

**Joint Action on Health Workforce Kick Off
April 11-12, 2013**



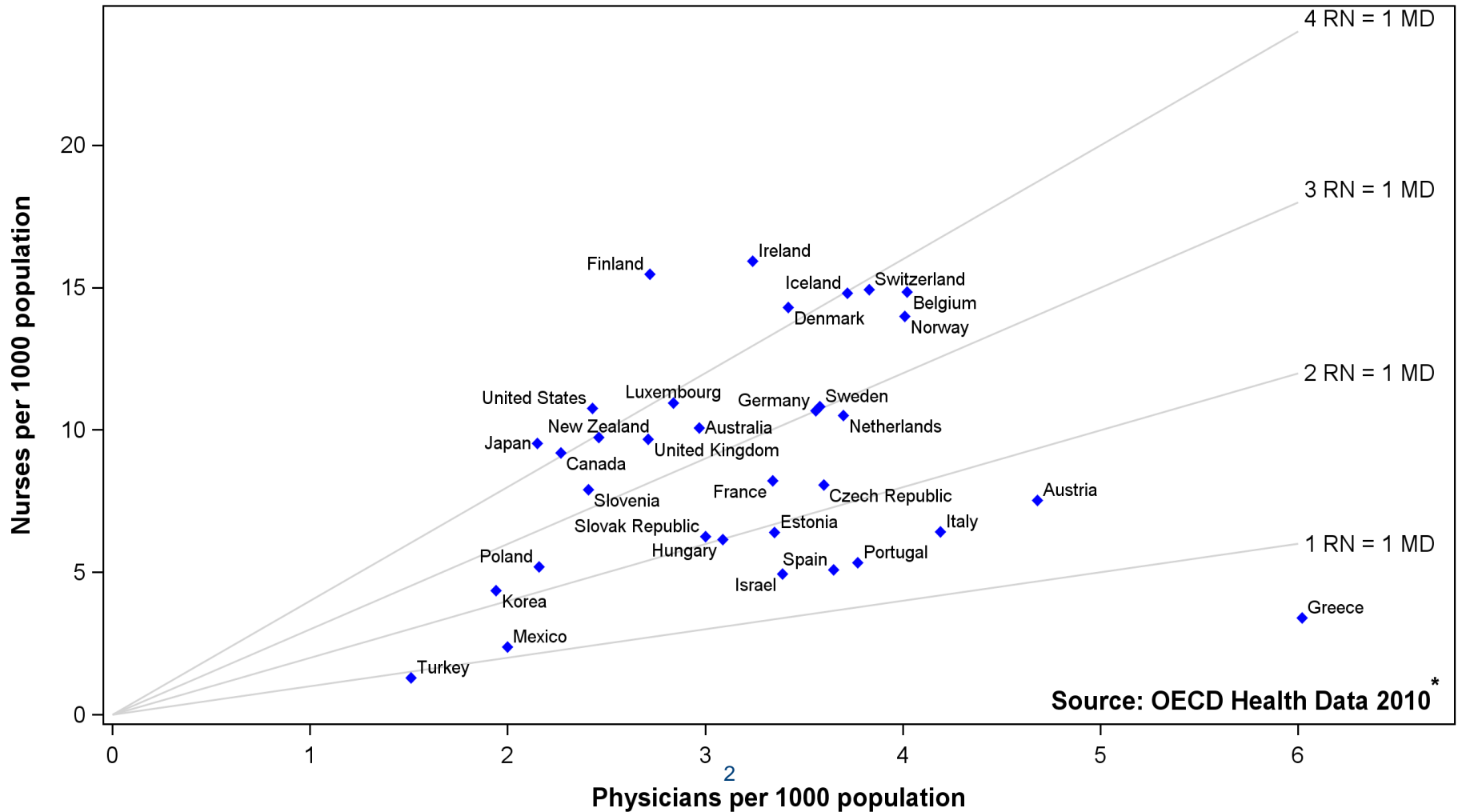
Planning issues for nurses

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High variability in nurse density across Europe

Ratio of nurses to physicians



Source: OECD Health Data 2010*

*nearest year available

But this figure is not telling the whole story...

- Issues:
 - What is a nurse in various countries ?
 - Numbers versus full-time equivalents ?
 - All nurses, practical nurses, bedside nurses ?
 - What do nurses do: scope of practice ?
- Impact:
 - Impact on quality of care
 - Impact of budget constraints
 - Shortages of nurses in countries with high & low nurse densities

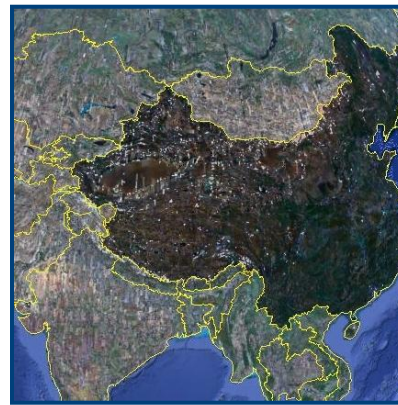
Key questions in (nursing) workforce planning

- The current situation: How many and what type of staff do we have now? Do staff numbers and skills match the service need?
- The demand forecast: What is the 'right' workforce for the future (numbers, roles and skill mix)?
- The supply plan: How do we ensure that the 'right' workforce will be available?

7th Framework Programme for Research and Technological Development



- 'RN4CAST: nurse forecasting in Europe': €3 million funding for 2009-2011
 - Health theme 3: Optimizing the delivery of health care
 - 16 partners: 12 European countries, USA, China, South-Africa, Botswana
- Co-ordination: Leuven University (W. Sermeus), U. Pennsylvania (L. Aiken)



RN4CAST CONSORTIUM



Belgium	Catholic University Leuven
England	King's College London
Finland	University of Eastern Finland
Germany	Technical University Berlin
Greece	University of Athens
Ireland	Dublin City University
Netherlands	Radboud University Nijmegen
Norway	Norwegian Knowledge Centre HSR
Poland	Jagiellonian University
Spain	Institute of Health Carlos III
Sweden	Karolinska Institute
Switzerland	Basel University
United States	University of Pennsylvania
Botswana	University of Botswana
China	Sun Yat-sen University
South Africa	North-West University

RN4CAST DESIGN

- Multicountry, multilevel, cross-sectional design to obtain important unmeasured factors in forecasting models, collected at the hospital, nursing unit and individual nurse and patient level:
 - Nurse survey: working environment, quality & safety, staffing
 - Patient survey: patient experiences with nursing staff, hospital, information
 - Hospital survey: type of hospital, inflow & outflow
 - Hospital Discharge data: ICD9/10, length-of-stay, adverse events, mortality
- Setting
 - At least 30 general acute hospitals in each European country.
 - At least 2 general surgical and internal medicine wards in each hospital.

SAMPLE

EUROPE (2009-2010) - 12 countries

Belgium, Finland, Germany, Greece, Ireland, Netherlands, Poland, Sweden, Norway, Spain, Switzerland, UK



486 hospitals

33541 nurses

11318 patients

In 210 hospitals

CHINA (2008-2010) – 9 Sites

6 provinces, 2 municipalities, 1 autonomous region



181 hospitals

9698 nurses

6494 patients

In 181 hospitals

South-Africa (2009-2010) – 6 Provinces

Gauteng, North-West, Free State, KwaZulu-Natal, Eastern Cape, Western Cape



62 hospitals

4657 nurses

USA (2006-2008) - 4 states

Pennsylvania, California, New Jersey, Florida



617 hospitals

27509 nurses

Millions of patients

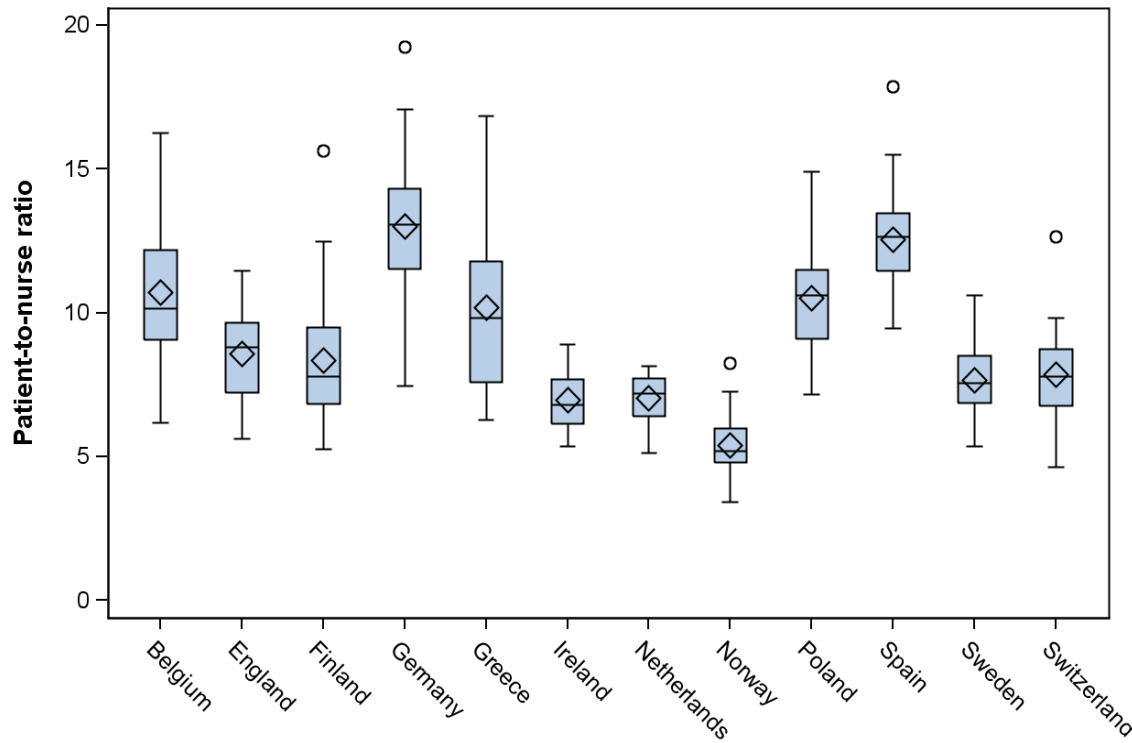
In 430 hospitals

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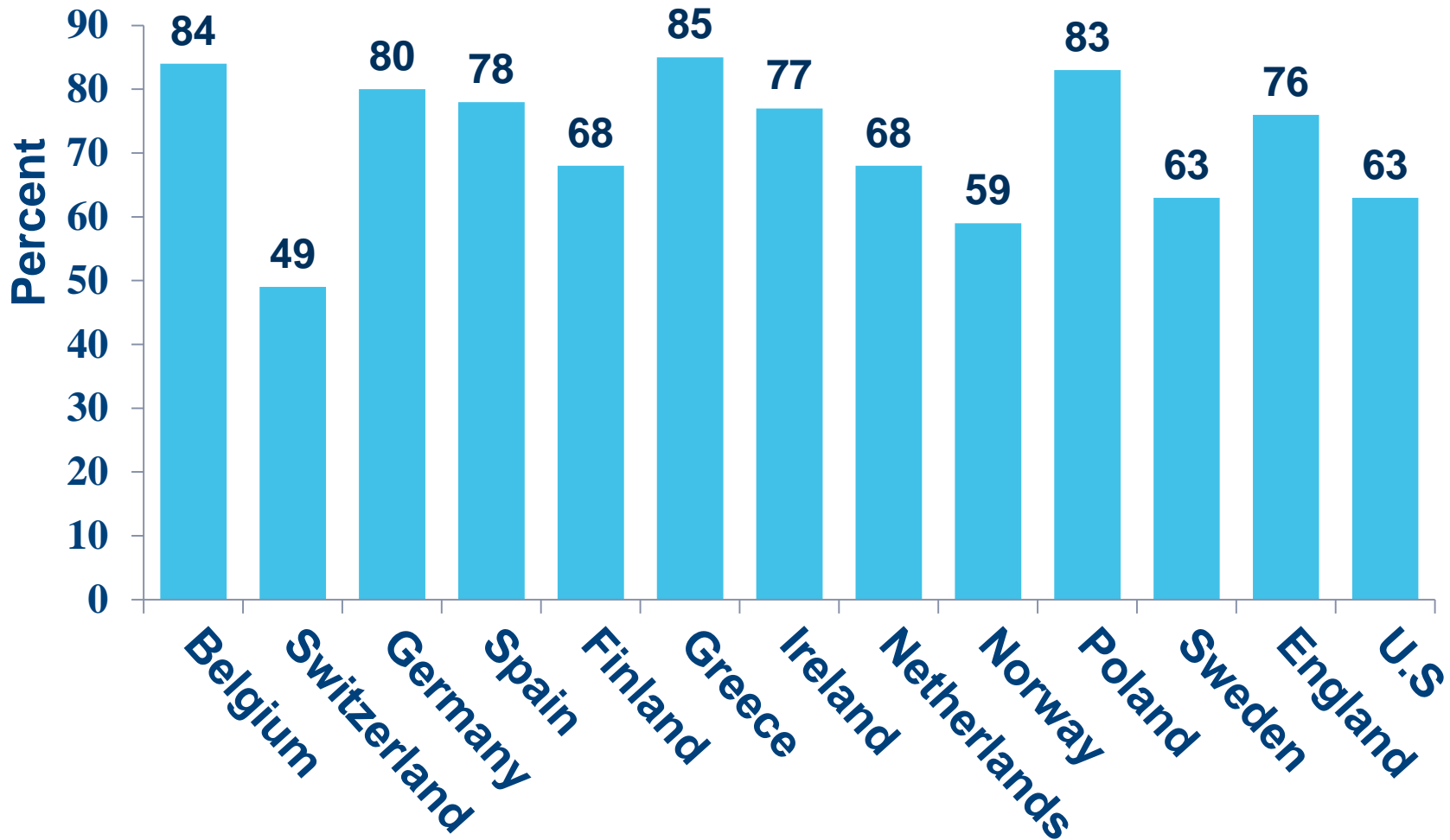
Nurse to Patient Ratios (3 shifts)

Patient-to-nurse ratio for RN4CAST countries: within-country variation at hospital level



Country	Mean	25th Pctl	50th Pctl	75th Pctl
Belgium	10.7	9.1	10.1	12.2
England	8.6	7.2	8.8	9.6
Finland	8.3	6.8	7.8	9.5
Germany	13.0	11.5	13.1	14.3
Greece	10.2	7.6	9.8	11.8
Ireland	6.9	6.2	6.8	7.7
Netherlands	7.0	6.4	7.2	7.7
Norway	5.4	4.8	5.2	6.0
Poland	10.5	9.1	10.6	11.5
Spain	12.5	11.5	12.6	13.5
Sweden	7.7	6.9	7.5	8.5
Switzerland	7.9	6.8	7.8	8.7

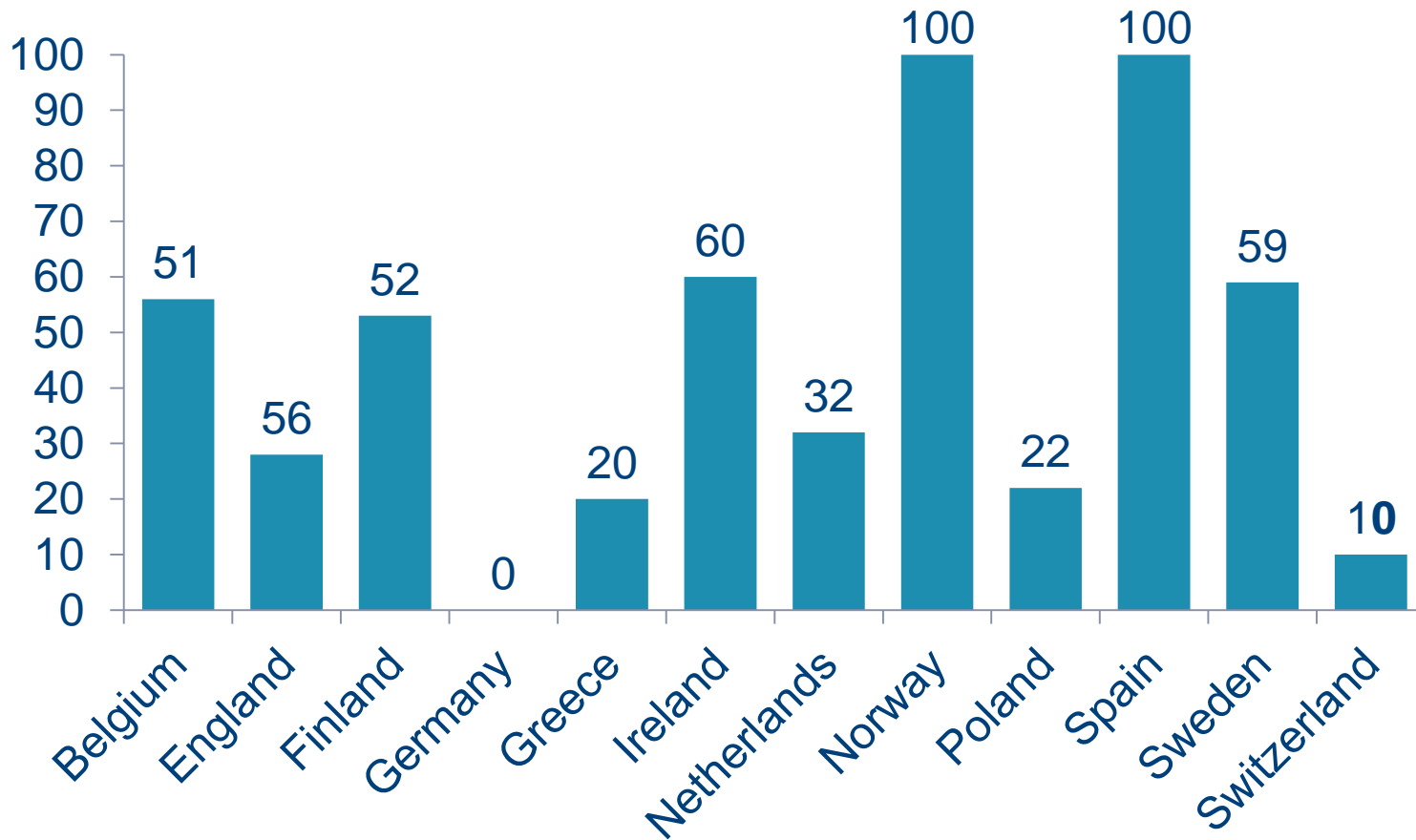
Percent Nurses Reporting Too Few Staff to Provide Quality Care



Nursing Care Left Undone Because of Lack of Time

	Country			
<i>% Reporting the Following Tasks Left Undone</i>	England	Norway	Spain	Switzerland
<i>Administer medications on time</i>	22	15	8	15
<i>Treatments and procedures</i>	11	7	4	3
<i>Skin care</i>	21	30	24	16
<i>Educating patients and family</i>	52	24	50	30
<i>Comfort/talk with patients</i>	66	38	39	51

Percent Bachelor prepared Nurses



Nursing education in a selection of European countries

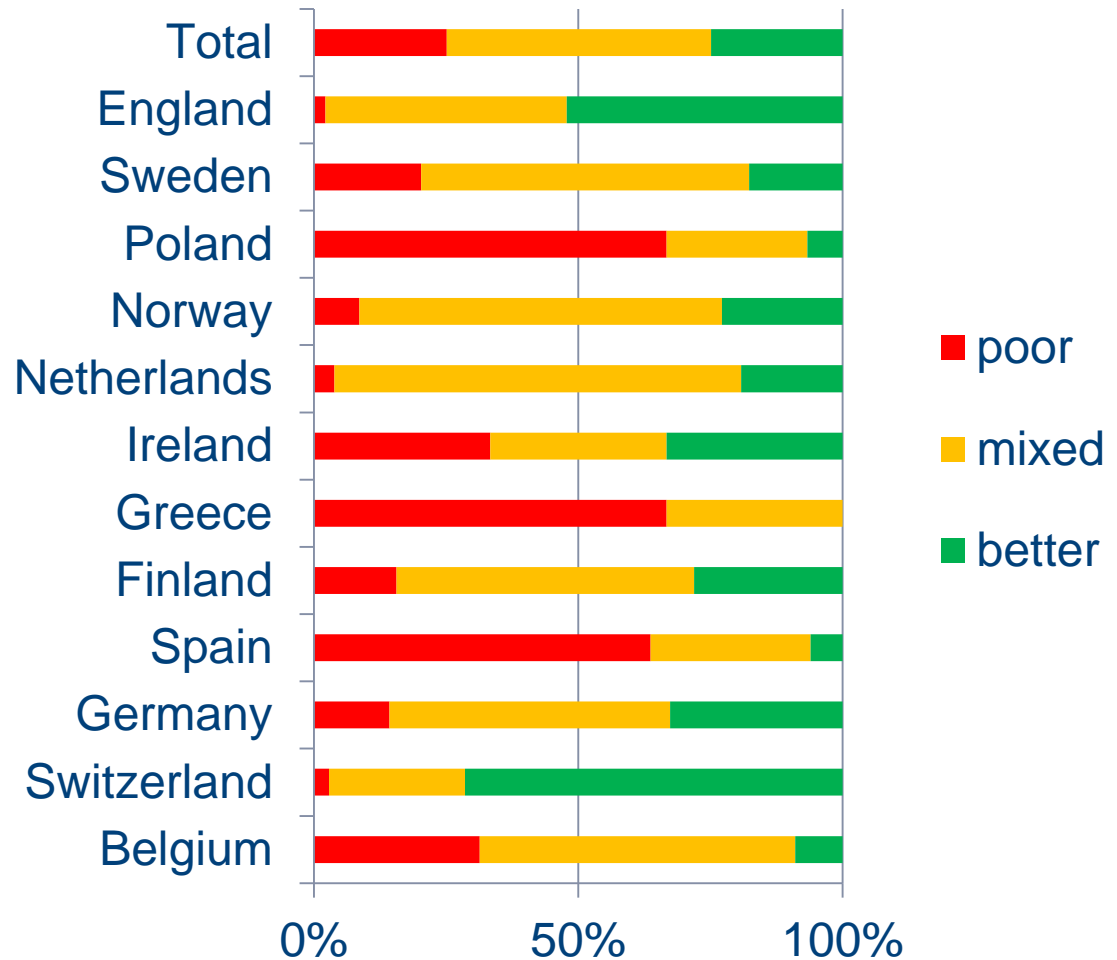
Country	First Cycle: entry to profession		
	Vocational training	College/polytechnic	University
Iceland			Bachelor – 4y
Ireland			Bachelor – 4y
Malta			Bachelor – 4y
Spain			Bachelor – 4y
Italy			Bachelor – 3y
Norway			Bachelor – 3y
Sweden			Bachelor – 3y
UK			Bachelor – 3y
Greece		Bachelor – 4y	Bachelor – 4y
Portugal		Bachelor – 4y	Bachelor – 4y
Luxemburg		Bachelor – 4y	
Finland		Bachelor – 3,5y	
Denmark		Bachelor – 3,5y	
France		Bachelor - 3 y	
Switzerland	Diploma - 3y	Bachelor – 4y F: only BA – 4y	
Austria	Diploma - 3y	Bachelor – 3y	
Netherlands	Diploma - 4y	Bachelor – 4y	
Belgium	Diploma - 3y	Bachelor – 3y	
Germany	Diploma - 3y	Bachelor – 3y	

Nurses' work environment

Captures 5 dimensions:

- Staffing adequacy
- Nursing foundations for quality
- Nurse manager ability & leadership
- Nurse-physician relations
- Nurse involvement in hospital affairs

Hospitals classified into quartiles by PES scores



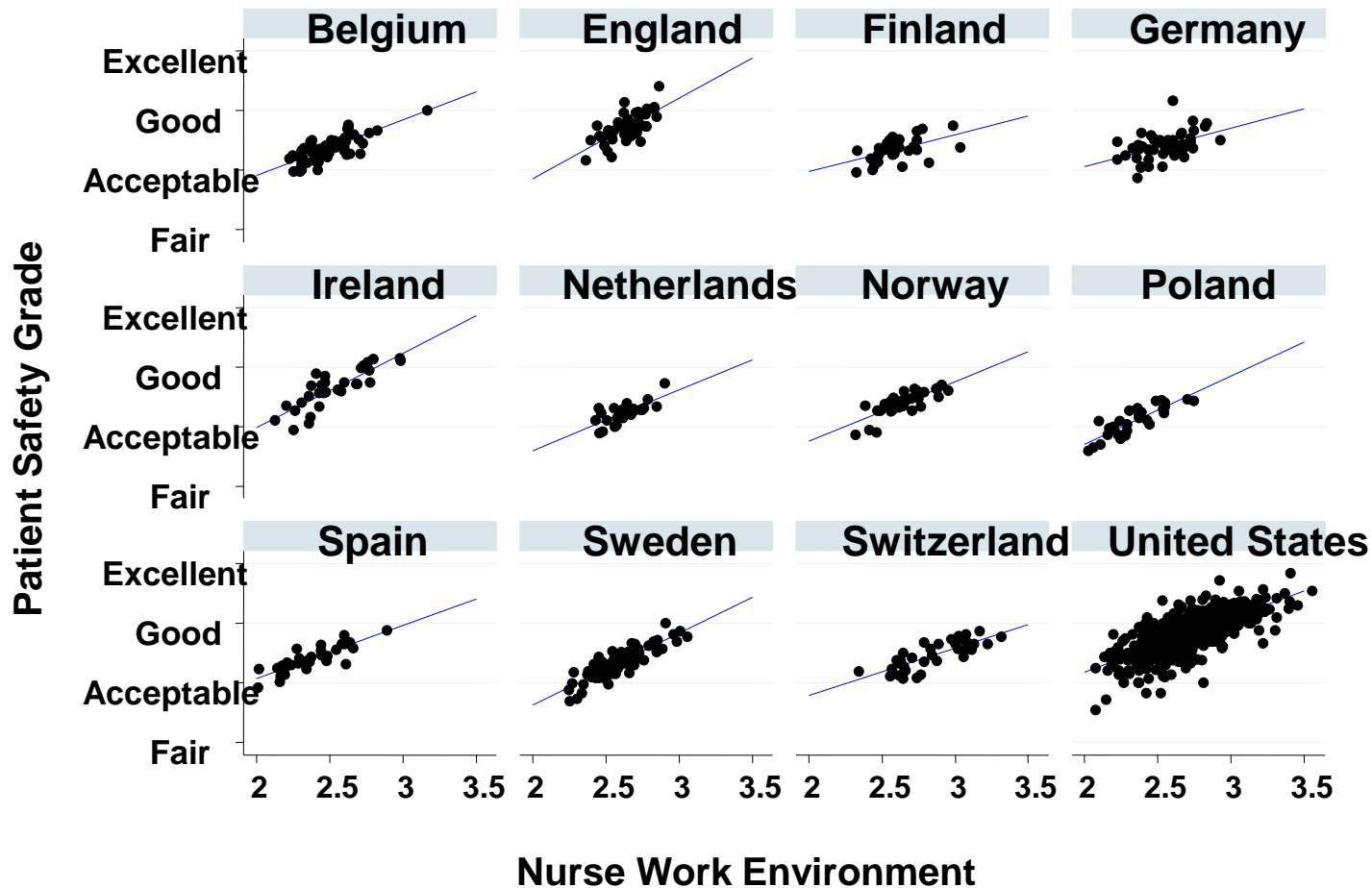
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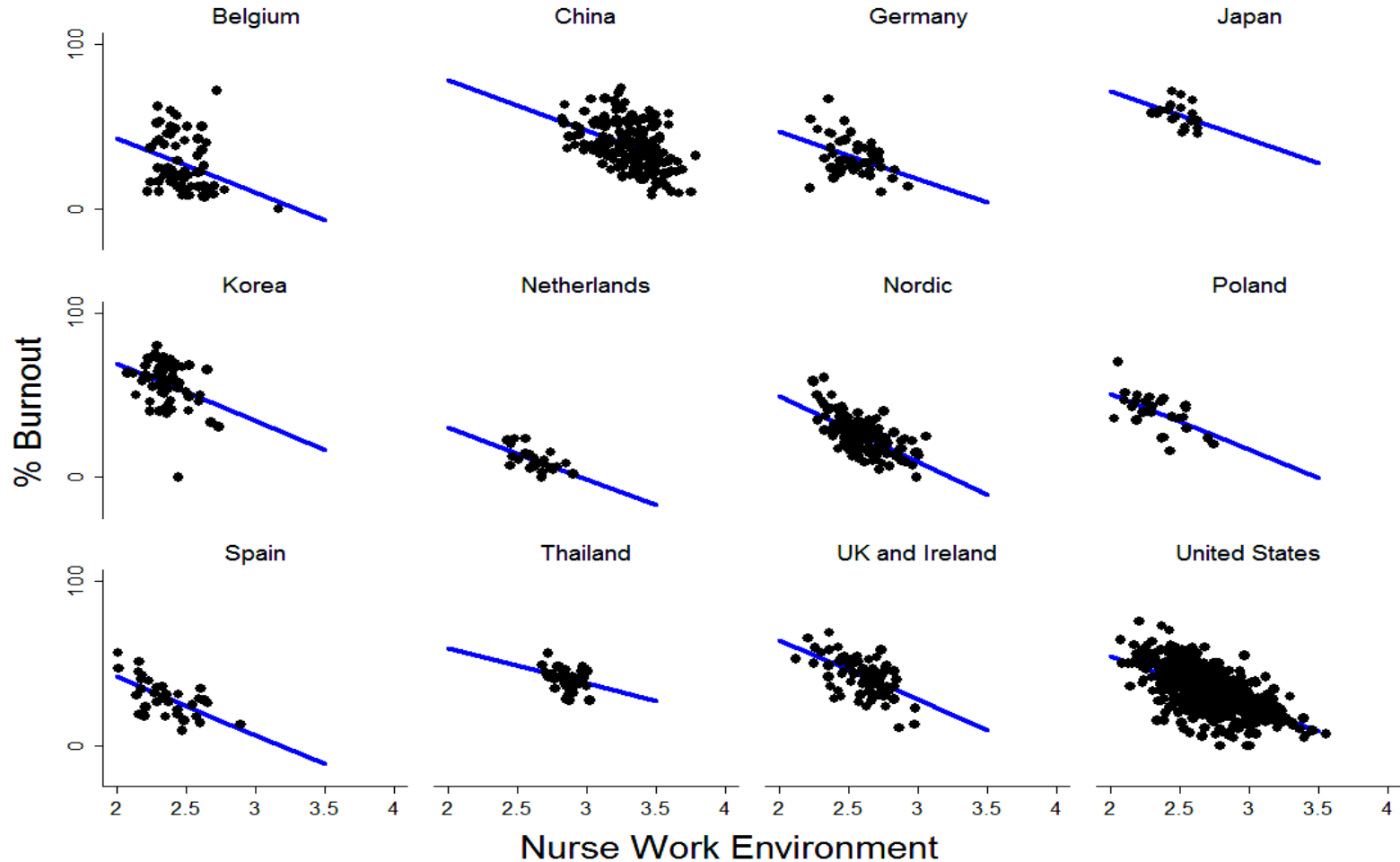
Summary of the evidence

- Impact on patient outcomes
 - Nurse staffing
 - Qualification level
 - Working environment
- Mediating effect of the working environment
- Impact on recruitment and retention
 - Nurse staffing
 - Working environment
- Dose-response relationship
- Cost-effective measure (1 Euro spent = 0.75 Euro gained)

Hospital Safety Grade is Higher in Hospitals with Better Work Environments, in Every Country



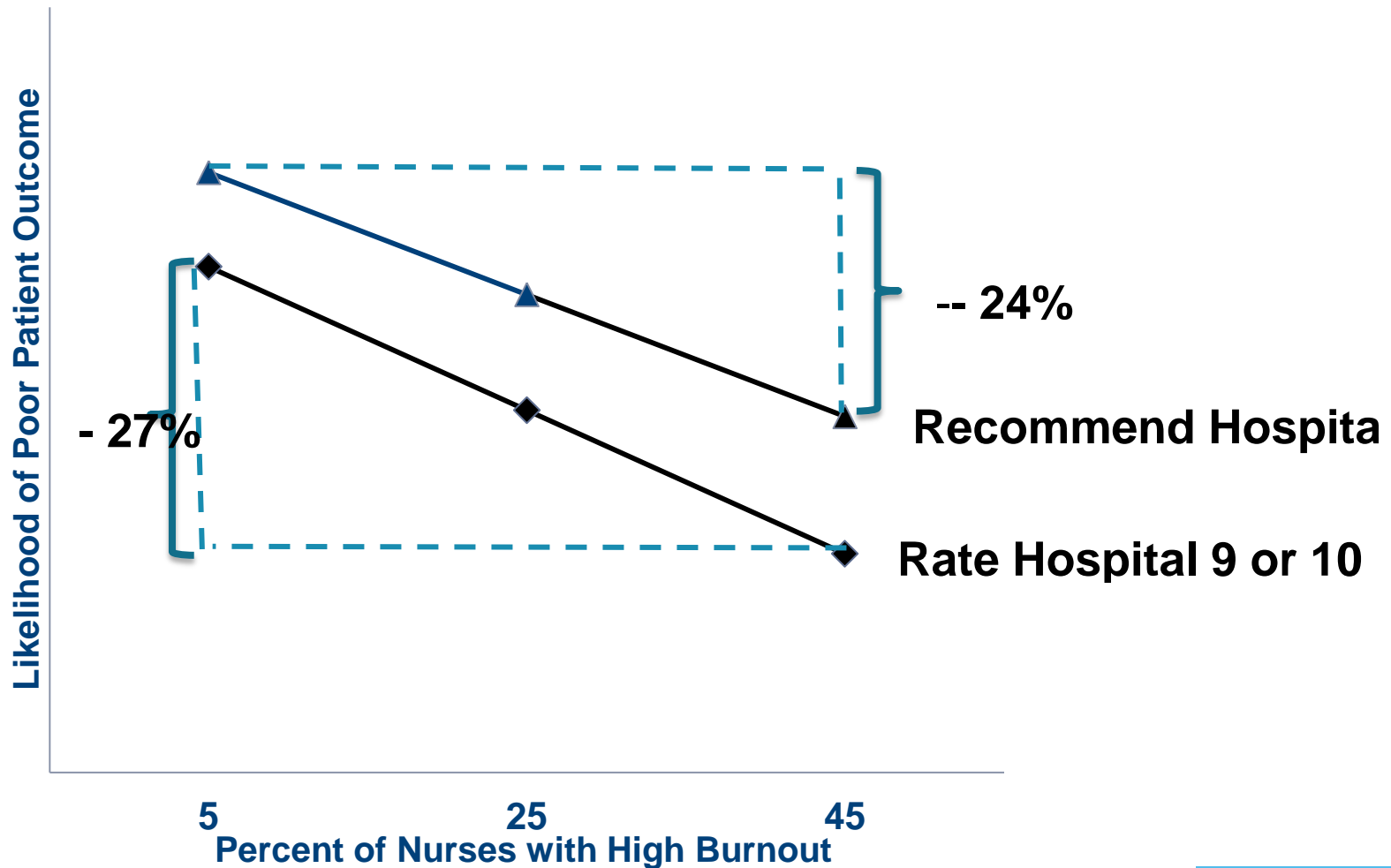
Hospitals with Better Work Environments: Lower Nurse Burnout, in every country



Patient Satisfaction: Room for Improvement

	Rate hospital 9 or 10 (%)	Recommend Hospital(%)
Belgium	47	60
Switzerland	60	78
Germany	48	66
Spain	35	56
Finland	61	67
Greece	42	53
Ireland	61	74
Poland	55	57
United States	59	64

Nurse burnout and patient satisfaction



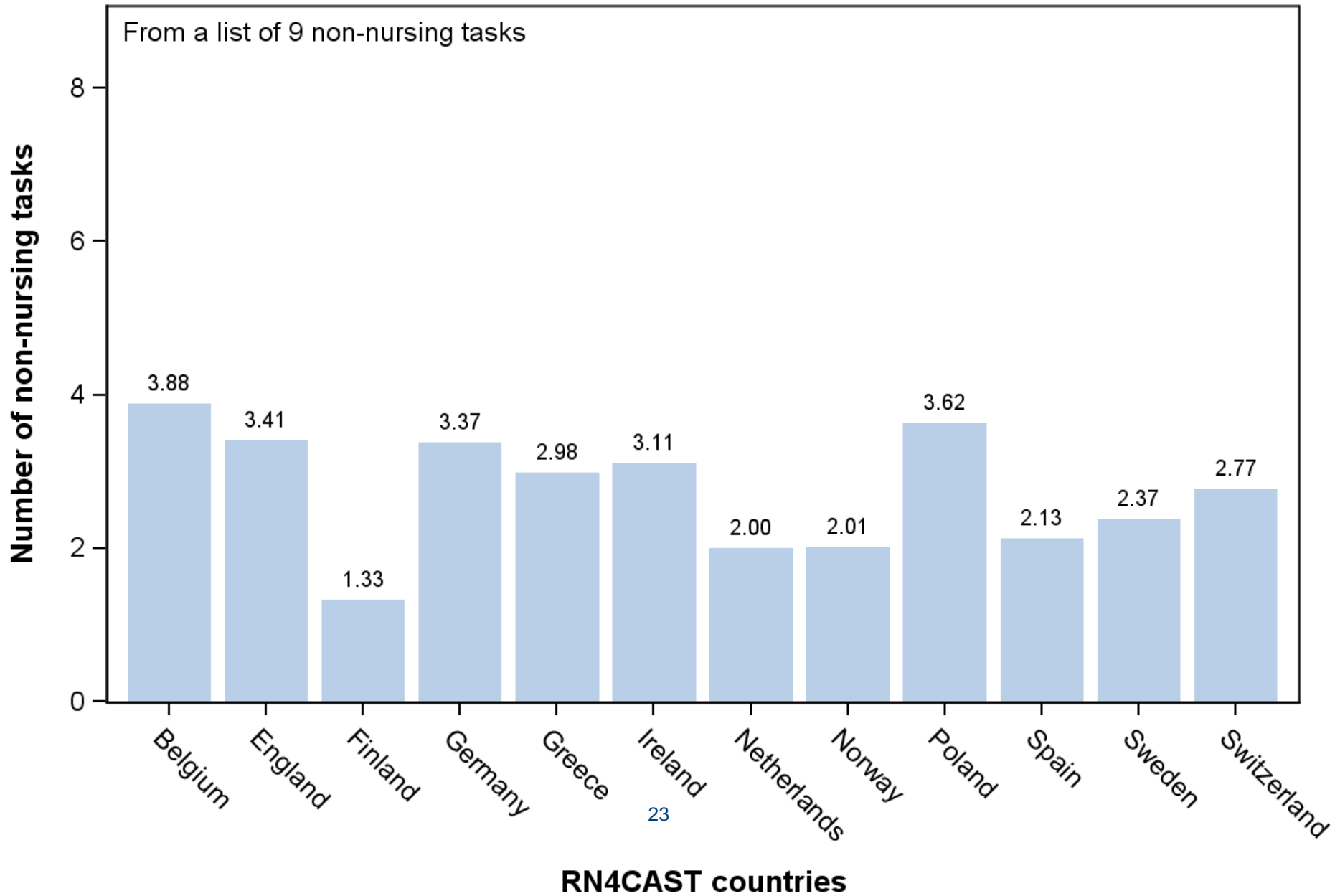
RN4CAST survey on tasks below skill level

(N nurses=33,731 in 12 countries).

Tasks “never”, “sometimes”, “often” performed during last shift:

1. Delivering and retrieving food trays
2. Performing non-nursing care
3. Arranging discharge referrals and transportation (including to long term care)
4. Routine phlebotomy/blood draw for tests
5. Transporting of patients within hospital
6. Cleaning patient rooms and equipment
7. Filling in for non-nursing services not available on off-hours
8. Obtaining supplies or equipment
9. Answering phones, clerical duties

Nurses' reports of the number of non-nursing tasks they often performed during their last shift: RN4CAST countries



More demand forecasting issues

- Impact on demand for nursing care
 - Demographic & epidemiological change
 - Technology & social innovations
 - Disruptive healthcare innovations
 - Task shift from physicians to nurses to patients
 - From hospitals to community care to homes
- Requirements for advanced nursing roles
- Quality & patient safety requirements

Key questions in (nursing) workforce planning

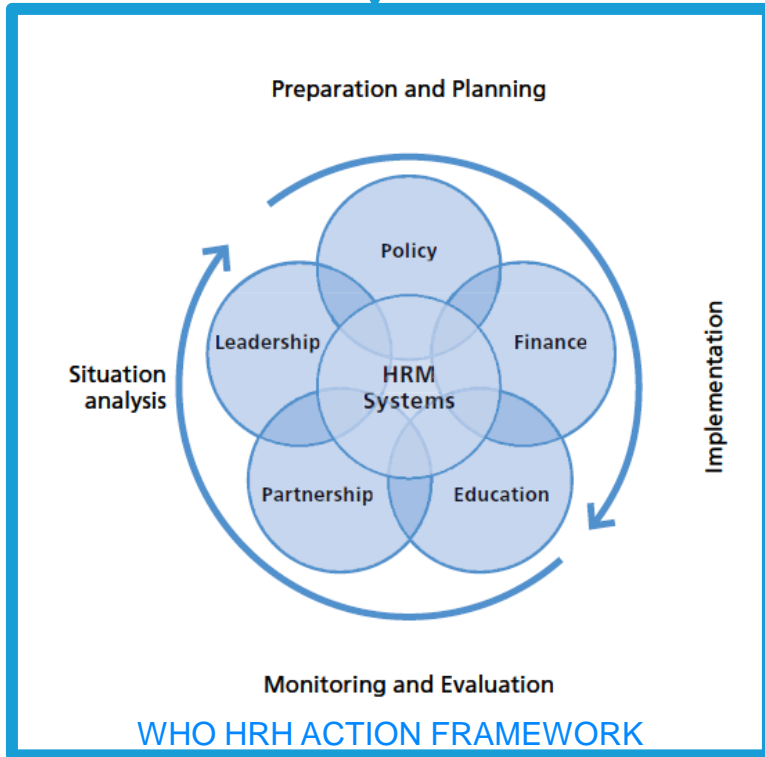
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Aim

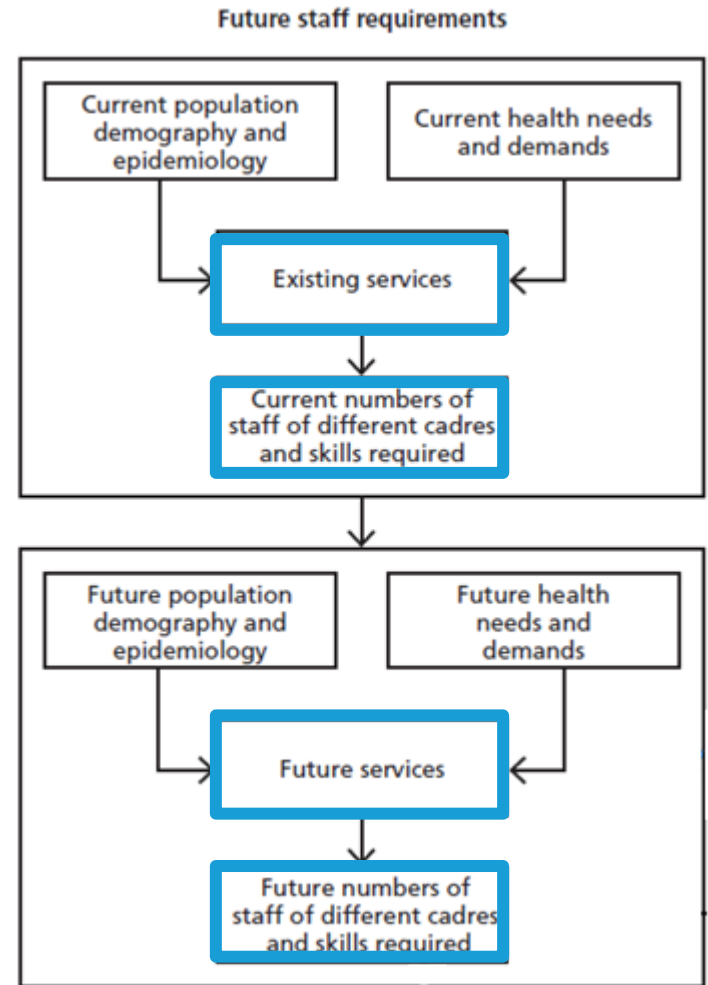
- “Right number of health workers, with the right skills, in the right place, with the right attitudes and commitment, doing the right work effectively and efficiently, at the right cost, with the right productivity”
- Human Resource for Health strategies:
 - On recruitment
 - On human resources management
 - On retention

RN4CAST ASSUMPTIONS

- It's not solely about numbers of staff in post
 - Provider to population ratios are of limited value from a planning perspective
- consider the dynamic relationships that are at play



WHO HRH ACTION FRAMEWORK



HRH FRAMEWORK ACTION FIELDS

RN4CAST

MEASUREMENT OF ACTION FIELDS ELEMENTS

EVALUTION OF THE IMPACT OF THE ACTION FIELDS

CONTEXT FACTORS FOR ANALYSIS

1 HR management systems

- Patient to nurse ratios
- Nurse care environments
- Planning of staffing
- Productive wards
- Skill mix management

- Nurse wellbeing: absenteeism and turnover
- Nurse wellbeing: job dissatisfaction, burnout, intention to leave (
- Patient satisfaction
- Clinical outcomes
- Safety grades and quality of care

- Migration, age, gender, education
- Perceived health status
- Medical doctor staff numbers
- Hospital changes over the last year
- Hospital characteristics

2 Leadership

- Nurse manager abilities and leadership
- Magnet hospitals

3 Partnership

Stakeholder collaboration

4 Finance

Budgets
Competitive salaries

5 Education

- Proportion bachelor prepared nurses
- Budget for in-service training and professional development

6 Policy

- Performance review and professional development
- Scope of practice

Key Issues

- 1. Practice issues**
- 2. Education issues**
- 3. Leadership issues**
- 4. Data on Nursing Workforce issues**
- 5. Joint Action comes at the right moment these issues**



Further readings

- Sermeus et al. (2011). Nurse forecasting in Europe (RN4CAST): rationale, design and methodology. BMC Nursing, 10 (1):6
- Aiken et al. (2012). Patient safety, satisfaction and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the united States. British medical Journal, Mar 20; 344:E1717
- IJNS special issue: RN4CAST - Nursing workforce a global priority area for health policy and health services research (http://www.journalofnursingstudies.com/content/collection_RN4Cast)



THANK YOU FOR YOUR
ATTENTION

More info:

www.rn4cast.eu

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