

The Rising Demand for Healthcare, 2015 - 2030

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Introduction

ESRI research report, “Projections of Demand for Healthcare in Ireland 2015-2030”, published October 2017

Programme of research funded by Department of Health since 2014

First output from new ESRI Hippocrates model

Important step to help decision-making and planning

Introduction

Most comprehensive mapping of public and private activity in the Irish healthcare system to have been published.

Annual projections of demand for wide range of health and social care services to 2030

Based on new ESRI population projections, first published based on 2016 Census

Objectives of model development: answer important questions in Irish health policy

This report:

- How much care is used now?
- How much unmet need is there?
- How much demand for care will there be in future?

Future research and applications of model:

- What capacity will system need to meet future demand?
- How much spending will be needed?
- If changes to model of care, e.g. further reductions in hospital length of stay, what effect on other care settings, like nursing home demand?

Methods and scope of this report

- Scope: wide range of services (hospital, primary, community, long-term)
- Scope: public and private demand
- Base year and time horizon: 2015 –2030
- Base case (pure population growth)
- Preferred projection range varies assumptions about population, health status and unmet demand
- Assume no change to models of care

Main Findings

Demand for care across all health and social care sectors projected to increase substantially in years to 2030

Driven by

Rapid growth and ageing of population

Plus unmet needs

Although we take an optimistic view of health as life extends

Main Findings

Greatest projected demand increases, 2015-2030 for services for older people

- Up to 54 per cent for residential and intermediate care places and home help care
- Up to 37 per cent for inpatient bed days in public hospitals
- Up to 30 per cent for inpatient cases in public hospitals
- Up to 27 per cent for GP visits

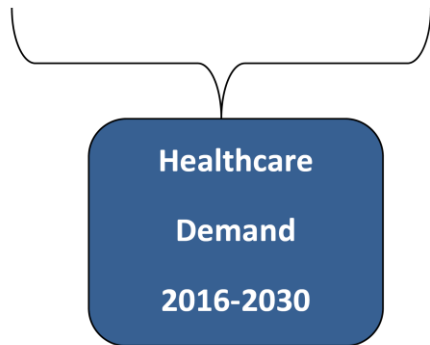
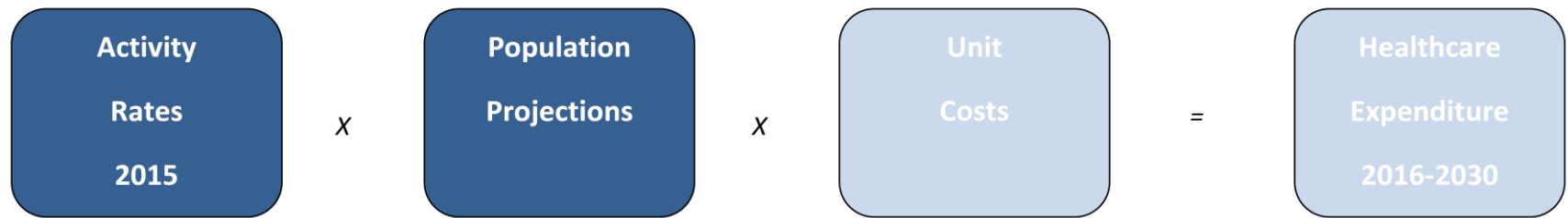
Annual average projected demand increases range between 1-3% per annum

Outline

- Scope of analysis
- How demand is analysed: baseline utilisation
- How projections are developed: population projections, health status assumptions, unmet demand
- Findings: baseline, projections, sensitivity analysis
- Policy implications of findings

SCOPE OF ANALYSIS

The Hippocrates Model



Inpatient and day patient public hospital care

Emergency department care

Outpatient care

Inpatient and day patient private hospital care

General Practice services

Community pharmaceuticals

Long-term and intermediate care

Community based care – home care

Community based care – allied healthcare professionals

Mental healthcare

Disability services

ANALYSIS OF HEALTH AND SOCIAL CARE USE, 2015 BASELINE

Irish health and social care activity 2015 – baseline findings

Sector	Measure of activity	Baseline Volume of activity in 2015/ end 2015 '000s
Public hospitals	Inpatient discharges	514
	Daypatient discharges	1,010
	Inpatient bed days	3,273
	ED attendances	1,138
	OPD attendances	3,299
Private hospitals	Inpatient admissions	133
	Daypatient admissions	459
	Inpatient bed days	613
General practice	GP visits	17,551
	Practice nurse visits	5,944

Irish health and social care activity 2015 – baseline findings

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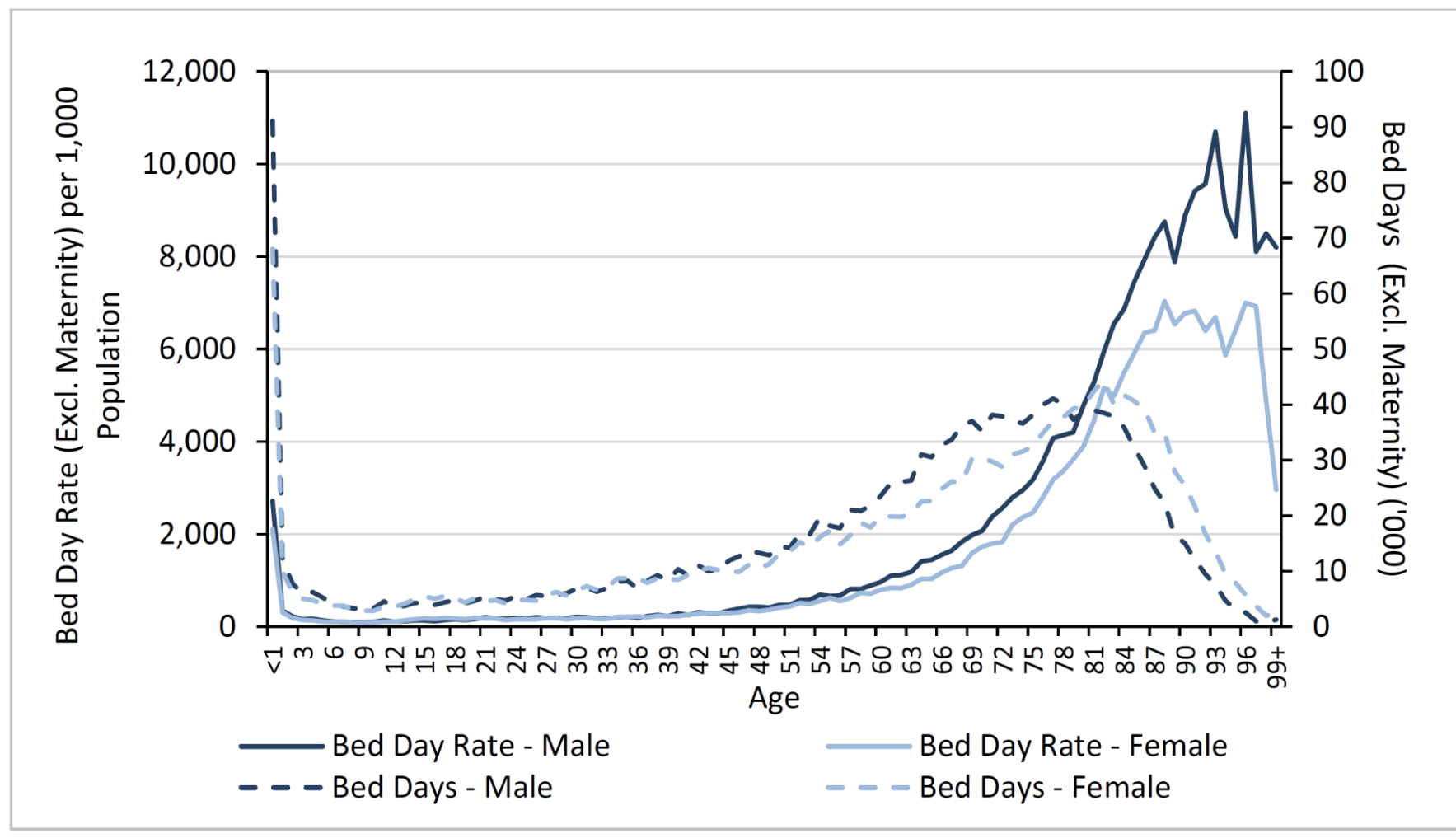
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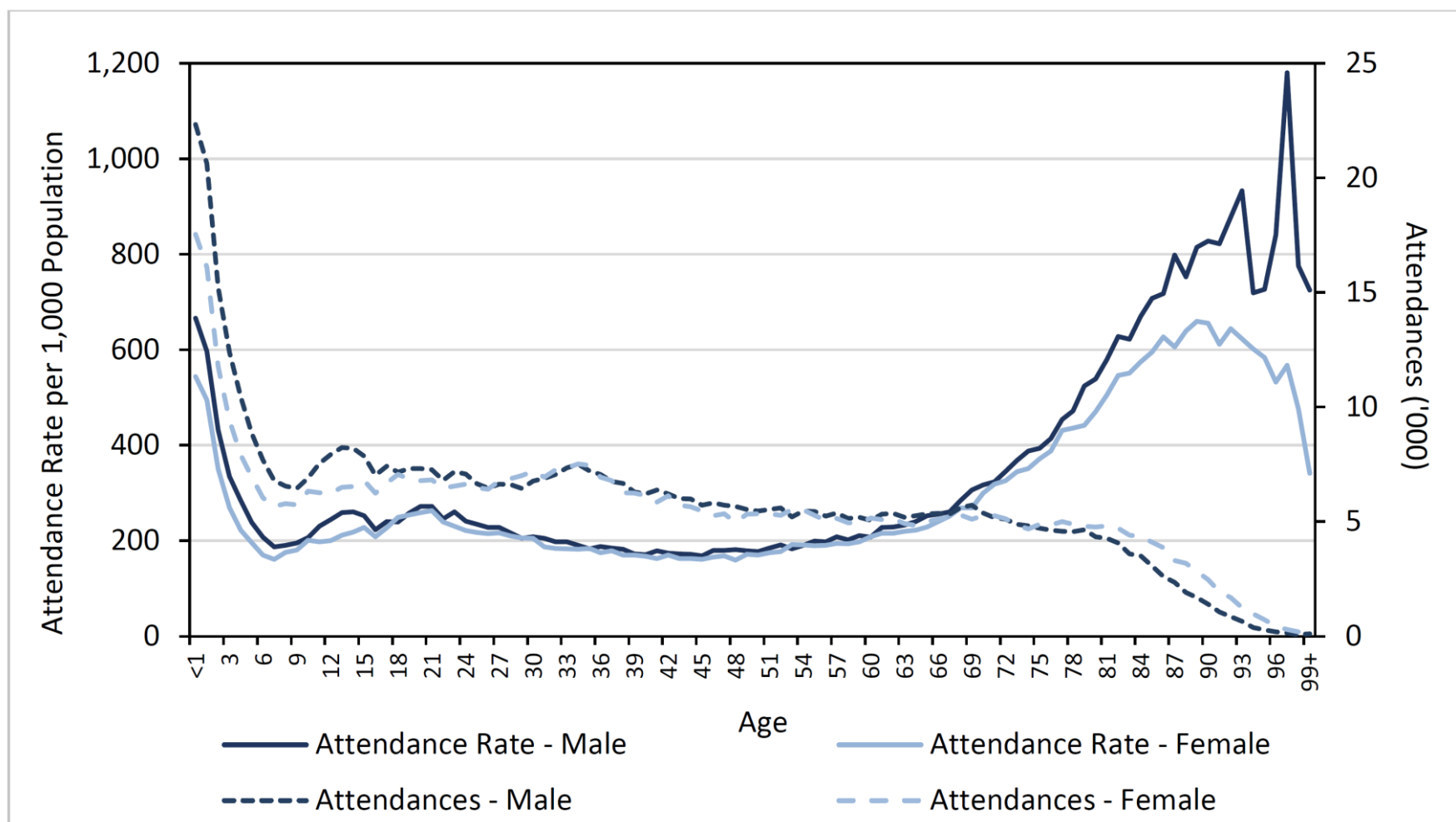
Irish health and social care activity 2015 – baseline findings

Sector	Measure of activity	Baseline volume of activity in 2015/ end 2015 '000s
Long-term care	Residents/places	29
	LTC bed days	10,580
Home care	Home help service	66
	HCP recipients	15
	Home help hours	14,311
Allied Healthcare Professionals	Public PT referrals	189
	Public OT referrals	88
	PHN visits	1,362
	Public PT visits	760
	Public OT visits	347
	SLT visits	7

Public hospital inpatient bed days, 2015



Public hospital ED attendances, 2015



DEVELOPMENT OF PROJECTIONS

Drivers of Growth in Demand for Care

- Population growth
 - Change in population age structure
 - Developments in health as people age
 - Unmet need
-
- Other factors such as effects of technology, higher incomes to be included as model includes expenditure

Population growth

Ireland's demographic profile unusual within EU

Rapid population growth 1996-2016:

Ireland 31% EU28 6%

Relatively young, 2016:

Ireland 13% aged 65+ 19% in EU28

Relatively young demographic masks increases in numbers at older ages

1996-2016: 64% increase in Irish population aged 80+

Summary of Population Projections, 2015-2030

Extra 640,000 - 1.1 million people (5.4 to 5.8m. 2030)

Aged 65 and over up from 1 in 8 to 1 in 6

Central scenario: Total increase 14% Aged 80 and over 89%

High scenario: Total increase 23% Aged 80 and over 94%

Migration key driver of difference in Central and High scenarios

Population growth a product of improving economic conditions and longer lives

Healthy Ageing

- Complex relationship between population ageing and healthcare demand with mixed international and national evidence

As life expectancy increases

- **Expansion of Morbidity** assumes more years are spent in bad health (morbidity/disability)
- **Dynamic Equilibrium** assumes number of years in bad health remains fixed
- **Compression of Morbidity** assumes number of years in bad health reduces
- **Moderate Healthy Ageing** a midway point between Expansion of Morbidity and Dynamic Equilibrium

Healthy Ageing

- **Expansion of Morbidity** *assumed in GP care where greater prevalence of chronic disease increases demand*
- **Dynamic Equilibrium** *assumed in hospital care where proximity to death a major predictor of demand*
- **Compression of Morbidity** *assumed in long-term and home care where evidence that reduced disability reduces need and demand but..*
- **Dynamic Equilibrium** *also assumed in long-term and home care due uncertainty about disability trends*

Unmet Need/Demand

- Volume of unmet need/demand in 2015 added to baseline activity
- Administrative waiting lists (e.g. public hospital waiting lists, waits for residential long-term care)
- Survey evidence (e.g. GP visits) of self-reported levels of unmet need converted into measure of activity

FINDINGS: PROJECTIONS

Projected demand increase 2015-2030

Sector	Measure of activity	Baseline Volume of activity in 2015/ end 2015 '000s	Percentage Increase		
			Lower projection	Upper projection	Lower + unmet demand/ need
Public hospitals	Inpatient discharges	514	24	30	28
	Daypatient discharges	1,010	23	28	29
	Inpatient bed days	3,273	32	37	36
	ED attendances	1,138	16	26	-
	OPD attendances	3,299	21	29	30
Private hospitals	Inpatient admissions	133	20	25	-
	Daypatient admissions	459	24	28	-
	Inpatient bed days	613	28	32	-
General practice	GP visits	17,551	20	27	22
	Practice nurse visits	5,944	26	32	-

Projected demand increase 2015-2030

Sector	Measure of activity	Baseline Volume of activity in 2015/ end 2015 '000s	Lower projection	Upper projection	Lower + unmet demand / need
			Percentage Increase		
Long-term care	Residents/places	29	40	54	44
	LTC bed days	10,580	40	54	44
Home care	Home help service	66	44	57	48
	HCP recipients	15	44	57	66
	Home help hours	14,311	38	54	-
Allied Healthcare Professionals	Public PT referrals	189	25	32	32
	Public OT referrals	88	36	41	42
	PHN visits	1,362	26	35	-
	Public PT visits	760	24	30	-
	Public OT visits	347	33	38	-

Source: Wren et al. 2017. *Projections of Demand for Healthcare in Ireland 2015-2030*
ESRI Research Series Report

FINDINGS: SENSITIVITY ANALYSIS

Sensitivity to population growth

Sector		Public Acute Hospitals		Long-Term Care	Home Help
Activity		Inpatient bed days	ED attendances	Residents	Home Care Packages
Population	Low	-2%	-4%	-2%	-2%
	High	4%	8%	3%	3%
Healthy Ageing	MHA	-5%	-1%	-7%	-7%
	DE	-10%	-3%	-14%	-15%
	CM	-15%	-4%	-22%	-22%
Unmet Need/ Demand	Low	1%		2%	15%
	Med	2%			
	High	3%			

Source: Wren et al. 2017. *Projections of Demand for Healthcare in Ireland 2015-2030*
ESRI Research Series Report

Sensitivity to healthy ageing

Sector		Public Acute Hospitals		Long-Term Care	Home Help
Activity		Inpatient bed days	ED attendances	Residents	Home Care Packages
Population	Low	-2%	-4%	-2%	-2%
	High	4%	8%	3%	3%
Healthy Ageing	MHA	-5%	-1%	-7%	-7%
	DE	-10%	-3%	-14%	-15%
	CM	-15%	-4%	-22%	-22%
Unmet Need/ Demand	Low	1%		2%	15%
	Med	2%			
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Source: Wren et al. 2017. *Projections of Demand for Healthcare in Ireland 2015-2030*
ESRI Research Series Report

Sensitivity to unmet need/demand

Sector		Public Acute Hospitals		Long-Term Care	Home Help
Activity		Inpatient bed days	ED attendances	Residents	Home Care Packages
Population	Low	-2%	-4%	-2%	-2%
	High	4%	8%	3%	3%
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Unmet Need/ Demand	Low	1%		2%	15%
	Med	2%			
	High	3%			

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Conclusions

- Ireland is unusual in recent and projected rapid population growth
- Population growth is a major driver of demand
- Population growth in older age cohorts will be a major driver of demand even if optimistic healthy ageing assumptions prove correct
- Annual average projected demand growth of 1-3%
- In the context of rising population and labour force

Policy implications

- Demand projections have major implications for capacity planning, capital investment, workforce planning and training
- Demand will need to be met in most if not all settings to avoid increased unmet demand
- The healthcare system is currently within this projection period and experiencing these pressures

ESRI report available at:

[//www.esri.ie/publications/projections-of-demand-for-healthcare-in-ireland-2015-2030-first-report-from-the-hippocrates-model](http://www.esri.ie/publications/projections-of-demand-for-healthcare-in-ireland-2015-2030-first-report-from-the-hippocrates-model)