avoidable hospital admissions - Methods

Principles:

Hospital admissions are considered avoidable when the reason(s) for admission is/are:

- A primary diagnosis that per se does NOT warrant an admission (e.g., uncomplicated hypertension);
- Unless procedure is required that is not directly related to the primary diagnosis (e.g., pacemaker implant).

Interpretation:

Hospital admissions should have been prevented through appropriate ambulatory care

Indicators:

- Avoidable admissions as a share of admissions for respective disease sub-group or group (ICD 10)
- Age- and sex-standardized rates (per 100,000 population)

Tracer conditions:

- Chronic Obstructive Pulmonary Disease (COPD) & Asthma
- Diabetes
- Congestive Heart Failure (CHF) & Hypertension

Reference:

OECD protocol for avoidable hospital admissions



Avoidable hospital admissions by tracer and disease sub-group

Tracer conditions	Disease sub-groups	Number of admissions	Share of avoidable admissions
COPD & Asthma	Lower chronic respiratory disease	2,935	76.9%
Diabetes mellitus	Diabetes mellitus	3,013	83.0%
CHF & Hypertension	Hypertension & other forms of heart disease	10,431	84.3%

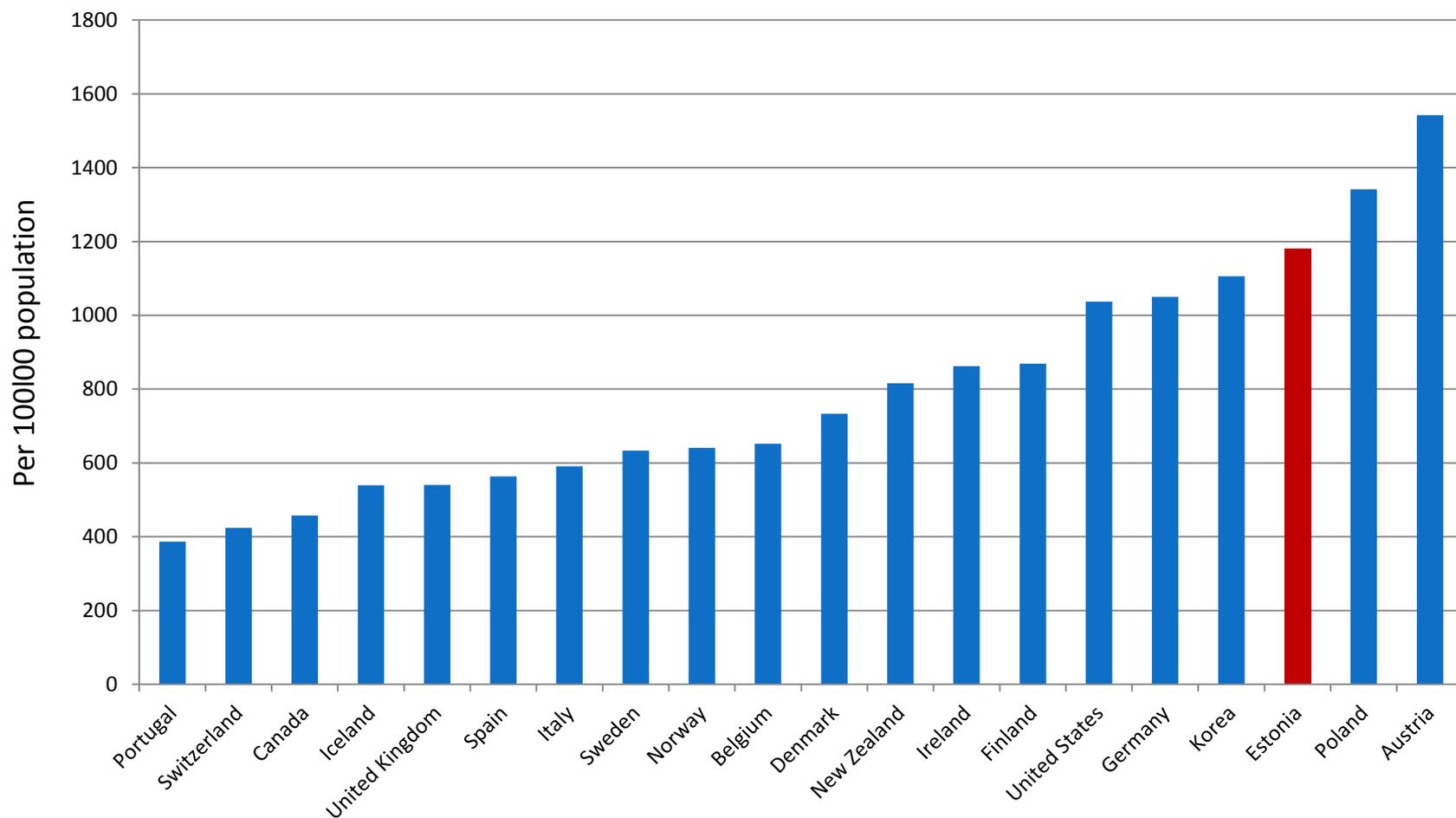


Avoidable hospital admissions by tracer and disease group

Tracer conditions	Disease groups	Number of admissions	Share of avoidable admissions
COPD & Asthma	Respiratory disease	25,836	8.7%
Diabetes mellitus	Endocrine, nutritional and metabolic disease	5,356	46.7%
CHF & Hypertension	Circulatory disease	39,338	22.4%



Avoidable hospital admissions / Age-sex standardized population rates / All tracers / International comparison 2008*



* Or next available year.

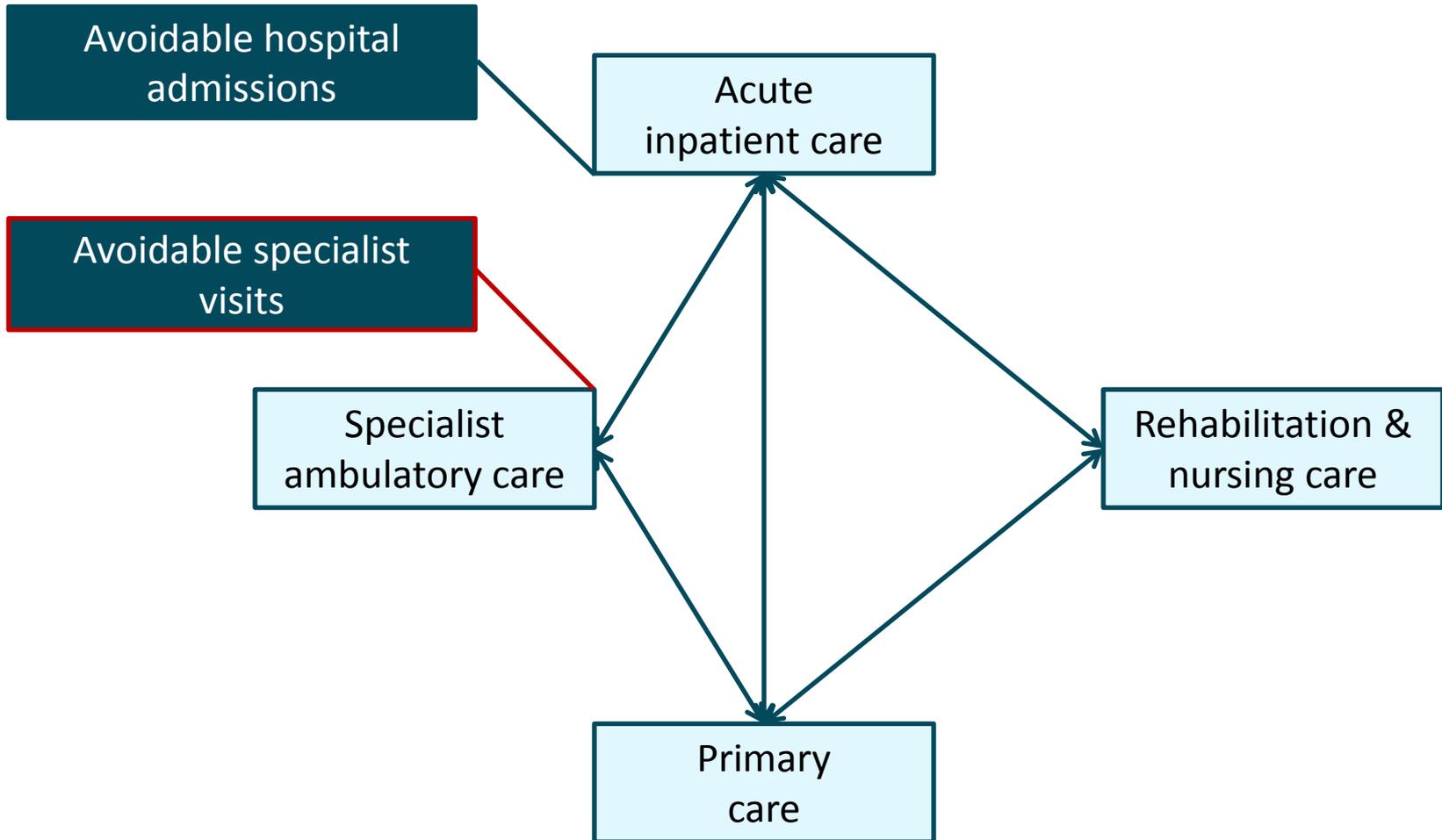


Avoidable hospital admissions by hospital type

Hospital type	Number of admissions / All disease groups	Share of avoidable admissions / All tracers
Regional	22,903	14.7%
Central	20,612	18.6%
General	18,144	22.3%
Non HNDP	10,138	14.0%
All	71,797	17.6%



Performance indicators





Avoidable specialist visits – Methods

Principles:

Specialist visits are considered avoidable when:

- The primary diagnosis is uncomplicated
- Unless guidelines recommend a specialist consultation.

Indicator:

Avoidable specialist visits as a share of specialist visits for the respective disease subgroup or group (ICD 10).

Tracer conditions:

- Diabetes
- Hypertension

Reference:

Protocol developed in consultation with national and international and national experts



Avoidable specialist visits by tracer

Disease sub-group	Number of specialist visits	Share of avoidable specialist visits	Comments
Diabetes	42,064	19.9%	> 90% of avoidable visits are with endocrinologists
Hypertension	63,917	67.5%	> 80% of avoidable visits are with cardiologists



Avoidable specialist visits by tracer and hospital type

Hospital type	Diabetes mellitus		Hypertension	
	Number of visits	Share of avoidable visits	Number of visits	Share of avoidable visits
Regional	6,172	13.09%	14,704	67.83%
Central	17,073	13.75%	27,017	66.97%
General	7,344	43.60%	10,304	62.44%
Non HNDP	11,475	17.58%	11,893	72.62%
All	42,064	19.91%	63,918	67.49%



Avoidable hospital-based care - Main conclusions



Findings suggests:

- A significant share of hospital admissions and
- A significant share of specialist visits can be avoided

They can be avoided by strengthening the management of patients with non-communicable diseases at the primary care level

With

The possible benefit of reducing waiting times for

- Specialist visits and
- Acute inpatient care



Outline

Assessment of key performance issues

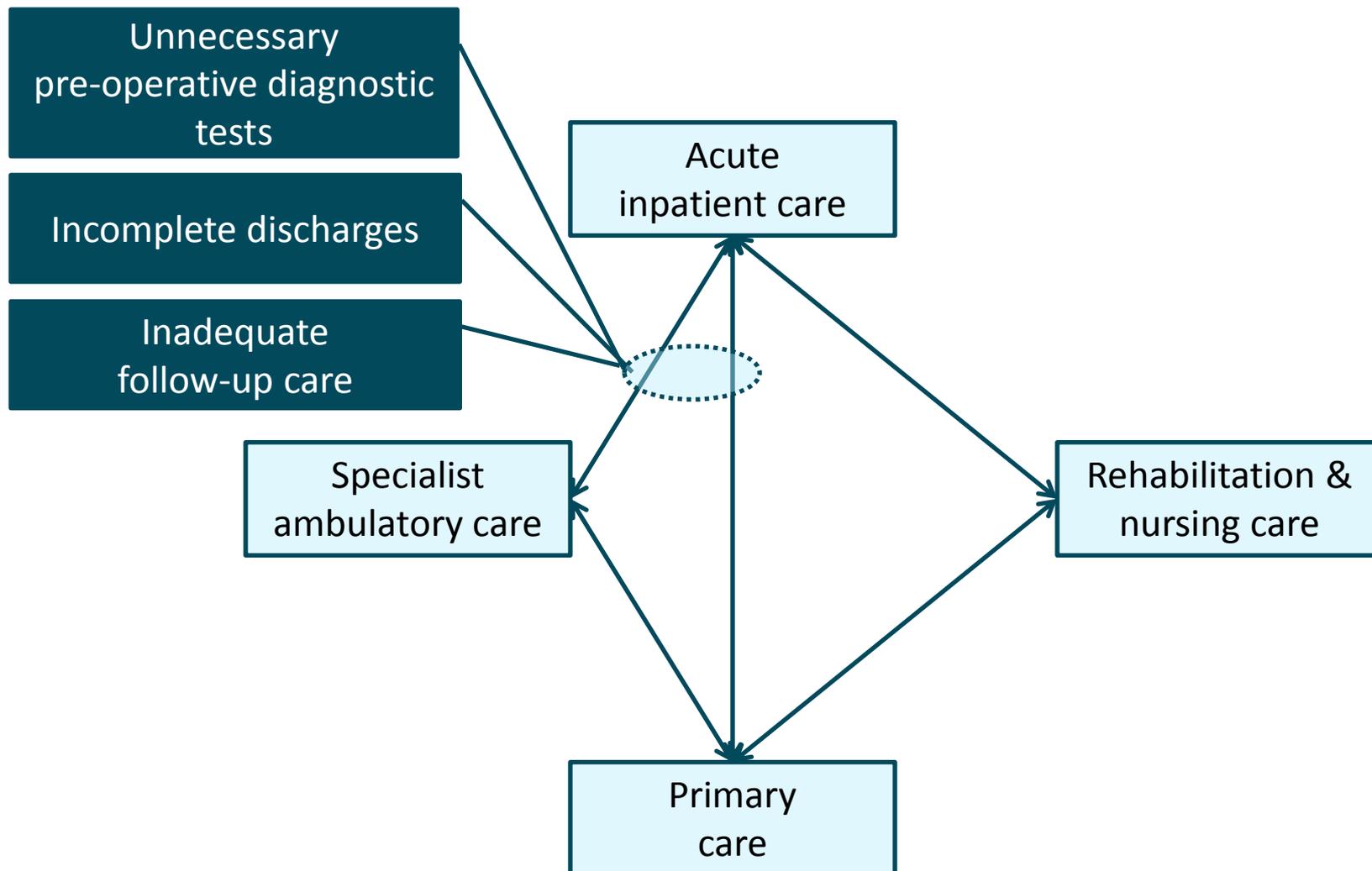
- Service delivery in the appropriate care setting
 - Is avoidable hospital-based care avoidable?

- **Appropriate coordination and continuity of care**
 - **Are there coordination issues before and after acute inpatient care?**
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Endnotes



Are there any coordination issues before and after acute inpatient care?





Unnecessary pre-operative diagnostic tests - Methods

Principle(s):

Pre-operative tests for low complexity surgeries are unnecessary when patients are young and have no or only non-severe system disease.

Indicator:

Unnecessary pre-operative tests as a share of all pre-operative tests.

Tracer surgeries:

- Cataract surgery
- Lumpectomy
- Hip Fracture
- Hernia repair
- Cholecystectomy

Reference:

Clinical guidelines from the UK NHS

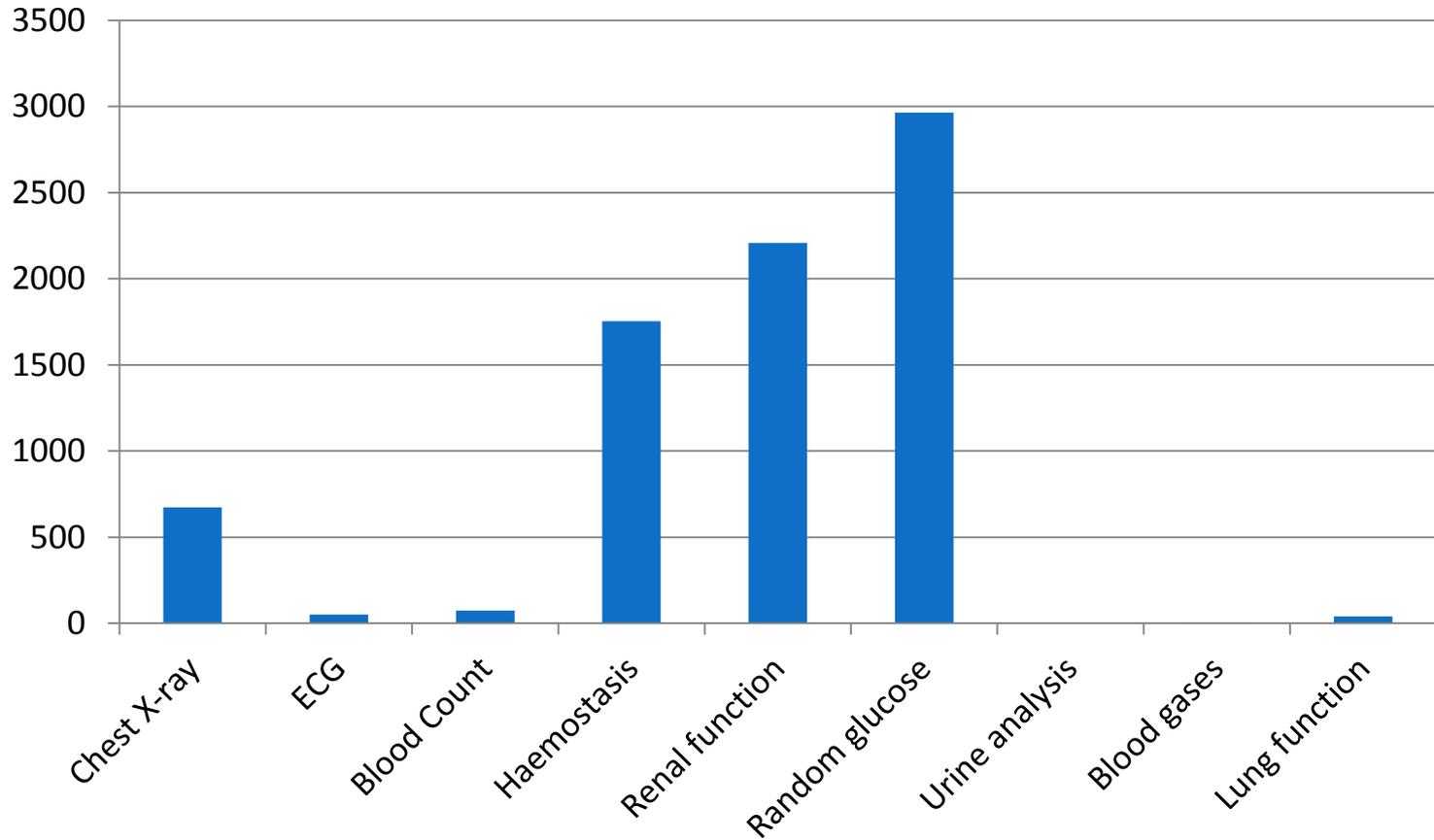


Unnecessary pre-operative diagnostic tests / All tracer surgeries

Number of surgeries	24,582
Number of pre-operative tests	25,466
Share of unnecessary tests	30.5% (7,767)

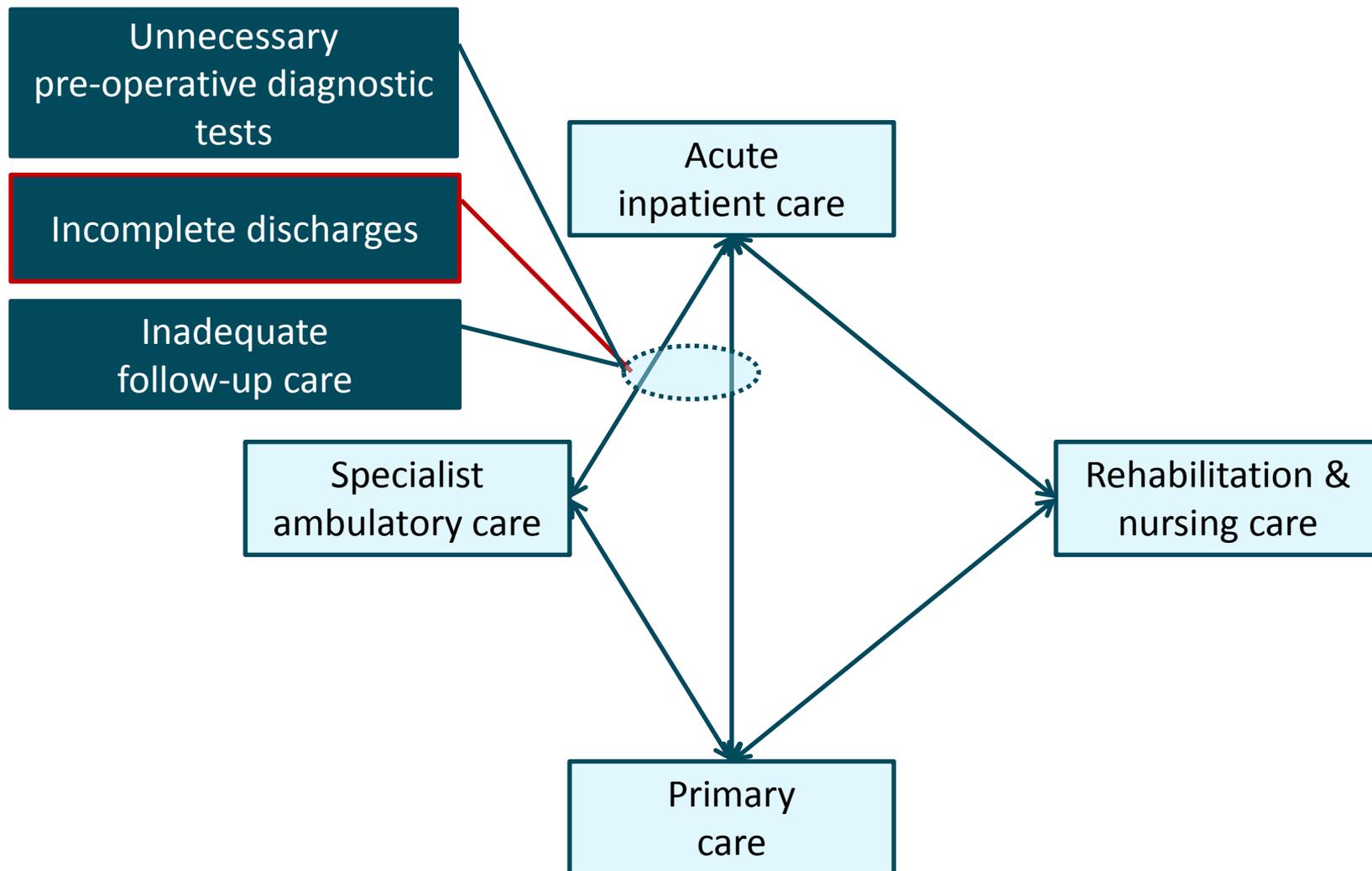


Unnecessary pre-operative diagnostic tests by test type / All tracers





Are there any coordination issues before and after acute inpatient care?





Incomplete discharges - Methods

Principle:

Discharges are complete when prescriptions are issued (filled) for recommended medications

Indicator:

Share of patients with issued / filled prescription at discharge

Share of patients with issued / filled prescriptions 90 days after discharge

Tracer conditions:

Unstable angina

AMI

Heart Failure

Recommended medications:

{ Beta-blocker
ACE Inhibitor
Statin

References:

National treatment guidelines (New Zealand)

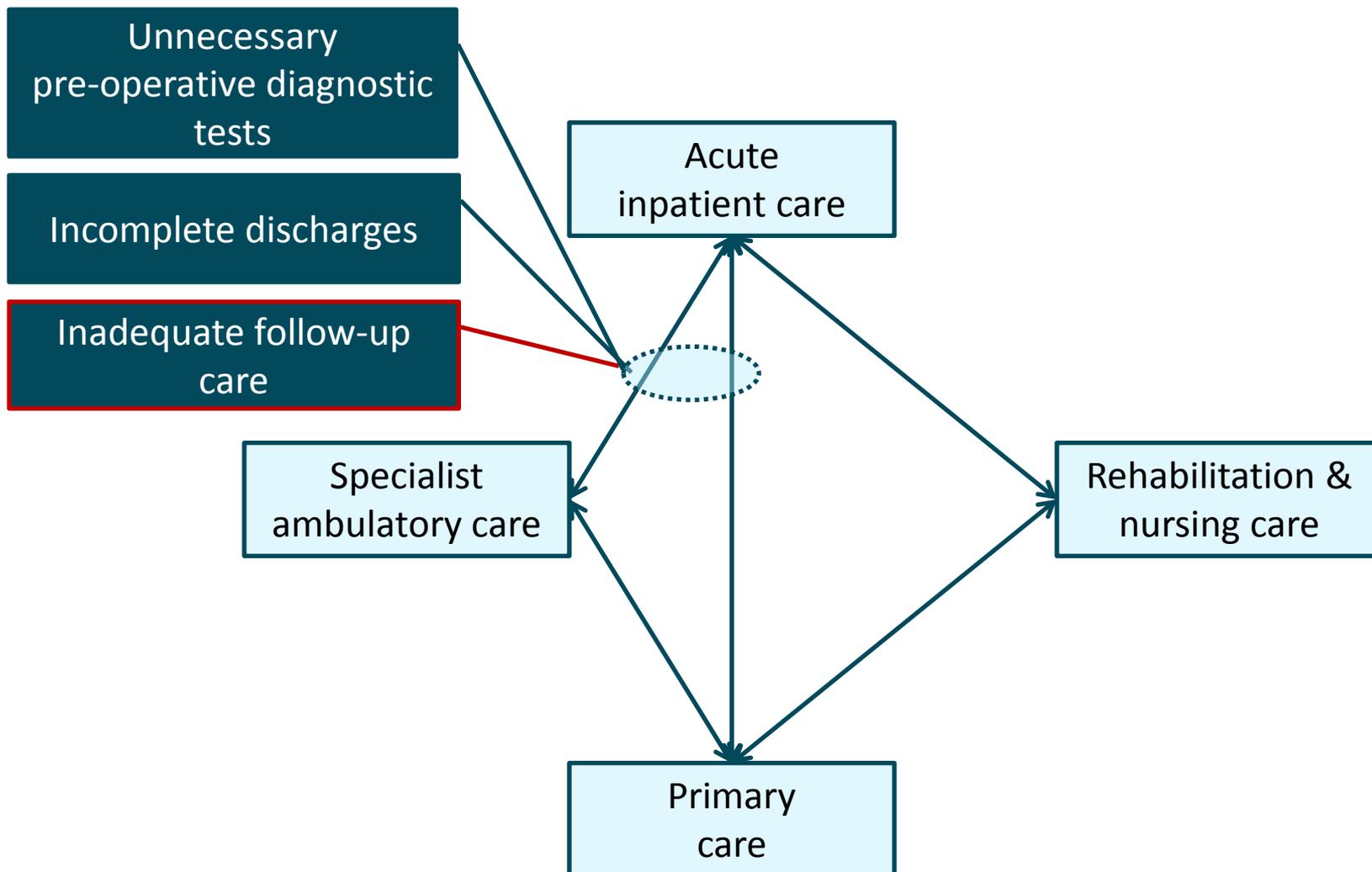


Share of incomplete (complete) discharges / All tracers

	At discharge		90 days after discharge	
	Prescription	Filled	Prescription	Filled
Discharges	6557			
All medications	1.6%	1.4%	2.3%	1.8%
No medications	63.4%	-	52.7%	-



Are there coordination issues before and after acute inpatient care?





Inadequate acute inpatient follow-up care

Principles:

Follow-up is adequate when patients visit a family physician (FP) or specialist (S) within 30 / 90 days after an episode of acute inpatient care

Indicators:

Share of patients with a FP / FP or S visit within 30 days after discharge

Share of patients with a FP / FP or S visit within 90 days after discharge

Tracer conditions:

- AMI
- Stroke
- Heart failure
- Cholecystectomy
- Hip fracture

Reference:

US literature



Inadequate acute inpatient follow-up care

Tracer	Number of patients	Share with follow-up visit within 30 days after discharge		Share with follow-up visit within 90 days after discharge	
		FP only	FP & S	FP only	FP & S
AMI	4428	30.1%		40.9%	
Stroke	2819	35.8%		43.4%	
Heart Failure	1453	21.8%		31.0%	
Cholecystectomy	2715	31.7%		33.5%	
Hip Fracture	929	21.1%		27.0%	



Inadequate acute inpatient follow-up care

Tracer	Number of patients	Share with follow-up visit within 30 days after discharge		Share with follow-up visit within 90 days after discharge	
		FP only	FP & S	FP only	FP & S
AMI	4428	30.1%	35.6%	40.9%	49.2%
Stroke	2819	35.8%	38.8%	43.4%	47.5%
Heart Failure	1453	21.8%	25.8%	31.0%	38.1%
Cholecystectomy	2715	31.7%	48.9%	33.5%	51.0%
Hip Fracture	929	21.1%	25.7%	27.0%	36.4%



Coordination issues before and after acute inpatient care – Main conclusions



Findings suggest:

- Some inefficiencies in pre-operative diagnostics; and
- Significant shortfalls in the quality of care at and post-discharge



Outline

Assessment of key performance issues

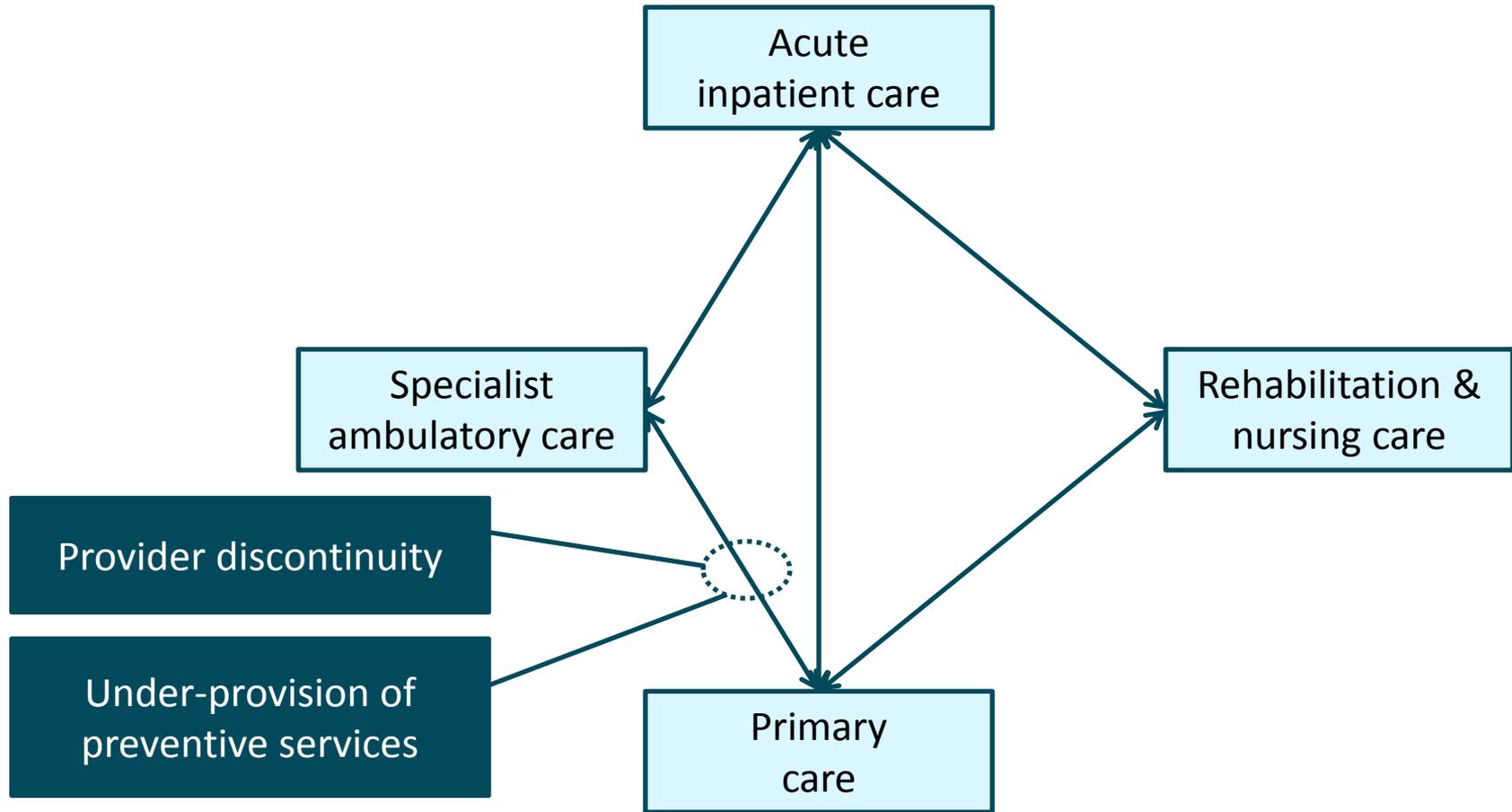
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Continuity, coordination and quality of ambulatory care





Provider discontinuity

Principles:

Patients do not maintain consistent contact with their usual care provider

Construction of indicators:

- Average number of ambulatory visits per year
- Share of family physician/specialist visits out of annual ambulatory visits
- Distribution of number of consecutive specialist visits in patient population

Tracer conditions:

- General population seeking care aged ≥ 18
- Diabetes aged ≥ 18
- Hypertension aged ≥ 18
- CVD aged ≥ 18

Reference:

Canadian Institute for Health Information



Average number of ambulatory visits* per year by population groups

Population	Number of visits [per year]
General population seeking care (18 years and older)	6.4
Diabetes (18 and older)	10.3
Hypertension (18 and older)	9.8
CVD (18 and older)	9.5

* Excluding visits with obstetricians/gynecologists



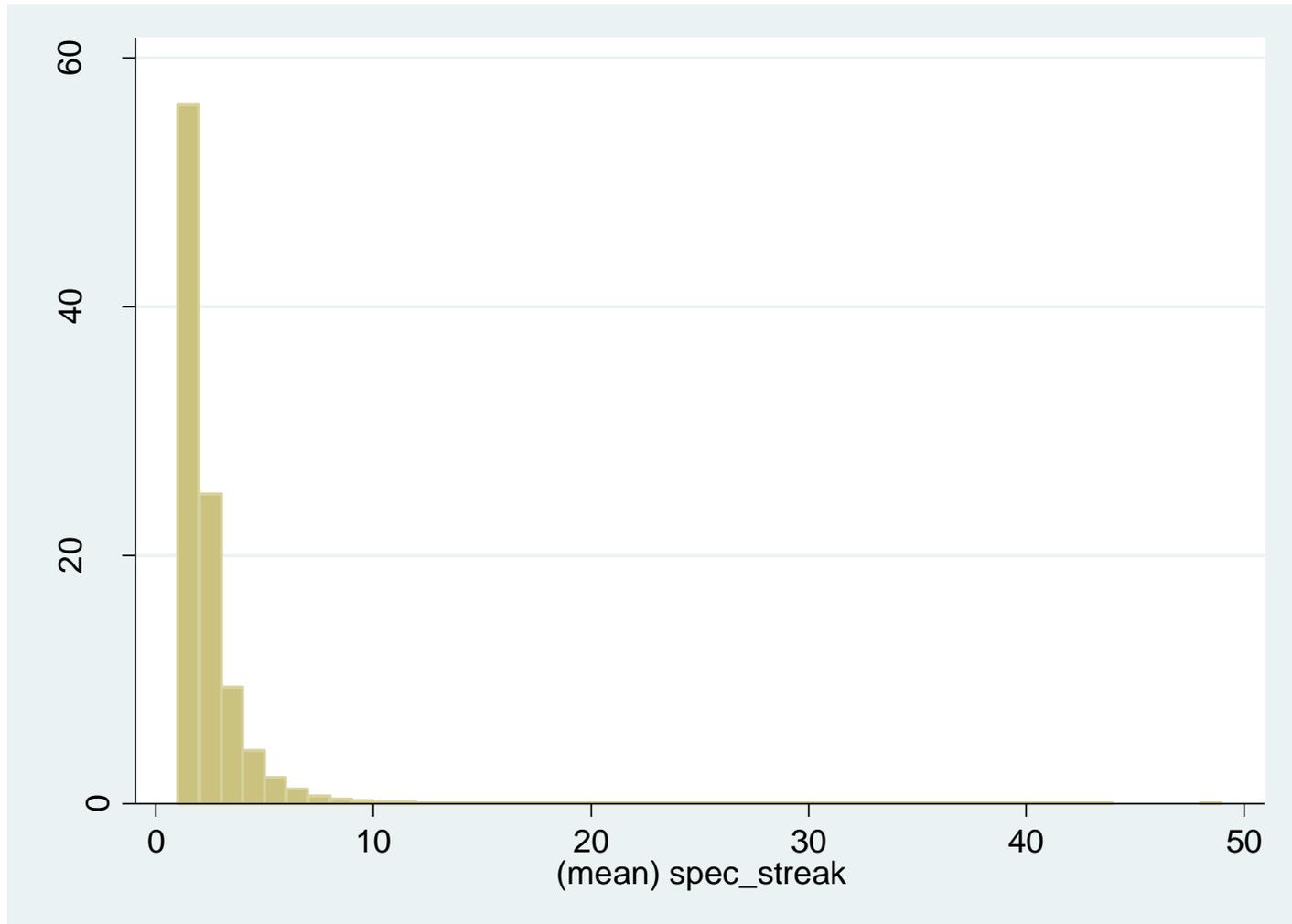
Share of family and specialist visits among ambulatory visits* by different population groups

Population	Family physician	Specialists
General population seeking care older than 18 years	61.0%	39.0%
Diabetes	59.2%	41.8%
Hypertension	60.6%	39.4%
CVD	60.9%	39.1%

* Excluding visits with obstetrician/gynecologists



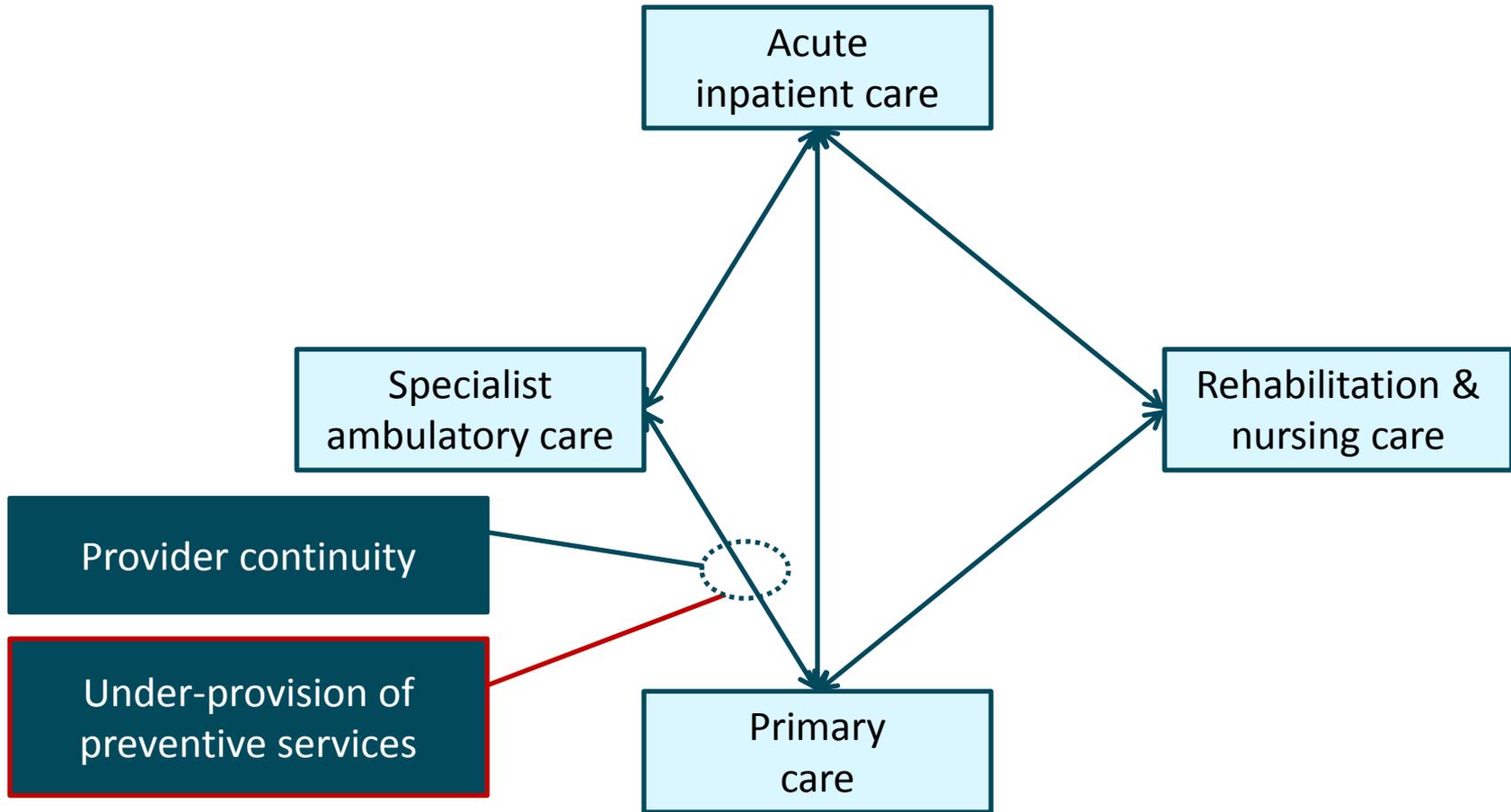
Distribution of number of consecutive specialist visits* in general patient population aged ≥ 18 years



* Excluding visits with obstetrician/gynecologists



Continuity, coordination and quality of ambulatory care





Under-provision of preventive services - Methods

Principle:

Preventive services are under-provided when patients do not receive the minimum diagnostic tests and counseling set forth in national clinical guidelines by family physicians (FP) or specialists (S)

Indicator:

- Share of patients that receive all / no diagnostic tests set forth in national clinical guidelines (FP or FP/S)
- Share of patients that do not receive nurse counseling

Tracer conditions:

Diabetes	Hypertension
Glycosylated hemoglobin	Glucose
Cholesterol	
Cholesterol fractions	
Albuminuria	
Creatinine	
	EKG

Reference:

National Australian Performance Framework



Share of patients that do not receive tests or counseling according to national guidelines

	GP only	GP & S	Difference
Diabetes			
All diagnostic tests	41.1%		
No diagnostic tests	20.0%		
Nurse counseling	67.3%		
Hypertension			
All diagnostic tests	9.5%		
No diagnostic tests	24.6%		
Nurse counseling	58.4%		

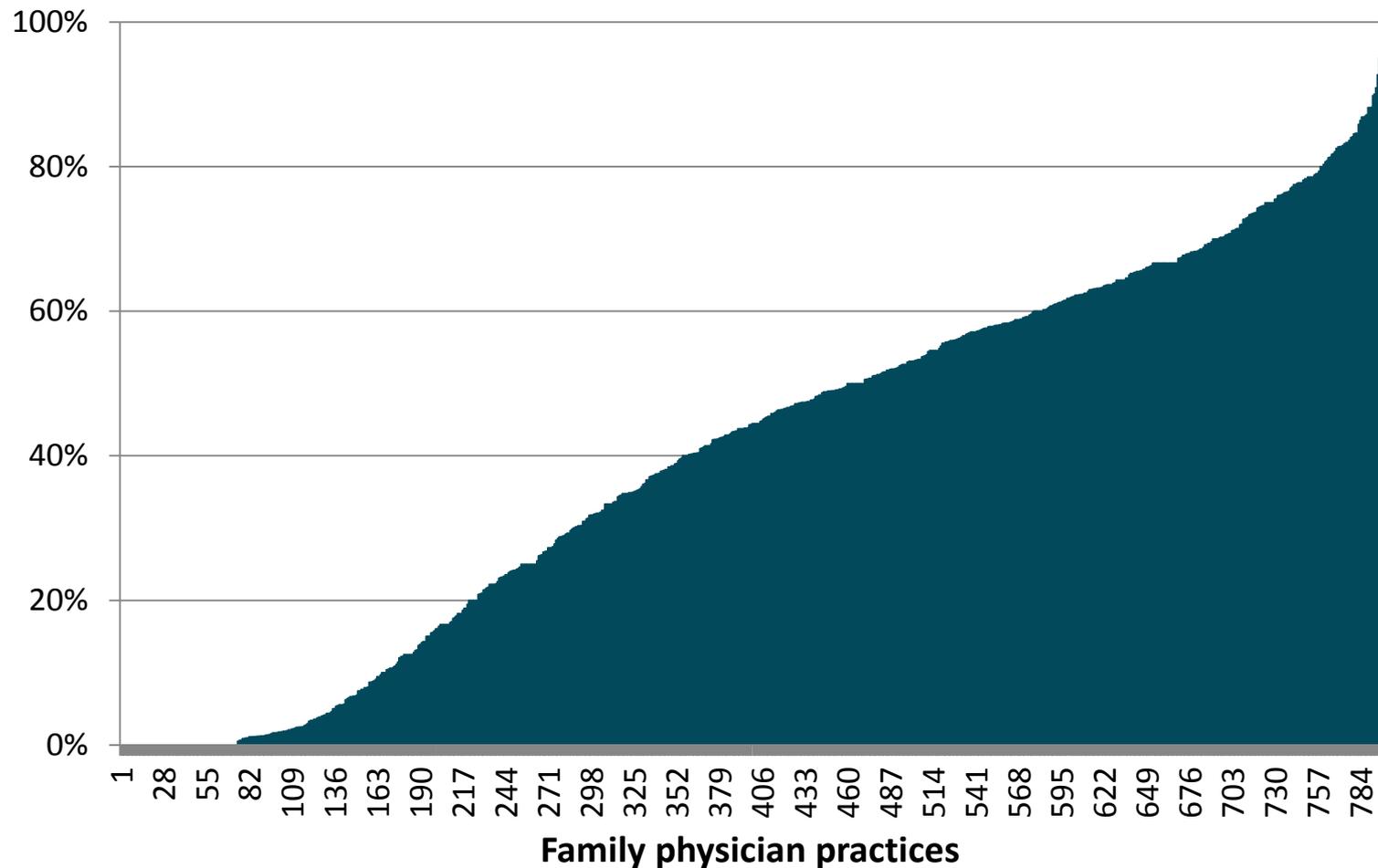


Share of patients that do not receive tests or counseling according to national guidelines

	GP only	GP & S	Difference
Diabetes			
All diagnostic tests	41.1%	44.2%	3.1%
No diagnostic tests	20.0%	13.0%	-7.0%
Nurse counseling	67.3%	N.A.	N.A.
Hypertension			
All diagnostic tests	9.5%	10.2%	0.7%
No diagnostic tests	24.6%	19.4%	-5.2%
Nurse counseling	58.4%	N.A.	N.A.

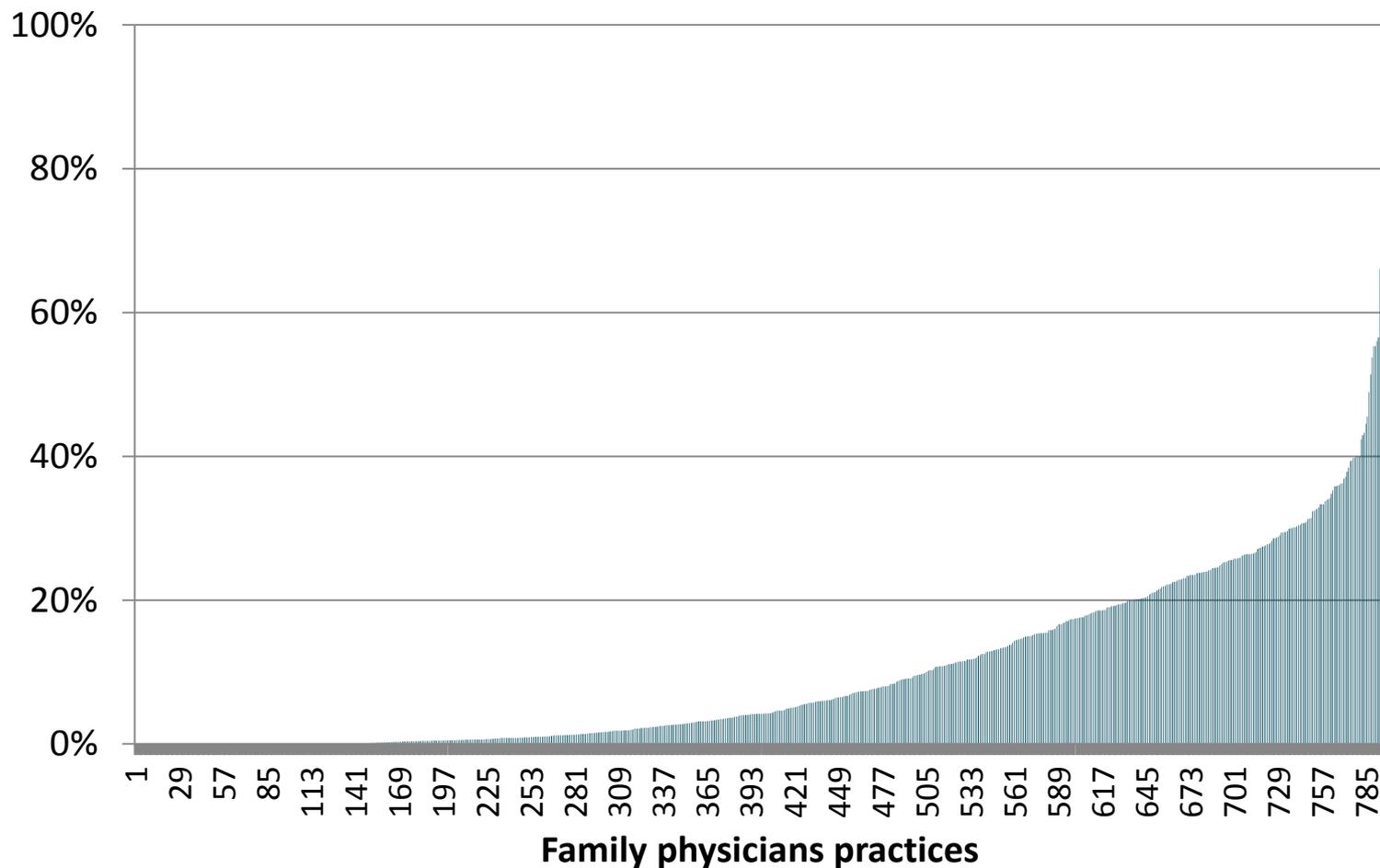


Share of patients that do receive all diagnostic tests for diabetes mellitus according to national guidelines by FPs





Share of patients that do receive all diagnostic tests for hypertension according to national guidelines by FPs





Adequate provider continuity, coordination and quality of preventive, ambulatory care – Main conclusions



Findings suggest that:

- Despite adequate continuity of family physician care,
 - there is under-provision of preventive services in ambulatory care;
- and
- there are little coverage gains from specialist care,
 - despite large shares of avoidable visits.



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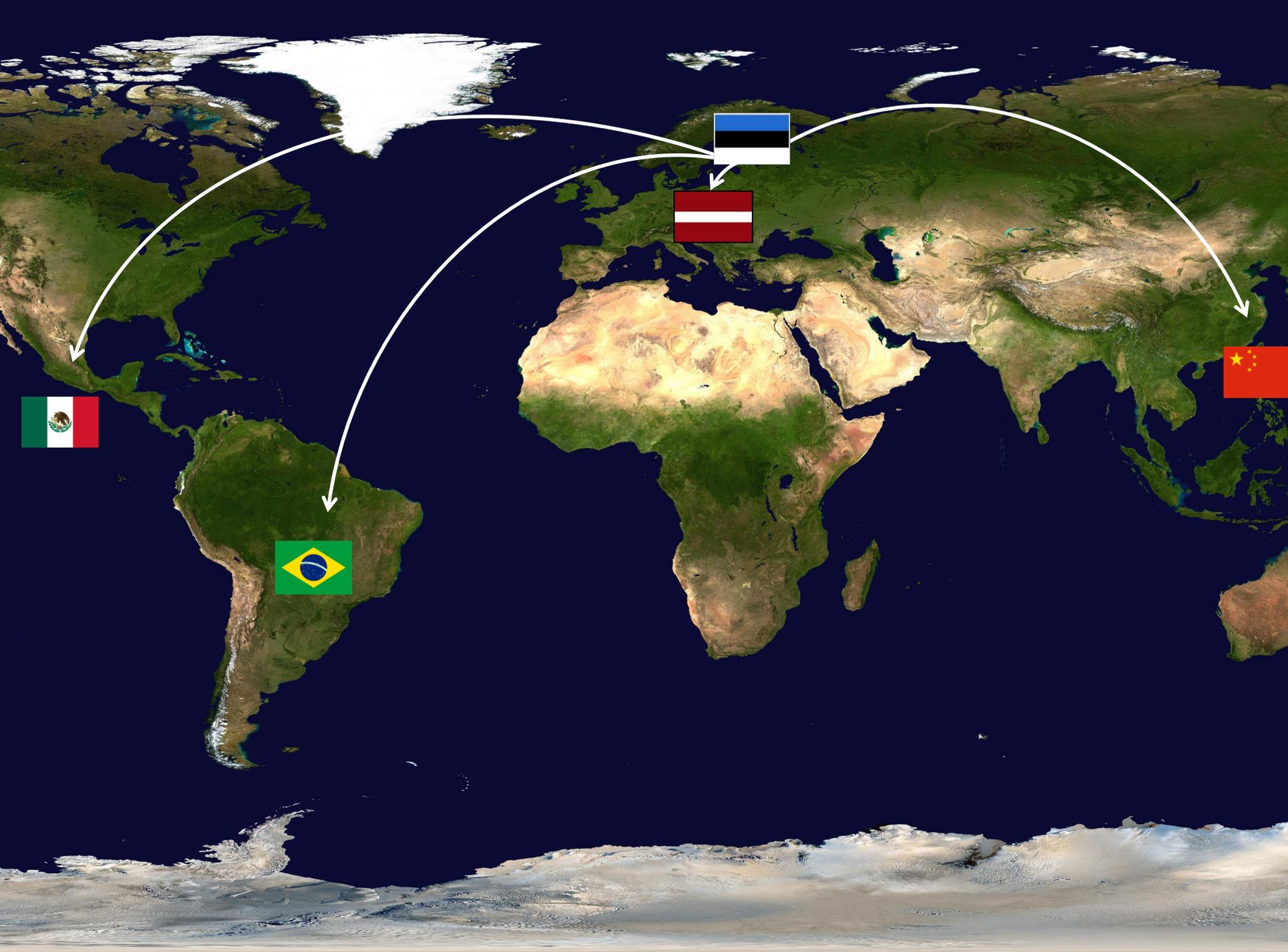
Endnotes



**Eesti
Haigekassa**



WORLD BANK GROUP





One size does not fit all!



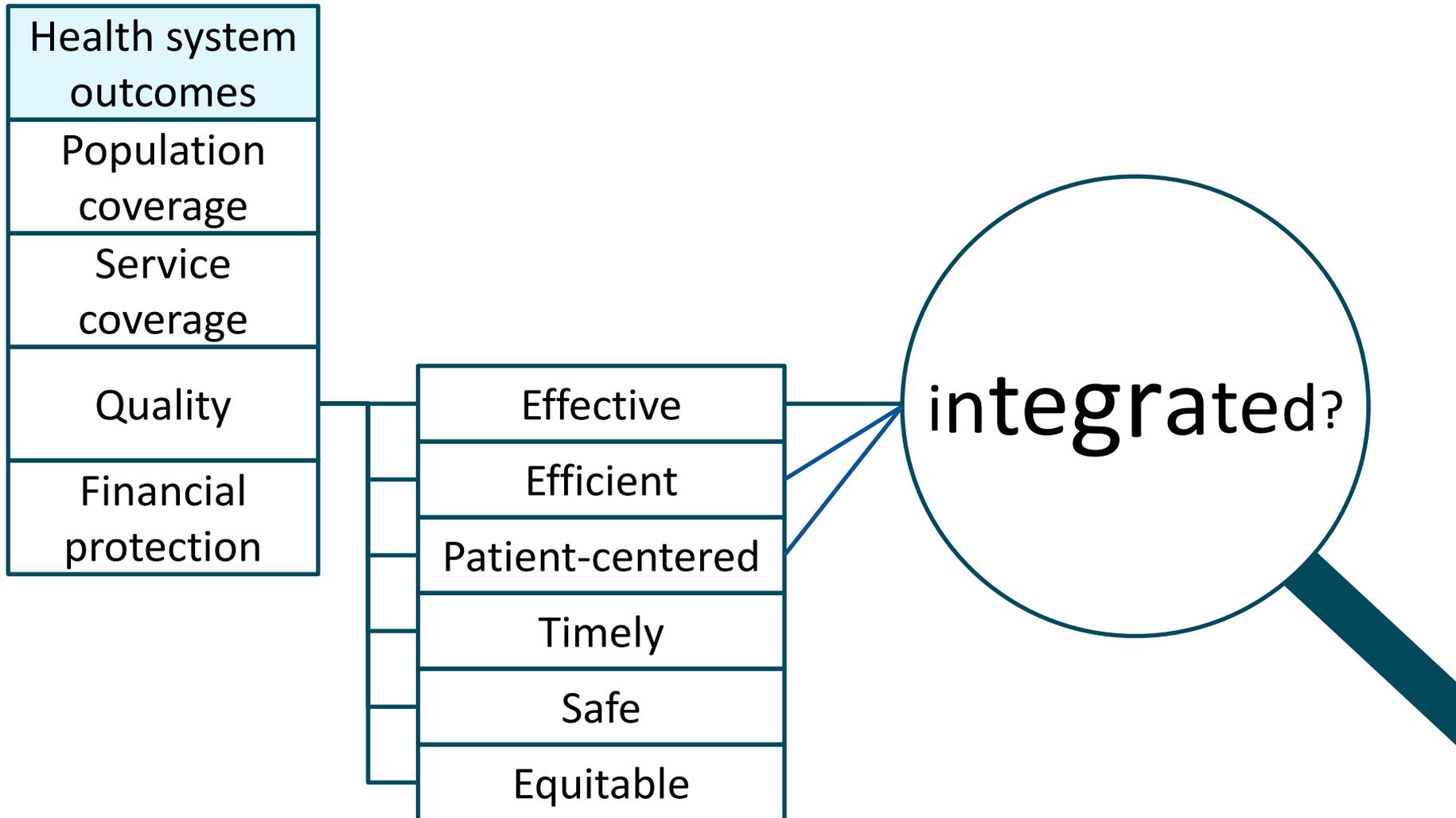
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Putting care integration into perspective





Don't throw me out
with the bathwater!



End
