Safe Nurse Staffing ands Skill-Mix in Community Settings: The Evidence to date

Official Launch of the Centre of Excellence for Nursing Research and Development.

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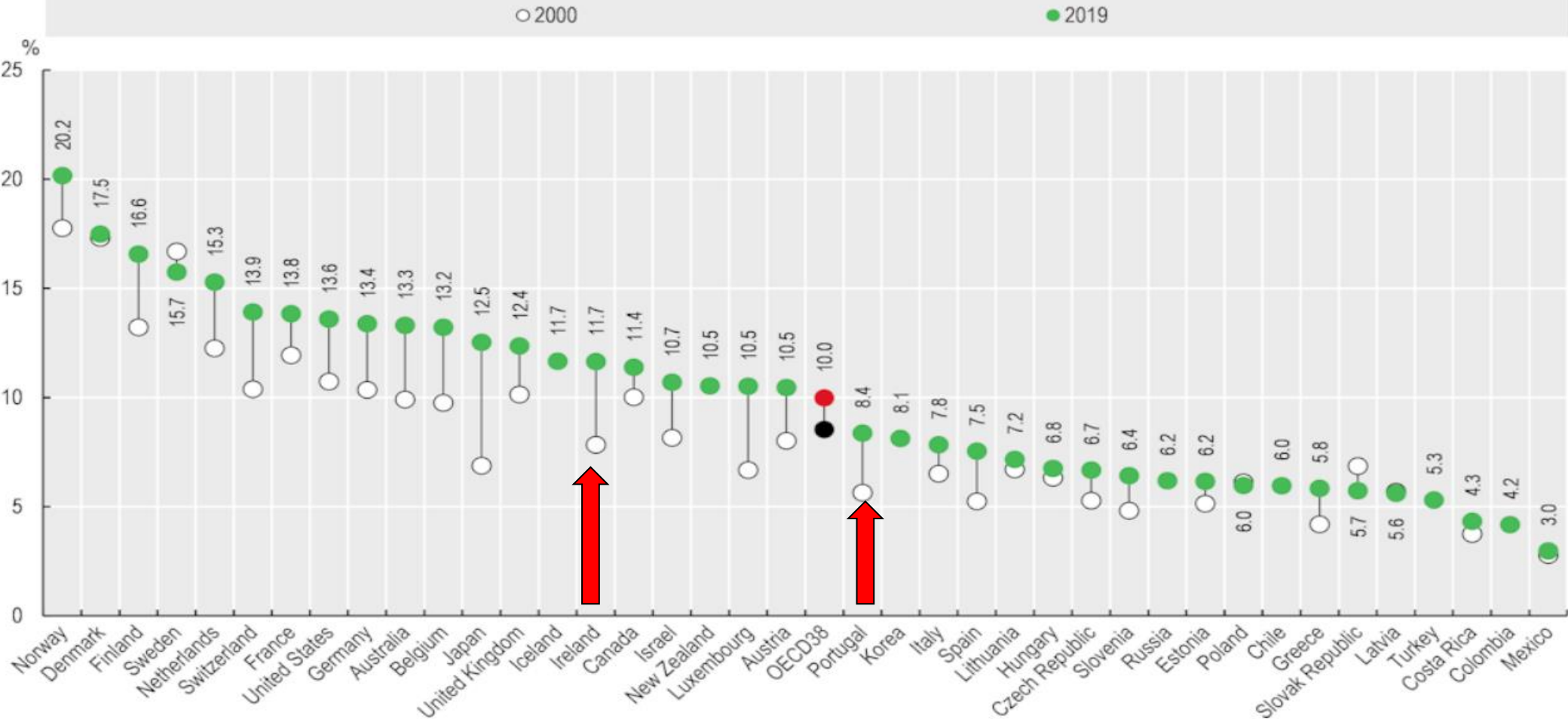**University College Dublin**

Collaborative Research Team

Overview of the Health Workforce Nationally and Internationally

- [OECD](#) countries now employ more healthcare professionals than ever before ([OECD 2021](#)).

- Despite this growth, there is expected to be, over the next decade, a shortfall in the number of healthcare professionals available to provide care.
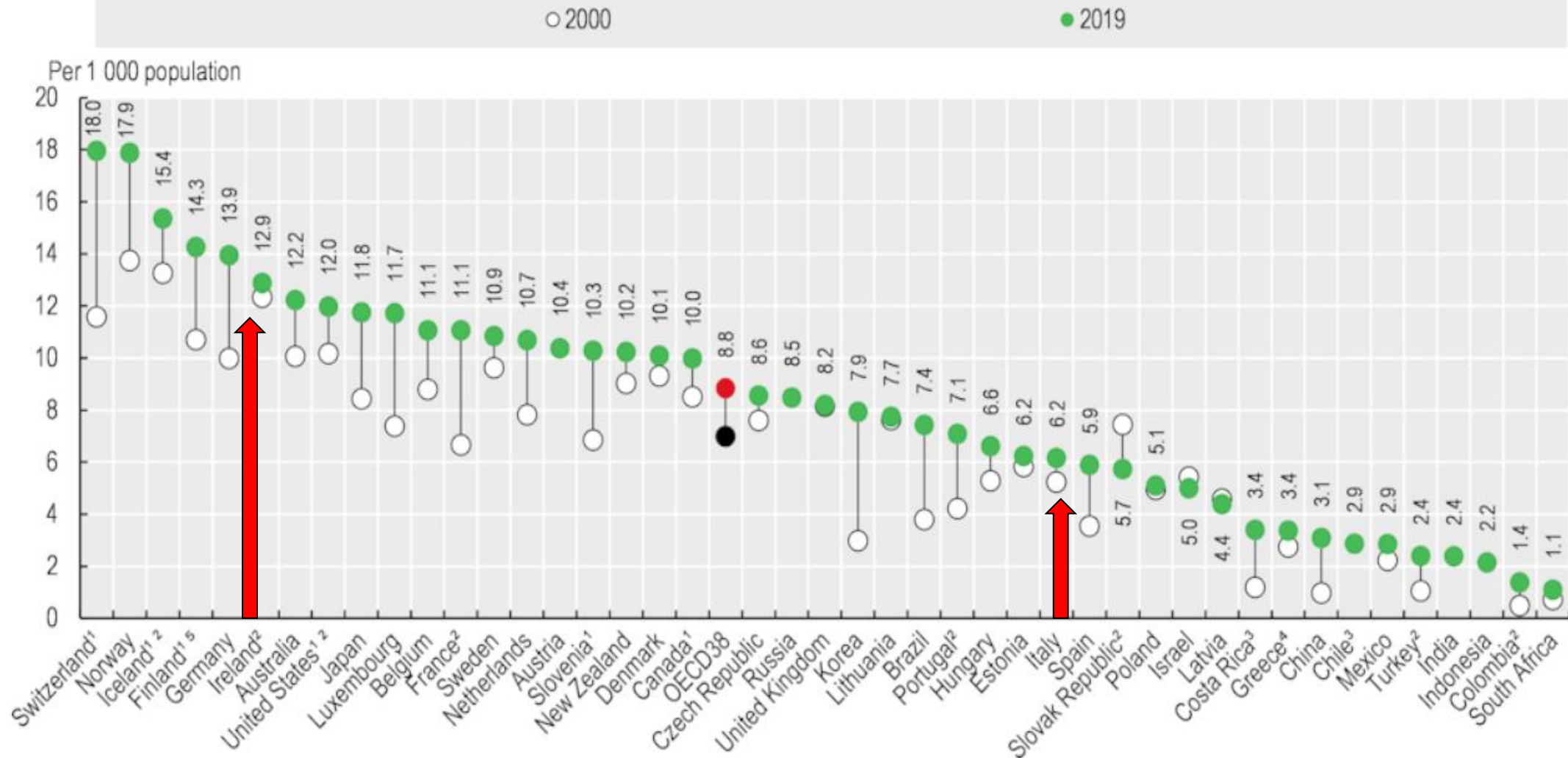

Health at a Glance 2021
OECD INDICATORS
OECD

Overview of the Growth in the Health Workforce Nationally and Internationally

OECD (2021)

The Nursing Workforce 2000 and 2019 (OECD 2021)

Per 1 000 population

○ 2000   ● 2019

Switzerland[1] 18.0, Norway 17.9, Iceland[1,2] 15.4, Finland[1,5] 14.3, Germany 13.9, Ireland[2] 12.9, Australia 12.2, United States[1,2] 12.0, Japan 11.8, Luxembourg 11.7, Belgium 11.1, France[2] 11.1, Sweden 10.9, Netherlands 10.7, Austria 10.4, Slovenia[1] 10.3, New Zealand 10.2, Denmark 10.1, Canada[1] 10.0, OECD38 8.8, Czech Republic 8.6, Russia 8.5, United Kingdom 8.2, Korea 7.9, Lithuania 7.7, Brazil 7.4, Portugal[2] 7.1, Hungary 6.6, Estonia 6.2, Italy 6.2, Spain 5.9, Slovak Republic[2] 5.7, Poland 5.1, Israel 5.0, Latvia 4.4, Costa Rica[3] 3.4, Greece[4] 3.4, China 3.1, Chile[3] 2.9, Mexico 2.9, Turkey[2] 2.4, India 2.4, Indonesia 2.2, Colombia[2] 1.4, South Africa 1.1

The Nursing Workforce in Italy and Ireland

Practicing nurses per 1 000 population

Doctors Low Nurses High

Doctors High Nurses High

NO
IS
FI
DE
IE
BE
LU FR
SI
NL
SE
AT
EU average: 8.4
CZ
EU
DK
MT
LT
PT
RO HU HR
IT
EE SK CY
PL BG
LV EL

Doctors Low Nurses Low

EU average: 3.9

Doctors High Nurses Low

Practicing doctors per 1 000 population
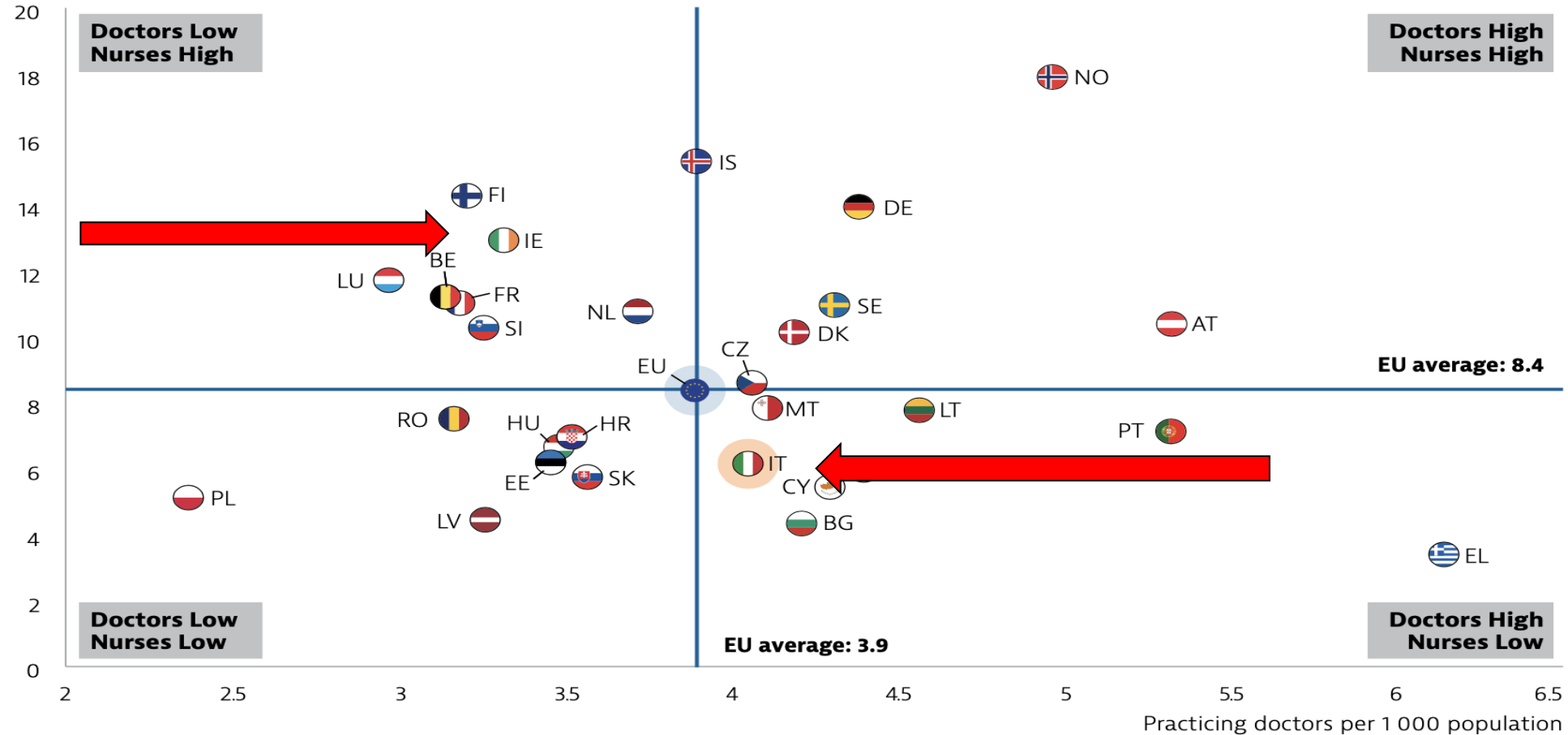
The Context of Healthcare Work
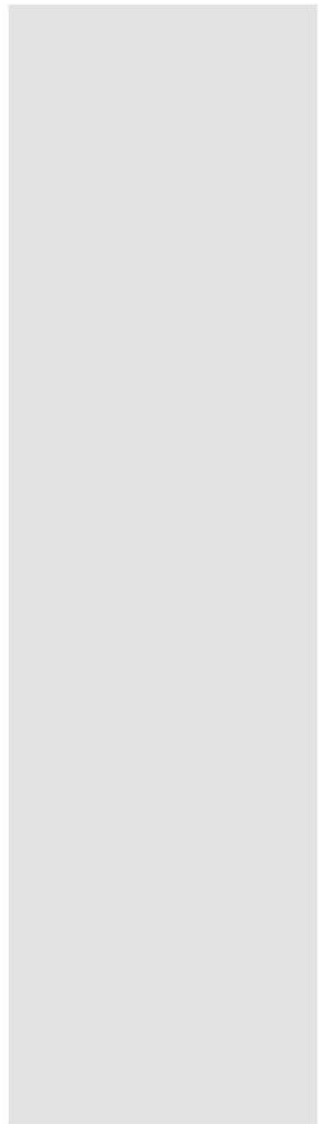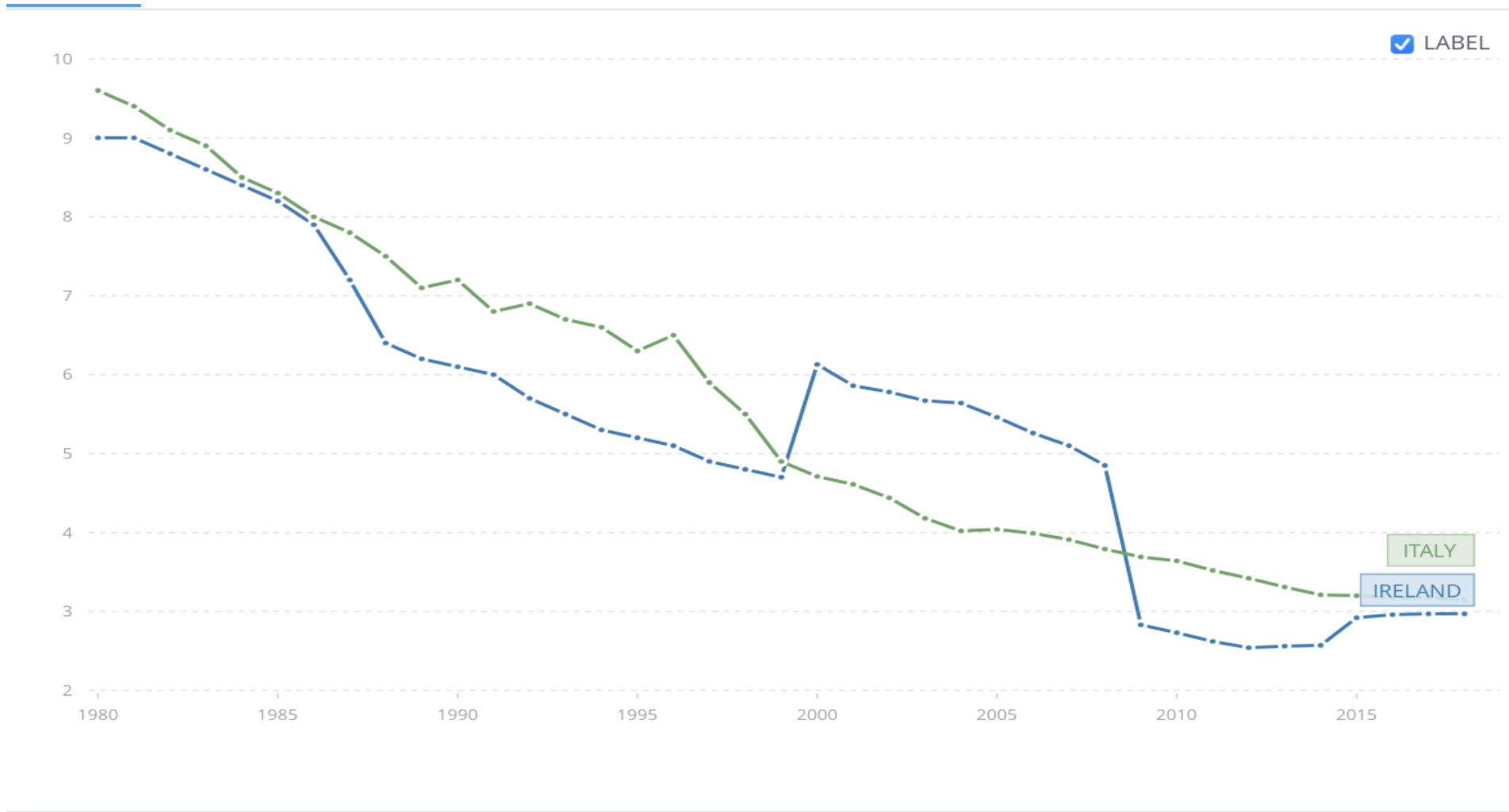
Number of Hospital Beds 2009 and 2019 (OECD 2021)

Hospital Beds in Italy and Ireland 1980 - 2018
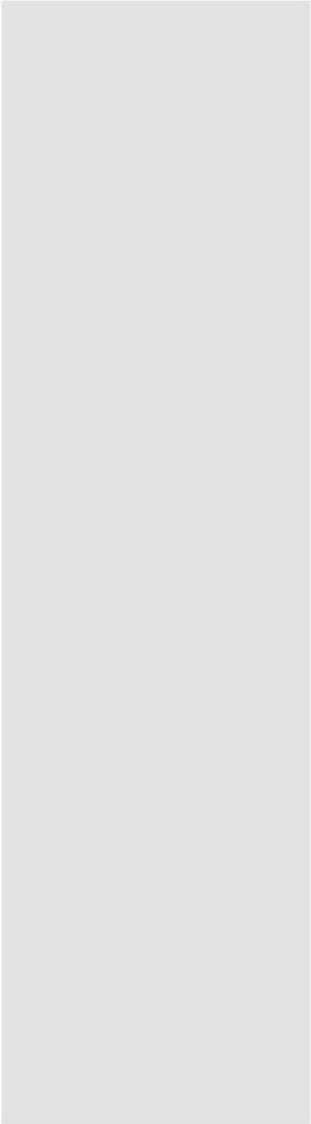(Source World Bank/WHO 2020)

The Future of the Health Workforce Planning

- There will be an increasing demand for healthcare workers in the future with skills and roles changing; these changes will occur not least due to the ageing population but also aligned to the growth in people living with long-term illnesses (OECD 2019).

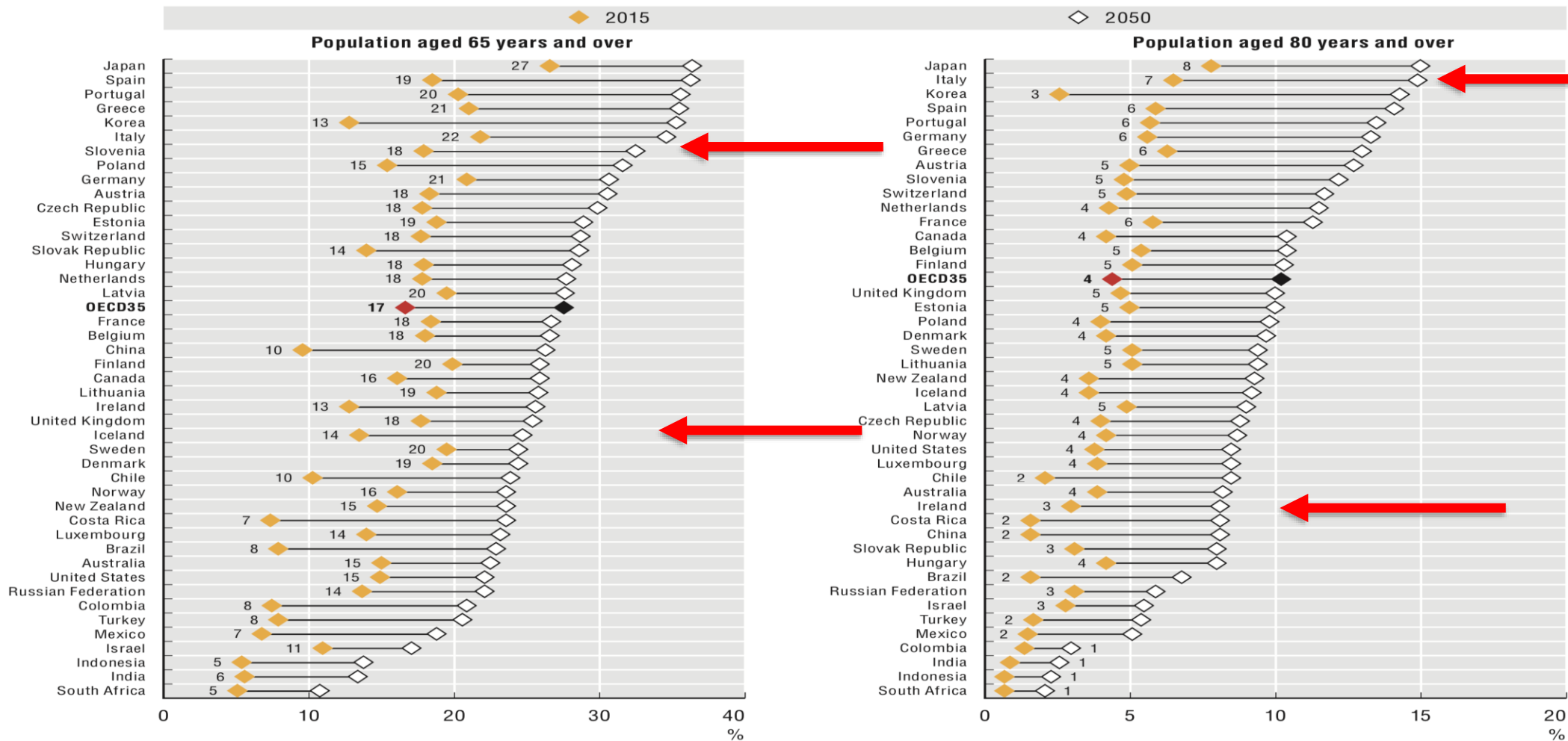- In addition, the ongoing impact of Covid-19 is requiring the re-organisation of care delivery.

Older Population as a Percentage of the Total Population – Italy and Ireland
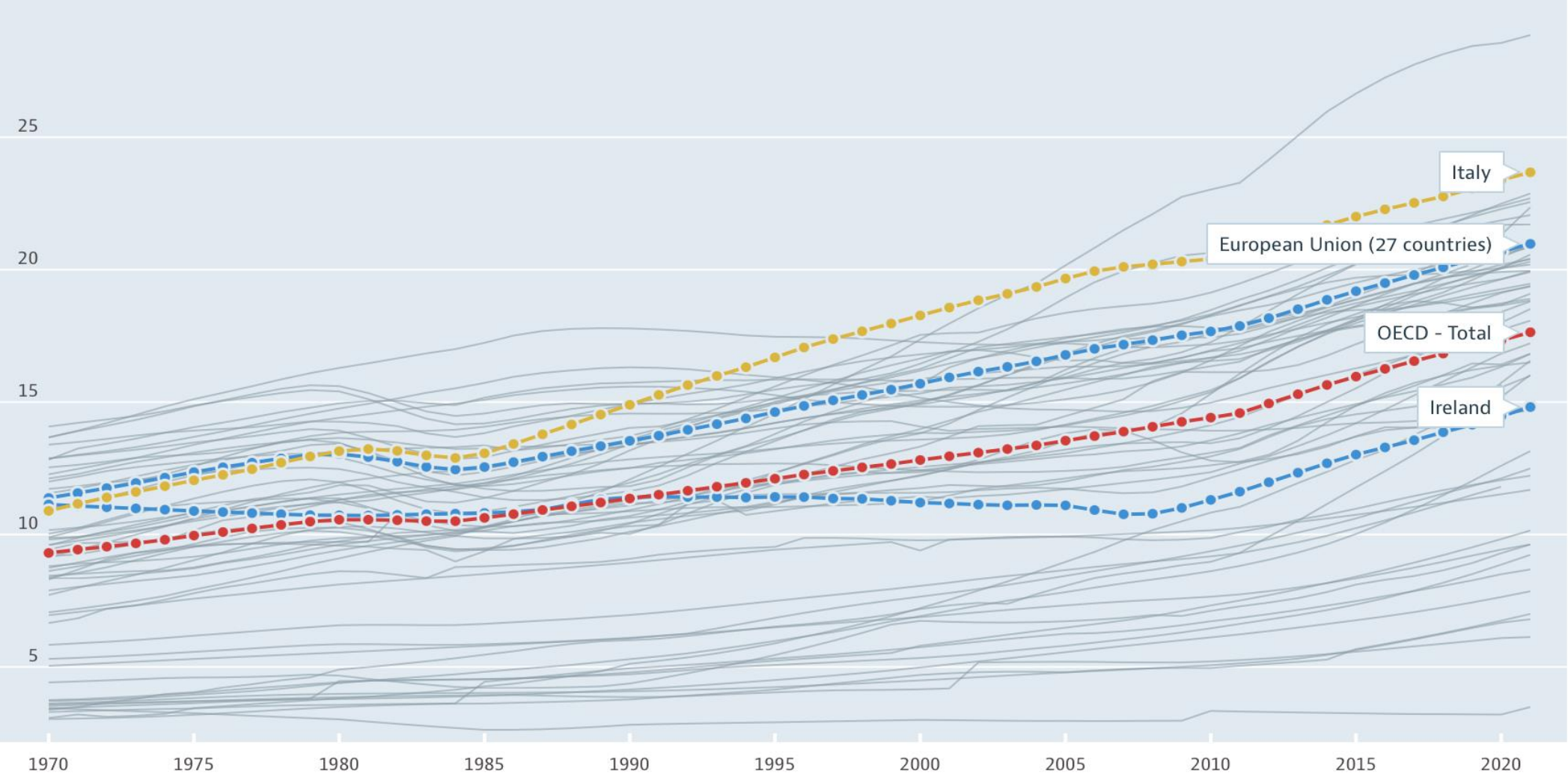
Source: OECD Health Statistics 2017, OECD Historical Population Data and Projections Database, 2017.

Share of the Population Aged 65 Years and Older 2015 - 2050

Source: OECD Health Statistics 2017, OECD Historical Population Data and Projections Database, 2017.

Older People and Requirement for Care

- People aged 65 years and older account for approximately 13% of the population and require approximately one third of healthcare activity

- 2031 – expected to be 19% of the population and account for 50% of healthcare activity

  –(Department of Health 2018).

Projections for Health Workers

- As populations age, the potential supply of labour in the economy is expected to decline.

Projections for Health Workers

- On average across OECD countries, there were slightly more than four people of working age (15-64 years) for every person 65 years and older in 2012.

- This rate is projected to halve from 4.2 in 2012 to 2.1 on average across OECD countries over the next 40 years (OECD, 2013).
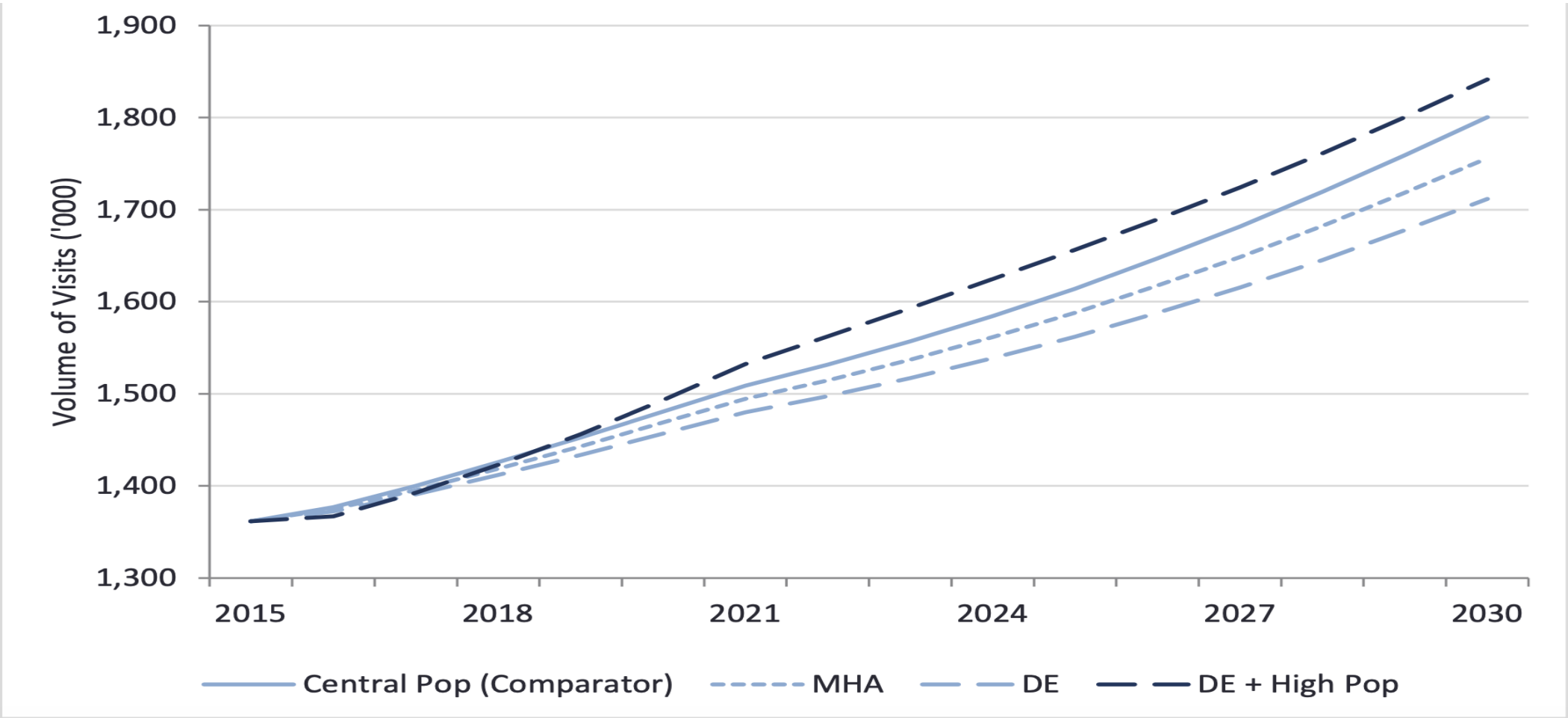
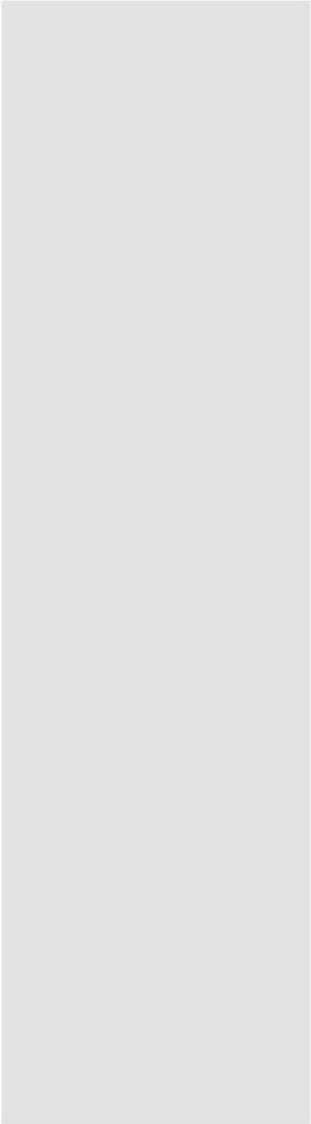# Public Health Nursing Referrals and Visits in Ireland
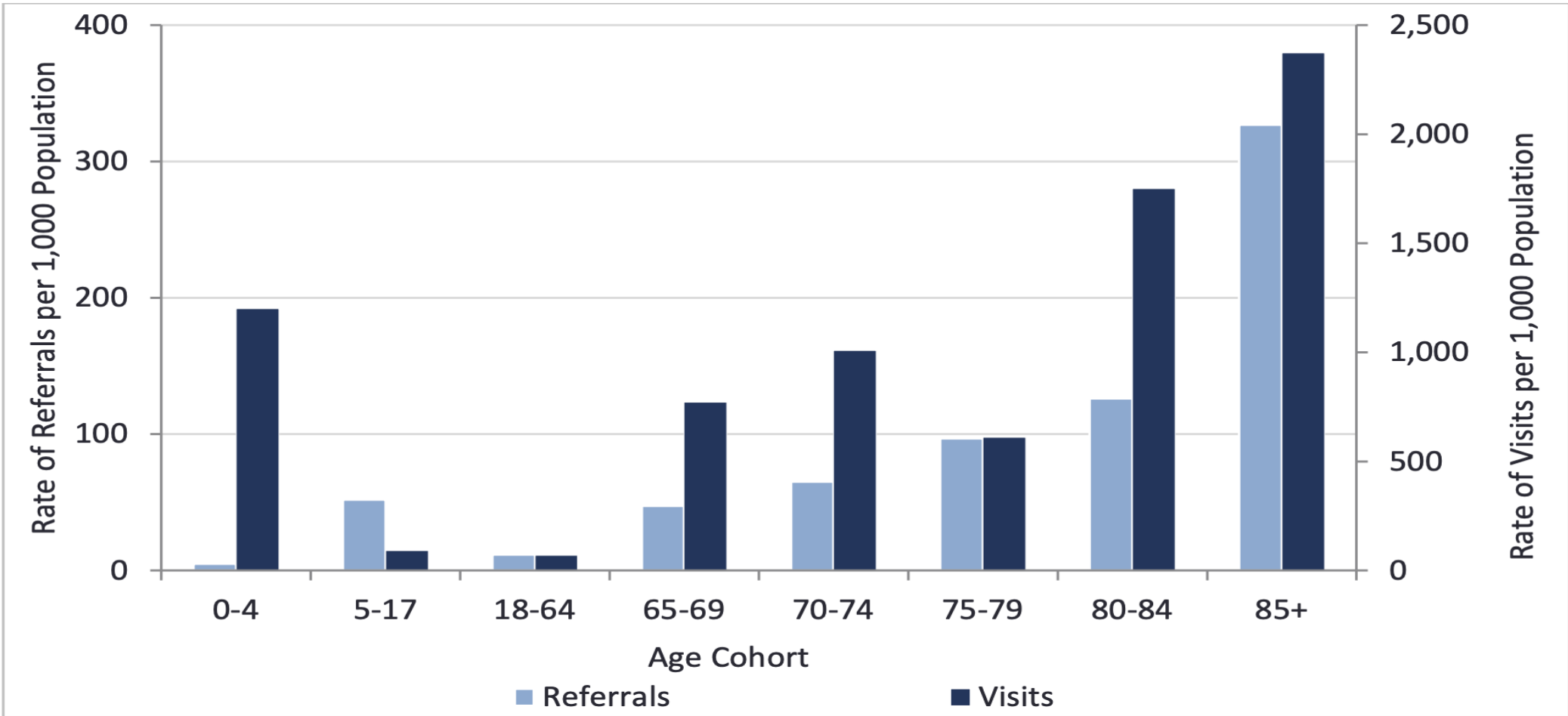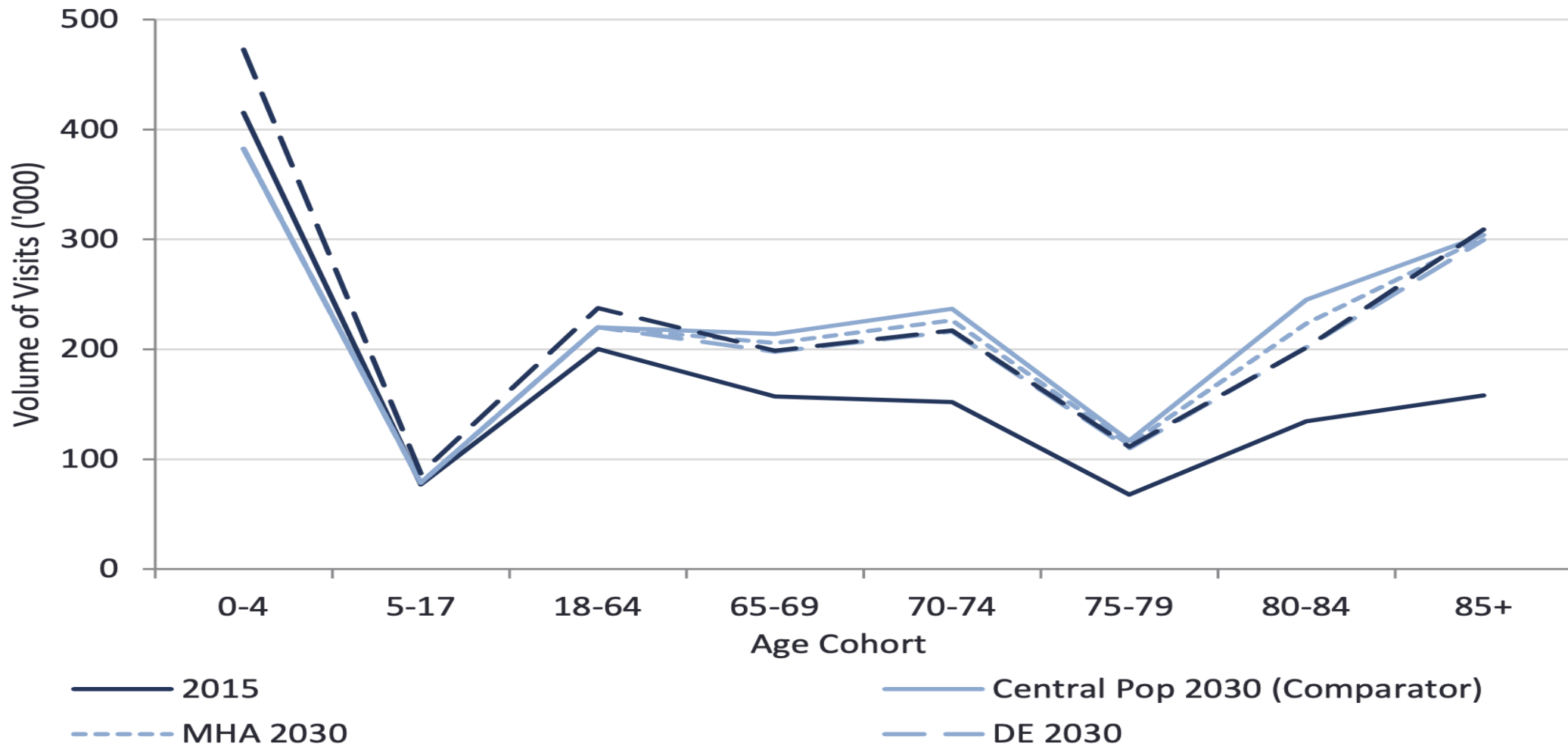

Source: ESRI 2015

Projected Demand for Public Health Nursing Visits 2015 - 2030


Source: ESRI 2015

Projected Demand for Public Health Nursing Visits by Age 2015 - 2030

Source: ESRI 2015

Community Settings – Research Questions

- What approaches and/or models for determining nursing staff requirements and/or skill mix are effective in community settings?

- What outcomes and factors are associated with safe nurse staffing for care in the community?

- What nursing care activities should be considered when determining nursing staff requirements within community settings?
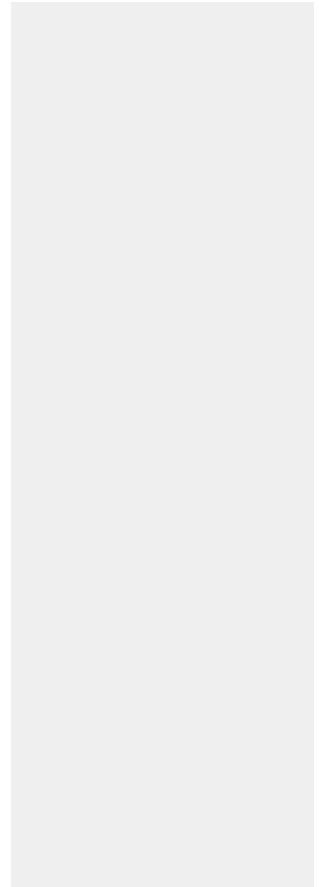
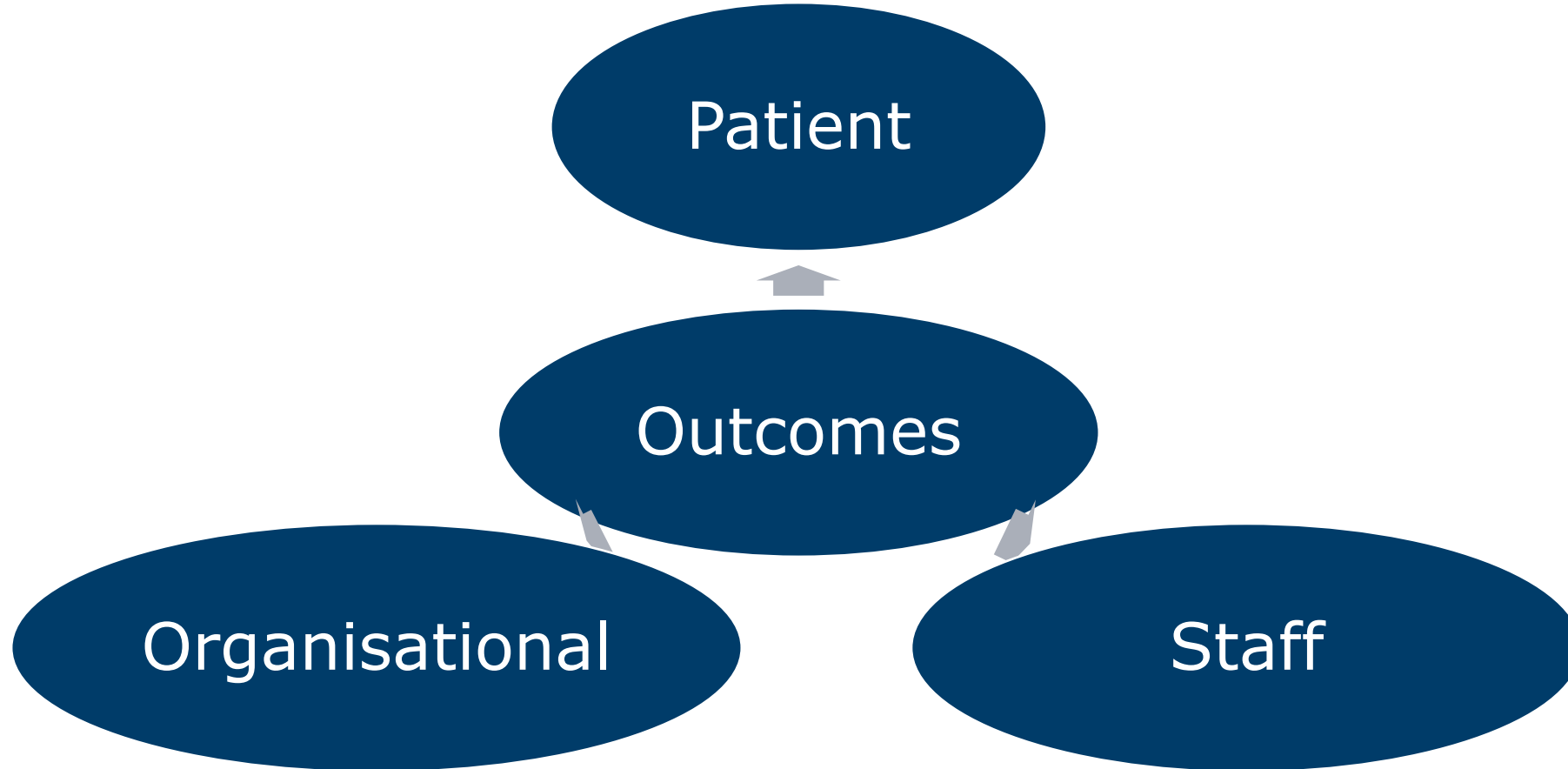# Community Settings – Current Model in Ireland
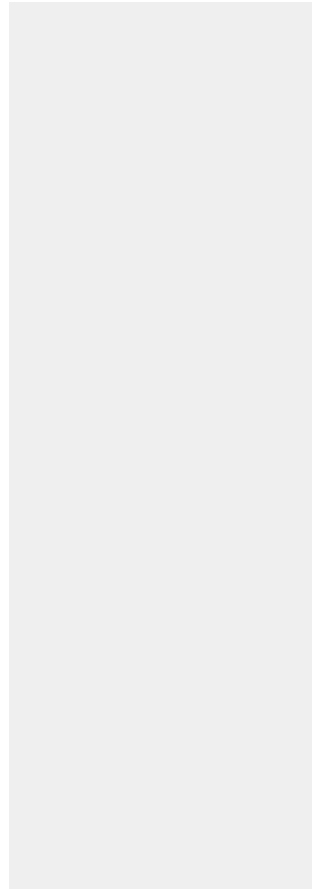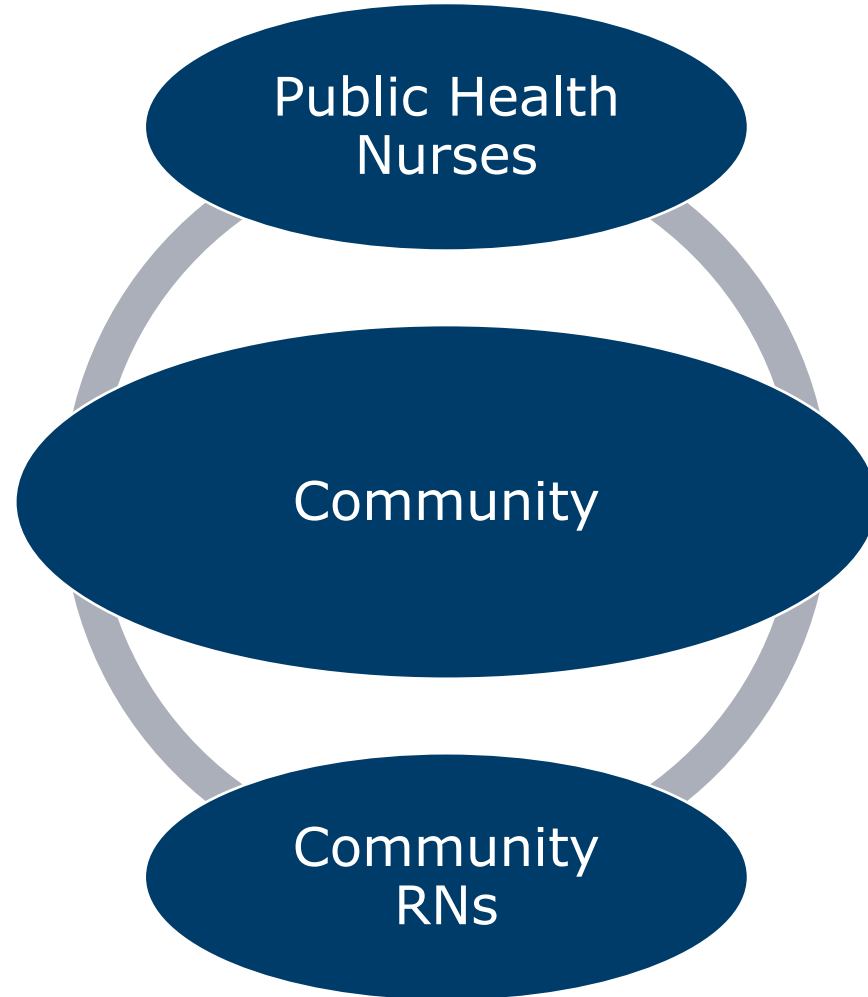
Challenges in identifying care provided

Outcomes to be considered to determining safe staffing in community settings

Outcomes to be considered to determining safe staffing in community settings

- Patient Outcomes
  - Delivery of nursing care
  - Preventing avoidable deterioration
  - Preventing unnecessary admission to hospital
  - Preventing healthcare associated infections
  - Quality of life
  - Improving the safety of discharge from hospital
  - Preventing medication errors
  - Preventing medical device errors
  - Prevention and effective management of pressure ulcers
  - Wound-healing rates
  - Preventing falls
  - Rehabilitation and recovery
  - Missed care

- Nurse Outcomes
  - Nurse staff sickness absence rates
  - Staff experience and satisfaction ratings
  - Burnout
  - Missed care
  - Intention to leave

- Organisational Outcomes
  - Current and up to date nursing staff training
  - Costs
  - Nurse staff retention and recruitment
  - Nursing vacancy rates
  - Work environment

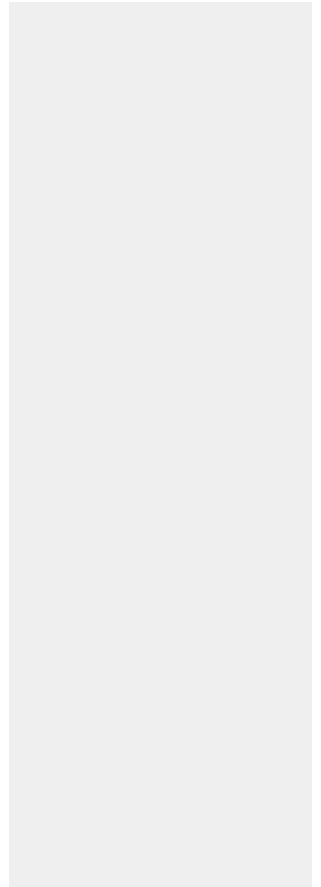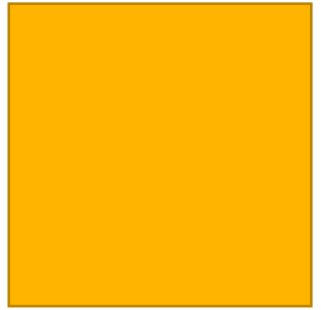# Approaches used to Determine Staffing in Community Care

Caseload

- Models
- Workload
- Activity
- Dependency

Approaches used to Determine Staffing in Community Care

- Caseload
  - The Sheffield Caseload Classification Tool
  - District Nursing Caseload Review Tool
  - Caseload Profiling
- Workload – Activity Based
  - Staffing Methodology Equalization Tool (SMET)

Approaches used to Determine Staffing in Community Care

- Workload – Dependency Based
  - The District Nursing Dependency Tool (DNDT)
  - The Community Client Need Classification System (CCNCS)
  - The Scottish Community Nursing Workload Measurement Tool
  - The Warrington Workload Tool
  - The DominiC Tool
  - Quest Acuity and Frailty Measures
  - The Cassandra Matrix ® Workload Activity Tool
- Models
  - The Dutch Buurtzorg Model
  - The Guy's and St Thomas' NHS Trust (GSTT) Test and Learn Pilot
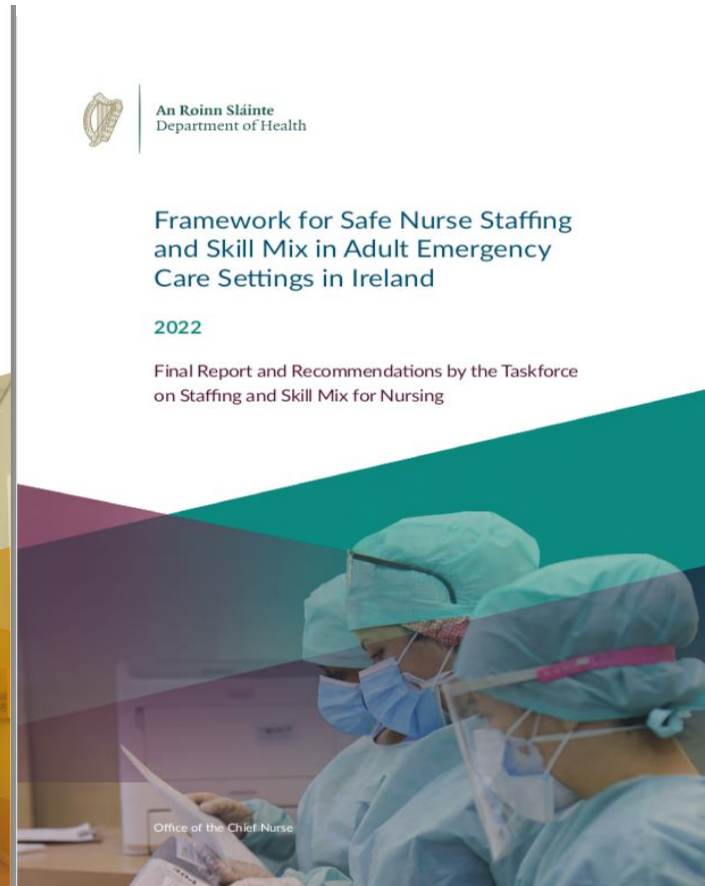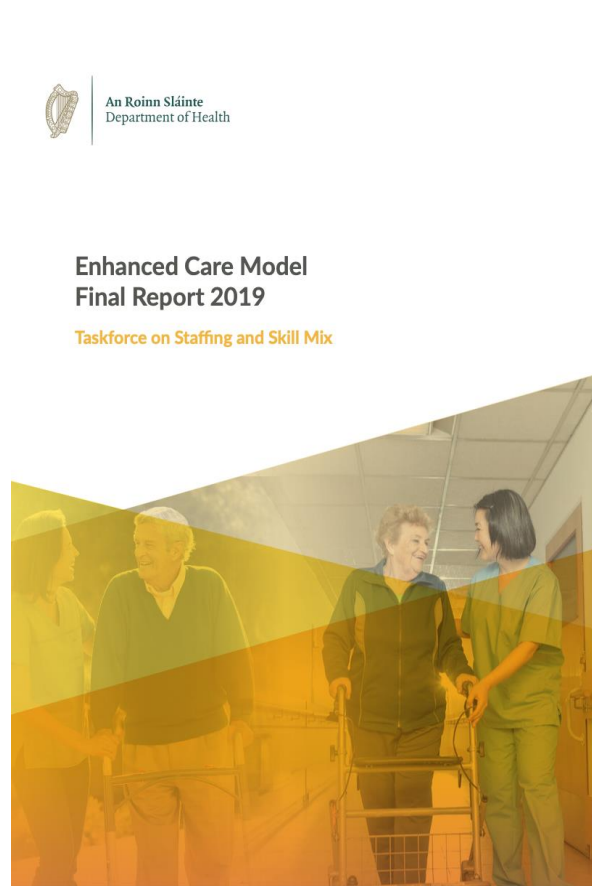 - Community Health Worker (CHW) Model

Limitations of Measurement Tools

- it is challenging to categorise workload and patient dependency within the community as needs may change and vary substantially.

- There is limited validated tools that can be used within this context.

- Several factors impact on the workload and dependency of patients within the community. The variability in these impacting factors further confounds the ability to determine appropriate measurement tool.

Research Questions to be Addressed in Future Research in Community Settings

- What model of safe nurse staffing should be introduced into community settings?.
- To what extent do patient outcomes change as a result of the introduction of the pilot Framework in community settings?
- To what extent do adverse events change as a result of the introduction of a new Framework in community settings?
- To what extent does the introduction of the pilot Framework impact on nurse outcomes (job satisfaction, intention to leave, burnout) in community settings?
- To what extent does the introduction of the pilot Framework impact on the patient experience in community settings?
- To what extent does the introduction of the pilot Framework impact on organisational and environment factors in community settings?
- What are the costs associated with the introduction of the pilot Framework in community settings?

Nursing & Midwifery Workforce

Acknowledgements