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Projections of regional workforce requirements for HSE primary and community care services in Ireland, 2022–2040: Based on the Hippocrates model

AOIFE BRICK, THEANO KAKOULIDOU, MARYAM AFZAL AND FRANK WOLFE

PROJECTIONS OF REGIONAL WORKFORCE REQUIREMENTS FOR HSE PRIMARY AND COMMUNITY CARE SERVICES IN IRELAND, 2022–2040: BASED ON THE HIPPOCRATES MODEL

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This report has been accepted for publication by the Institute, which does not itself take institutional policy positions. All ESRI Research Series reports are peer-reviewed prior to publication. The authors are solely responsible for the content and the views expressed.

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ABBREVIATIONS AND ACRONYMS

AP	Advanced practitioner
BIU	HSE National Business Information Unit
CHA	Community Healthcare Area
CHN	Community Healthcare Network
CHO	Community Healthcare Organisation
CIT	Community Intervention Team
CNS	Clinical nurse specialist
CRGN	Community registered general nurse practitioner
CS	Clinical specialist
CSO	Central Statistics Office
CST	Community Specialist Team
DML	HSE Dublin and Midlands region
DNE	HSE Dublin and North East region
DSE	HSE Dublin and South East region
ECC	Enhanced Community Care
EHR	Electronic Health Record
GMS	General Medical Services
HCA	Health care assistant
HSCA	Health and social care assistant
HSCP	Health and Social Care Profession/al
HSE	Health Service Executive
IHA	Integrated Healthcare Area
KPI	Key performance indicator
LHO	Local Health Office
MW	HSE Mid West region
NA-CMS	National Audiology Clinical Management System
PHN	Public health nurse
QQI	Quality and Qualifications Ireland
RANP	Registered advanced nurse practitioner
SD	Service demand scenario
SW	HSE South West region
TILDA	The Irish Longitudinal Study on Ageing
WM-GM	Workforce mix – grade-mix scenario
WM-SM	Workforce mix – skill-mix scenario
WNW	HSE West and North West region
WTE	Whole-time equivalent

FOREWORD

This report was prepared by researchers at the Economic and Social Research Institute (ESRI) for the Strategic Workforce Planning and Intelligence Unit at the National Human Resources Directorate of the Health Service Executive (HSE). The report is a component of a research programme funded and directly supported by the HSE, designed to inform population-based workforce planning across the newly established HSE Health Regions. Published as an ESRI Research Series Report, it is the second report applying the Hippocrates model to projections of workforce requirements under this research programme. It analyses workforce provision for a selection of primary and community care services provided by the HSE and projects regional requirements for the years from 2022 to 2040.

The Hippocrates model was developed at the ESRI under the ESRI Research Programme in Healthcare Reform agreed between the ESRI and the Department of Health. The HSE funded developments to Hippocrates to project workforce demand. The Hippocrates model is a tool which can: inform health and social service planning in Ireland; inform financial planning for the healthcare system; inform planning for capacity, services and staffing; identify future demand pressures and provide a framework in which to analyse the effects of potential system changes and reforms. This project was overseen by the HSE/ESRI Research Programme in Workforce Planning steering group with input from the Department of Health Strategic Workforce Planning Unit.

The ESRI is responsible for the quality of this research, which has undergone peer review prior to publication. The report was prepared by Aoife Brick, Theano Kakoulidou, Maryam Afzal and Frank Wolfe and reflects their expertise and views. The views expressed in this report are not necessarily those of other ESRI researchers, the HSE, the Minister for Health, or the Department of Health.

May 2026

EXECUTIVE SUMMARY

INTRODUCTION

This report, funded by the Health Service Executive (HSE), uses the Economic and Social Research Institute's (ESRI) Hippocrates model to project regional workforce requirements to 2040 for a selection of staff providing HSE primary and community care services.[1] The professions and grades under consideration are a selection of Health and Social Care Professions (HSCPs) (audiologists, dietitians, occupational therapists, physiotherapists, podiatrists, speech and language therapists) and associated health and social care assistants (HSCAs), public health and community nurses and health care assistants (HCAs).

CONTEXT

Demand for health and social care services in Ireland is projected to increase significantly, driven by a growing and ageing population. This rise in demand has direct implications for future workforce requirements. Demographic pressures are occurring alongside major reforms in how care is delivered. The implementation of Sláintecare policies, particularly those shifting care away from hospitals into the community, combined with the rollout of new HSE Health Regions and the Integrated Service Delivery model, is likely to increase pressure on already strained services, evidenced by substantial waiting lists for care. Given the long lead times required to train and recruit staff, evidence-based medium-term strategic workforce planning is essential to ensure timely, safe and effective care delivery into the future. Projection modelling can play a key role in supporting this planning.

METHODS

The projections start from regional whole-time equivalent (WTE) staffing levels for the selected professions and grades working in HSE primary and community care services. These baseline WTE figures include directly employed staff (including overtime) and agency staff, amounting to approximately 5,650 WTE in 2022. Age-adjusted WTE per capita are estimated based on service approved age profiles. These age-adjusted WTE are projected using the Hippocrates model under five projection scenarios, three service-demand scenarios and two workforce-mix scenarios.

The service-demand scenarios account for projected changes in workforce requirements given changes in the population over time (central, low and high). The workforce-mix scenarios additionally examine how projected workforce requirements might be altered by alternative combinations of workforce through

[1] Future ESRI research will expand the analysis to develop projections for additional areas of the HSE community-based healthcare workforce (older people's care, specialist mental health and specialist disability services).

altering grade-mix (e.g. between community registered general nurses and HCAs) and skill-mix distributions (e.g. the percentage of HSCPs operating at advanced practice level). They were chosen in agreement with relevant stakeholders following a series of focus groups and follow-up consultations and are best described as 'what-if' scenarios, to facilitate greater depth and understanding in relation to projections, and do not reflect recommendations regarding implementation.

In addition to the Hippocrates scenarios an additional scenario is run outside of the Hippocrates model, the benchmarking scenario. This scenario evaluates the impact on 2040 workforce requirements of benchmarking age-specific WTE per capita in each HSE Health Region to the region with the highest WTE per capita in 2022. It does not imply that the benchmark region's staffing levels or service age profile are optimal, as all regions still face significant and different challenges.

The report does not forecast workforce but provides projections of requirements based on clear assumptions in relation to changes in the population and workforce mix. It does not consider how workforce supply will be adjusted to meet projected requirements. It is also acknowledged that, due to data limitations, it was not possible to examine the extent to which the baseline levels of workforce supply (adjusted for agency and overtime) reflect best-practice staffing levels. Work is ongoing across the health sector to develop detailed best-practice staffing metrics, which will inform future analyses.

FINDINGS

Key to informing the projections are ESRI HSE Health Region population projections which model future population change as a function of fertility, mortality, and international and internal migration. Nationally, between 2022 and 2040 the population is projected to increase by between 14 and 22 per cent, but there is substantial variation across the regions, with higher growth projected in the east. In addition, significant growth is projected for older cohorts, with the proportion of the population aged 85+ expected to double.

Workforce requirements for all professions and grades examined are projected to increase substantially by 2040 driven by the large projected increases in the population, particularly those aged 65 years and older. Table ES.1 presents a summary of the projection findings from the five main scenarios. Average annual growth of between 1.0 and 3.2 per cent is projected for HSCPs. Services with a higher concentration of current service delivery in children (e.g. speech and language therapy), demonstrate lower growth requirements than those services where service delivery is concentrated in the oldest age cohorts (e.g. podiatry). For HSCA grades, minimum growth requirements are generally marginally higher than those of the associated HSCPs. The upper end of the range is substantially higher

for HSCAs than HSCPs, particularly for services where the difference between the baseline and modelled grade-mix ratio is pronounced.

For public health and community nurses, requirements for between 2,000 to 2,200 additional WTEs are projected by 2040, equating to average annual growth of between 3.0 and 3.1 per cent. Average annual growth requirements for HCAs are higher, in this case driven by the older service age profile applied to this grade. The grade-mix scenario has limited impact on this service due to the 2022 mix being close to or above the target modelled.

While large increases in workforce requirements are projected across all HSE Health Regions, variability in population growth across regions results in somewhat larger additional requirements being projected for the east of the country. Regional projections are also sensitive to the application of modelled grade-mix scenarios and the extent to which base-year regional grade-mix ratios differ from modelled ratios.

TABLE ES.1 WTE projection range by service, 2022–2040

	2022 WTE[a]	2040 WTE		Average annual growth 2022–2040
		Additional	Total	
		min-max[b]	min-max	min%-max%
Health and Social Care Professional services				
Health and Social Care Professionals				
Audiologists	62	30–34	92–96	2.2–2.5
Dietitians	215	70–90	285–305	1.6–2.0
Occupational therapists	686	300–383	986–1,069	2.0–2.5
Physiotherapists	706	242–315	947–1,021	1.6–2.1
Podiatrists	86	58–66	143–152	2.9–3.2
Speech and language therapists	616	117–208	734–825	1.0–1.6
Health and social care assistants				
Audiology assistants	10	5–6	15–16	2.2–2.5
Dietitian assistants	–	(-) –14	(-) –14	–
Occupational therapy assistants	26	13–79	39–104	2.3–8.1
Physiotherapy assistants	32	12–65	44–98	1.8–6.3
Podiatry assistants	–	(-) –7	(-) –7	–
Speech and language therapy assistants	6	1–70	7–76	1.2–15.3
Public health and community nursing services				
Public health and community nurses	3,010	2,075–2,231	5,085–5,240	3.0–3.1
Health care assistants	193	161–182	355–376	3.4–3.8

Notes: Growth rates are not calculated where the 2022 WTE is zero.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b Reflect the min and max projection from the five main scenarios – Service Demand (Central, Low, High) and Workforce Mix (grade-mix and skill-mix).
Source: See section 3.3 for an overview of data sources; authors' calculations.

The additional benchmarking scenario modelled elevating the WTE per capita of all regions to that of the highest in 2022 (HSE West and North West) for HSCPs and public health and community nurses. Overall, the scenario indicates significantly higher workforce growth requirements than the service demand central scenario, typically about double the average annual growth rate. Some professions show even greater differences, such as podiatrists (almost three times higher) and some significant regional requirements for audiologists in HSE Dublin and South East and dietitians in HSE South West. More moderate differences are observed for occupational therapists and public health and community nurses.

While it is not possible to model the impact of waiting lists for HSCP services formally in the methodology employed, a separate analysis highlights the significant levels of additional activity that would be required to reduce waiting times for first-time appointments to 12/16 weeks, which may have an impact on the workforce required into the future.

DISCUSSION

Workforce projections indicate substantial growth in requirements for HSE primary and community care services by 2040, primarily driven by population growth and ageing. Even at the lower end of estimates, all professions and grades examined will require significant expansion. These findings have implications for service planning, workforce development, training and infrastructure at both regional and national levels.

While limitations in the analysis, such as the limited availability of granular activity data, the inability to account for waiting list pressures and the absence of best practice/safe staffing evidence, mean projections may underestimate future needs, the trend is clear, WTE requirements will rise sharply. Additional pressures may also emerge from Sláintecare policy initiatives and changes brought about by the implementation of the Integrated Service Delivery model, which aim to shift care from acute hospitals to community settings. Continuous monitoring and iterative updates to projections will be essential as new programmes and data become available.

Addressing these challenges will require investment in workforce capacity and capability, including optimising grade-mix and skill-mix. Recruitment and retention remain critical issues, compounded by high turnover in therapy professions and international migration trends. Digital initiatives such as the Community Care Record and the planned National Electronic Health Record will improve data quality and modelling accuracy, supporting better planning. The projections should be viewed as a medium-term guide, updated regularly to reflect improvements in data, evolving policies, population trends, and service configurations.

CHAPTER 1

Introduction

1.1 OVERVIEW

This report provides projections of regional workforce requirements to 2040 for professions and grades providing a selection of services in public primary and community care in Ireland. These projections have been generated using the Hippocrates model, which was developed at the Economic and Social Research Institute (ESRI) in a programme of research funded by the Department of Health. This report marks the continued development of the workforce component of the Hippocrates model and was funded by the Health Service Executive (HSE).

Previous analysis has applied the Hippocrates model to project workforce requirements for general practice (Connolly et al., 2025a; b) and a selection of staff directly involved in patient care in public acute hospitals (Keegan et al., 2022).[2] This report further expands the model into non-acute care, projecting workforce requirements for staff providing a selection of services for HSE primary and community care. While acknowledging the role played by the private sector in the provision of some primary and community care services (Smith et al., 2019), they are outside the scope of the current analysis.

The HSE identified a defined set of professions and grades for inclusion in this report. These comprise selected Health and Social Care Professionals (HSCPs) (audiologists, dietitians, occupational therapists, physiotherapists, podiatrists, speech and language therapists) and associated health and social care assistants (HSCAs), public health and community nurses, and health care assistants (HCAs). Other services provided by HSE primary and community care such as dental, palliative care, ophthalmology/optometry, psychology and social inclusion are not within the scope of the current research. Future ESRI research will expand the analysis to develop projections for additional areas of the HSE community-based healthcare workforce (older people's care, specialist mental health and specialist disability services).

Hippocrates projections are influenced by data availability and quality, the model of service delivery, as well as the existing policy environment. Analyses of community-based services, such as those presented in this report and in Walsh et al. (2021), are severely curtailed by the data environment. Walsh et al. (2021)

[2] This is the second report under the HSE/ESRI Research Programme in Workforce Planning which uses the Hippocrates model to project workforce requirements for public health services. Keegan et al. (2022) provided important background on the drivers of health workforce demand (demographic, non-demographic and changes to models of service delivery), Irish workforce planning policy and reviewed health workforce planning models including approaches to modelling workforce demand. We will not repeat this material here, but it should be read in conjunction with this report.

highlight that the HSE's current data infrastructure cannot systematically capture detailed service utilisation data or the demographic profiles of individuals accessing HSE primary and community care services. In addition, this analysis was conducted during a period of significant change in public health services, including the establishment of the new HSE Health Regions and the continuing development and implementation of the new Integrated Service Delivery model (HSE, 2025a).

The report does not forecast workforce but provides strategic projections of workforce requirements based on clear assumptions in relation to drivers of service demand and changes to workforce mix. It is also acknowledged that, due to data limitations, it was not possible to examine the extent to which workforce supply in 2022 (even when adjusted for agency and overtime) reflects what might be considered appropriate staffing levels. The data capture workforce composition in 2022 and thus projections, based on the assumptions outlined below, present how these will evolve over time, being in effect supply driven. Not all demand is met, some of which is demonstrated by waiting lists, but it can also be the case that because a service is not currently available in a region patients are not referred. While the impact of waiting lists and improvements in waiting list management cannot be formally modelled given the data limitations, an overview of waiting lists is provided, along with estimates of the increase in first-time appointments that would be required to clear backlogs and maintain waiting times at a target level. The limitations of the data available are substantial, and projections should be seen as a medium-term guide to future requirements.

1.2 OBJECTIVES

The broad objectives of this report are to:

- Provide estimates of national and regional workforce supply for a selected set of HSE primary and community care professions and grades in 2022;
- Provide estimates of service-user age profiles for the selected services;
- Project workforce requirements for HSE primary and community care both nationally and regionally to 2040; and
- Examine the relative impact of demographic change and workforce-mix on projected workforce requirements.

The report does not consider how workforce supply will be adjusted to meet projected requirements.

The remainder of this chapter provides the context for the projections by outlining key features of the Irish healthcare system. It begins with an overview of eligibility for and access to public healthcare, followed by a discussion of ongoing service delivery reforms, including the introduction of new health geographies. The

chapter then describes the role and scale of primary and community care services within the wider system. Finally, it presents a brief overview of strategic workforce planning in Irish healthcare and sets out the structure of the report.

1.3 OVERVIEW OF THE IRISH HEALTHCARE SYSTEM

The Irish healthcare system is a complex mixture of public and private ownership, delivery and financing and many eligibility categories governing access to care. There are two main entities which have a role in the design and delivery of public health services. The Department of Health provides strategic leadership and policy direction for the Irish healthcare system; undertaking effective governance and performance oversight; and collaborating to ensure that health priorities are achieved (Department of Health, 2023). The HSE manages and delivers, or arranges to be delivered on its behalf, public health and social care services (HSE, 2021a).

The Sláintecare Reform Programme, arising from the Sláintecare Report (Houses of the Oireachtas Committee on the Future of Healthcare, 2017) aims to transform the system into a universal, integrated, and person-centred model which promotes population-based planning and seeks to shift care from acute hospital settings to primary, community, and social care environments. The healthcare system remains in a period of significant transformation.

1.3.1 Eligibility

Ireland does not have universal healthcare, rather access to public health services is determined by residency status and financial means. It is categorised into two main eligibility groups: Category I (full eligibility) and Category II (limited eligibility). Category I includes 'ordinarily resident' individuals who qualify for the General Medical Services (GMS) scheme, commonly referred to as holding a medical card.[3] Persons who hold a medical card are entitled to a range of free health services including general practitioner (GP) visits, public hospital care, prescribed medications (subject to a nominal charge), dental and optical services, and community-based services.

Category II includes those who do not qualify for the GMS scheme but are still considered ordinarily resident in Ireland. These individuals can access public hospital inpatient services free of charge and public outpatient services in public hospitals may be subject to charges. They are also eligible for subsidised medications under the Drugs Payment Scheme. Additionally, some may qualify for a GP visit card, which covers GP consultations but excludes other services like prescriptions or dental care.

[3] 'Ordinarily resident' means that you are living here and intend to live here for at least one year (HSE, 2024).

Eligibility for a medical card or GP visit card is primarily determined by a means test which incorporates age, varying income thresholds and additional allowances for dependents, and certain expenses. Everyone aged under 8 and over 70 years automatically qualifies for a GP visit card. Some cards may be issued on a discretionary basis without a means test taking account of the individual circumstances of applicants who may be in excess of income guidelines, for example to those with high levels of medical expenses. Additionally, some people may automatically qualify if they fulfil selected criteria outlined in the national assessment guidelines (HSE, 2024). As highlighted in the Sláintecare Report, public primary and community care services may not be available to individuals without a medical card (Houses of the Oireachtas Committee on the Future of Healthcare, 2017).

In December 2024 there were 1.56 million medical card holders in Ireland, representing 29 per cent of the population. A further 720,000 individuals (13.4%) hold GP visit cards (HSE, 2025b). This implies that almost 58 per cent of the population do not have free access to general practice. It has been estimated that over 30 per cent of the population who are eligible for a medical card do not claim it (Keane et al., 2021) and if eligibility income limits had adjusted in line with inflation the number of cardholders would be significantly higher (Keane et al., 2025).

1.3.2 Access

Preventative public health measures, timely diagnosis and early intervention by primary and community care is essential to easing the long-term impact of illness, but this depends on individuals accessing care when symptoms first appear (The Lancet Regional Health – Europe, 2025). While there is an entitlement to a wide range of services for medical card holders under the GMS scheme, eligibility does not necessarily imply that appropriate services can be accessed in a timely manner. Several studies have highlighted regional disparities in the supply of services. Smith et al. (2019) identified substantial geographic variation in supply of GPs and community-based services and a mismatch between supply and need. Recent research by Coy and Tanwir (2025) highlighted that the disparity in GP availability persists. In addition, in some areas while some level of service may be available, there may be long waiting times to access them. For those in Category II there is an additional financial impediment to accessing most non-acute services, with the exception of the GP for those holding a GP visit card. Analysis using data from the Healthy Ireland survey estimates that 19 per cent of people who needed to see a GP and didn't, did not attend because they couldn't afford it (Coy and Tanwir, 2025). GP access is important in the context of this work given their role as gatekeepers to other primary and community care services (Connolly et al., 2022).

1.3.3 Service delivery reform – new health geographies

A key recommendation of the Sláintecare Report called for the establishment of regional healthcare bodies to support an integrated approach to service planning and care delivery across hospital- and community-based care. In response, the delivery of public health and social care services is currently undergoing significant structural reform. Previously, services were organised around nine geographical catchments for community care delivery, Community Health Organisations (CHOs), which were further divided into 32 Local Health Offices (LHOs). These were not coterminous with the seven hospital groups which oversaw the delivery of public acute hospital services. This lack of integration between hospital and community services led to fragmentation and was a barrier to efficiency and continuity of care (Sicari and Sutherland, 2023).

To address this, an Integrated Service Delivery model is in the process of being rolled out and the following section is based on the information available at the time of writing (HSE, 2025a). Six HSE Health Regions, with a population of between 400,000 and 1.2 million, were established in 2024 and are all operational[4] – Dublin and North East (DNE), Dublin and Midlands (DML), Dublin and South East (DSE), South West (SW), Mid West (MW) and West and North West (WNW). Each region is based on the alignment of the previous hospital groups and CHOs, each with defined geographic boundaries (Figure 1.1). Integrated Healthcare Areas (IHAs) (20 nationally), are substructures of the Health Regions and cover populations of between 150,000 and 450,000. They bring together primary and community care, acute services, and non-HSE providers to support integrated health and social care (HSE, 2025c; OECD, 2025).

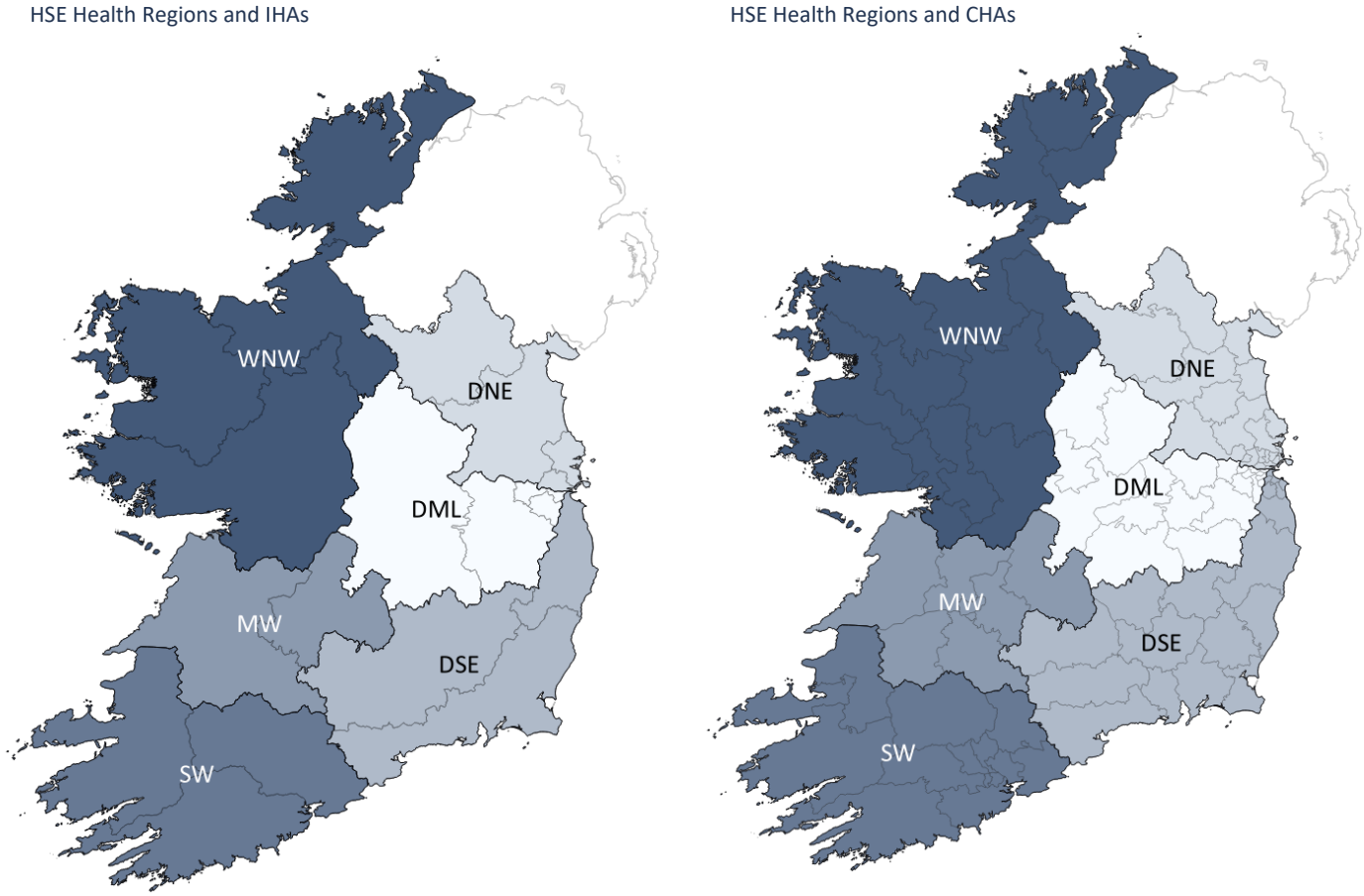
Each IHA is further disaggregated into multiple Community Healthcare Areas (CHAs), geographies serving populations of approximately 50,000 (~96 nationally). CHAs cover a broad range of services including high volume teams (Community Healthcare Networks (CHNs), children's disability network teams, home support, child and adolescent mental health services, adult mental health services) and some residential, respite and day services. In addition to the CHA services, some primary and community care services are managed at the IHA or HSE Health Region level including specialist/higher complexity services that span several CHNs including Community Specialist Teams (CSTs) and some regulated services (e.g. mental health inpatient services).

These reforms are designed to support a more integrated model of care, with a stronger emphasis on population-based resource allocation and planning, population health and the delivery of services closer to home. By aligning hospital

[4] 'From Tuesday 4 November 2025, the HSE Health Regions will move to the next stage of implementation. This will involve appointing staff to new roles and the rollout of the approved Integrated Healthcare Area structure in 5 out of 6 HSE Health Regions. HSE Mid West is preparing for implementation, which will begin at a later date.' (HSE, 2025c).

and community services within defined HSE Health Regions and IHAs, the new structures aim to facilitate better coordination across primary, community and acute care settings.

FIGURE 1.1 Map of HSE Health Regions, Integrated Healthcare Areas and Community Healthcare Area boundaries



Sources: Author generated from health geographies mapping files available from www.geohive.ie.

1.3.4 The role of primary and community care in health system reform

A key element of Sláintecare is to reduce reliance on acute hospitals and reorientate care provision towards primary and community care. As Ireland continues to implement structural reforms under Sláintecare, primary and community care is recognised as central to service delivery. Primary and community care supports people of all ages across the continuum of their lives, close to home, through a community-based approach. Inclusive of general practitioners (GPs), public health and community nurses and a range of HSCPs, primary and community care provides the first point of contact to the wider health and social care system. These services are designed to promote health, prevent illness and manage chronic conditions in the community, consequently reducing pressure on acute hospitals (Government of Ireland, 2023a).

The expansion of primary and community care, along with the extension of entitlements to universal services recommended by Sláintecare, are undoubtedly accompanied by significant staffing requirements (Houses of the Oireachtas Committee on the Future of Healthcare, 2017). Service restructuring, combined with a growing and ageing population, poses substantive challenges in recruiting staff to address existing service deficits, disparities in provision across areas, and future increases in demand.

Successive budgets since the publication of the Sláintecare Report in 2017 have emphasised the importance of developing primary and community care services and providing funding for service development and expansion (Government of Ireland, 2018a; b; 2019; 2020; 2021a; 2022; 2023b; 2024; 2025a). Specific measures funded include the Enhanced Community Care (ECC) programme, under which CHNs, the Integrated Care Programme for Older People, the Chronic Disease Management programme and Community Intervention Teams (CITs) have been developed – as well as investment in primary and community care infrastructure. There were also specific workforce initiatives funded, including the recent commencement of the development of a Framework for Safe Nurse Staffing and Skill Mix for community nursing, the expansion of HSCP training places (Department of Further and Higher Education, 2025), and increased recruitment across the health service, with particular reference to reducing community waiting lists (Government of Ireland, 2024).

Plans to substantially expand primary and community care, through for example ECC initiatives, are taking place in the context of an Irish population that has experienced significant growth and ageing and is expected to continue doing so over the medium term. Recent ESRI population projections estimate that the Irish population will increase from 5.2 million in 2022 to between 5.9 and 6.3 million by 2040 (Bergin and Egan, 2024). The population aged 65 and over is also expected to increase from 15 per cent of the population in 2022 to 21 per cent in 2040. The projections have also demonstrated that the level of population growth continues to vary by HSE Health Region, with higher growth in the east compared to the west and south Brick and Kakoulidou (2025).

These changes in the size and structure of the population will have a significant impact on service demand particularly for those services where provision is concentrated in older age cohorts (Keegan et al., 2020; Keegan et al., 2021; Walsh et al., 2021). The labour-intensive nature of primary and community care services means that as demand for services increases, so too does the demand for healthcare staff (Keegan et al., 2022).

1.3.5 HSE workforce

In 2022, the base year of the analysis, there were almost 138,000 whole-time equivalent (WTE) employees in the HSE. These figures refer to the standard hours of those directly employed by the HSE; they do not include WTEs arising from overtime or agency work. Acute services accounted for 52.2 per cent of total WTEs in 2019, increasing to 53.8 per cent in 2022. In contrast, the proportion of total WTEs accounted for by aggregate community-based services decreased from 43.5 per cent in 2019 to 41.8 per cent in 2022. Over this period, WTEs increased across all service areas, and WTEs per 50,000 population increased for all service areas except older people's services. In all cases WTE growth exceeded growth in WTEs per 50,000 population. This suggests that although the workforce is expanding, once adjusted for population growth the increase is more modest.

There was no change in the proportion of total WTEs employed in primary and community care services, the focus of this work, between 2019 and 2022 (8.8%). Over the period, the absolute number of WTEs in primary and community care services increased by 13.8 per cent, while WTEs per 50,000 population also increased but by a smaller margin (8.8%).

TABLE 1.1 HSE workforce (WTE) by service area, 2019–2022

	2019			2022			2019–2022 % change	
	N	%	Rate[a]	N	%	Rate[a]	N	Rate
Acute services	62,538	52.2	631	74,055	53.8	714	18.4	13.3
Community-based services	52,085	43.5		57,521	41.8		10.4	
Community health and wellbeing	-	-	-	322	0.2	3		
Mental health	9,967	8.3	101	10,453	7.6	101	4.9	0.3
Primary and community care	10,597	8.8	107	12,057	8.8	116	13.8	8.8
Disabilities	18,273	15.3	184	19,903	14.4	192	8.9	4.2
Older people[b]	13,239	11.0	944	13,947	10.1	893	5.3	-5.4
CHO operations	9	0.0	0	839	0.6	8		
National services	5,190	4.3	52	6,168	4.5	59	18.8	13.7
Total WTE	**119,813**	**100**		**137,745**	**100**		**15.0**	**10.0**

Notes: Overtime or agency WTEs are not included.
a WTEs per 50,000 population.
b WTEs per 50,000 population aged 65 and over.
Sources: Health Service Personnel Census – December 2023; CSO population data, 2019–2023 (https://data.cso.ie/table/PEA01); authors' calculations.

1.4 STRATEGIC WORKFORCE PLANNING IN IRISH HEALTHCARE

Strategic workforce planning refers to the systematic process of analysing an organisation's current and future workforce needs, identifying gaps, and implementing targeted solutions to ensure the organisation can deliver on its strategic objectives (Department of Public Expenditure and Reform, 2020). In the context of healthcare, this involves understanding the drivers of demand, such as demographic change, while also forecasting future workforce supply to address potential shortages or surpluses (Department of Health, 2025a). In recent years,

the development of a robust, evidence-informed approach to workforce planning has emerged as a key policy priority within the Irish health system.

The National Strategic Framework for Health and Social Care Workforce Planning, published in 2017, remains the basis for health and social care workforce planning in Ireland (Department of Health, 2017). Underlying the framework is a recognition that planning must focus on current and future population health needs, ensuring the right skills and geographic distribution of workforce, and recognising a need to capture 'key strategic and operational developments including national health policies and strategies, agreed models of care, and other developments' (Department of Health, 2017, p.9). The framework outlines a five-step approach, with particular emphasis on modelling and forecasting as critical enablers for identifying and implementing effective policy responses. The framework's recognition of the need to align with evolving policy developments and to establish robust strategic workforce planning coincides with a period of substantial reform in Ireland's health and social care system.

The Sláintecare programme recognised that measures such as the expansion of the primary and community care workforce, development of primary and community care infrastructure and tackling waiting lists for primary and community care services were required (Government of Ireland, 2018c). Achieving this vision requires a workforce that is not only sufficient in number but also appropriately skilled and distributed across settings. The Sláintecare Implementation Strategy and Action Plan 2021–2023 identified workforce planning as a critical enabler of reform, calling for accelerated implementation of the 2017 Framework and the development of the now established regional health structures (HSE Health Regions) to support integrated care delivery (Government of Ireland, 2021b).

More recently, the Sláintecare 2025+ roadmap has reaffirmed the centrality of strategic workforce planning in achieving reform goals. It outlines key milestones for 2025–2027, including the expansion of primary and community care capacity, the development of new roles and career pathways, and the strengthening of planning and data infrastructure (Government of Ireland, 2025b).

1.5 REPORT STRUCTURE

The remainder of the report is structured as follows: Chapter 2 provides an overview of HSE primary and community care services and describes the workforce professions and grades under consideration in this report. Chapter 3 describes the Hippocrates model and the specific methods and data used to project workforce requirements for selected HSE primary and community care staff. Chapter 4 presents 2022 service user profiles and baseline staffing and Chapter 5 presents the WTE projections. Chapter 6 outlines the extent of measured unmet demand (waiting lists) and Chapter 7 summarises and concludes.

CHAPTER 2

HSE primary and community care services

2.1 INTRODUCTION

This chapter provides an overview of HSE primary and community care services. It outlines the structure of the service and the current delivery model. It describes the roles of the professions and grades covered by this report. Finally, workforce mix, safe/best practice staffing and waiting lists for the included services are discussed.

2.2 OVERVIEW

The HSE funds and directly provides a wide range of public health and social care services outside the acute hospital setting. Primary and community care services are primarily delivered through Community Healthcare Networks (CHNs), supported by Community Specialist Teams (CSTs) and other services provided at the Community Healthcare Area (CHA), Integrated Healthcare Area (IHA) and HSE Health Region level. This structure was established to improve access and coordination across key areas, including services for older people, disability supports, mental health care, and acute hospital pathways.

CHNs deliver primary and community care across a population of approximately 50,000, with 96 teams nationally (Government of Ireland and HSE, 2023; HSE, 2025c). CHNs consist of multidisciplinary teams working alongside general practitioners (GPs). CSTs, which are nested within IHAs, are also being established. One team for older people's care and one for chronic disease coordinate and provide care across three CHNs including any Model 3/4 hospitals, ultimately there will be 60 CST teams nationally. Chronic conditions covered by CSTs include cardiovascular disease, type 2 diabetes, chronic obstructive pulmonary disease, and asthma.

In addition to the above services, Community Intervention Teams (CITs), which operate at IHA level, provide rapid, short-term clinical interventions in the community to avoid unnecessary hospital admissions or enable early discharge. They deliver services such as IV antibiotic administration, anticoagulation management, wound care, and respiratory support. Some CITs are staffed directly by the HSE and some are outsourced. Referrals come from hospitals, GPs, and other community sources, and care is provided at home, in residential settings, or other community locations.

Staff working in HSE primary and community care (excluding agency and overtime), are grouped into six staff categories in the Health Service Personnel Census

(Table 2.1). In 2022, nursing and midwifery (28.1%) comprised the largest proportion of WTE, followed by HSCPs (25.8%), management and administrative (23.7%), patient and client care – which includes HCA and HSCA grades (10.8%), medical and dental (8.6%), and general support (3.0%). Similar to the analysis of broader HSE workforce numbers in Table 1.1, when examined over time, we find that the increase in the WTE volume is greater than the increase in the rate per 50,000 population.

TABLE 2.1 HSE primary and community care employment by staff category/staff group, 2019–2022

	2019			2022			2019–2022 % change	
	WTE	%	Rate	WTE	%	Rate	N	Rate
Medical and dental	995	9.4	10	1,034	8.6	10	3.9	-0.6
Nursing and midwifery	2,976	28.1	30	3,389	28.1	33	13.9	8.9
Health and Social Care Professions	2,558	24.1	26	3,108	25.8	30	21.5	16.2
Therapy professions	1,733	16.4	17	2,162	17.9	21	24.8	19.3
Patient and client care	995	9.4	10	1,308	10.8	13	31.5	25.7
Management and administrative	2,668	25.2	27	2,856	23.7	28	7.0	2.4
General support	405	3.8	4	362	3.0	3	-10.6	-14.5
Total	**10,597**	**100**	**107**	**12,057**	**100**	**116**	**13.8**	**8.8**

Notes: Rate per 50,000 population.
Sources: Health Service Personnel Census – December 2019–2023; CSO population data, 2019–2023 (https://data.cso.ie/table/PEA01); authors' calculations.

2.3 SERVICES INCLUDED

At the time the analysis was undertaken, the Integrated Service Delivery model described in sections 1.3.3 and 2.2 was in the process of being rolled out. Framing the analysis broadly in terms of the new delivery model, the WTE in scope are those working in HSE community-based audiology services, therapy professions, nursing and midwifery[5] (excluding palliative care and social inclusion), and assistant grades, working in services at IHA level or in CHNs. Note that staff who work in CSTs for chronic disease management are included, while staff who work in CSTs for older people are excluded from consideration in the current analysis, as they fall under the remit of services designated for older people (not HSE primary and community care).

Sections 2.4 and 2.5 provide a description of the professions and grades selected by the HSE for consideration within HSE primary and community care namely: audiologists, dietitians, occupational therapists, physiotherapists, podiatrists, speech and language therapists, associated HSCAs, public health and community nurses and HCAs.[6]

5 Referred to as public health and community nurses in this report as there are only ~5 midwife WTE in scope in the base year for the analysis

6 Services provided by general practitioners and general practice nurses are not included in this analysis as while some aspects of the service may be funded by the HSE, they are contractors and not directly employed and therefore are beyond the scope of this analysis. For detailed analysis of these services and projections of workforce requirements see Connolly et al. (2025a).

2.4 HEALTH AND SOCIAL CARE PROFESSIONAL SERVICES

2.4.1 Health and Social Care Professionals

HSCPs are the second largest clinical group in the Irish health services. There are currently 26 HSCPs, spanning therapeutic, social care and diagnostics (HSE, 2021b). The principal regulatory body for many HSCPs is CORU. This was established under the Health and Social Care Professionals Act 2005 and comprises of the Health and Social Care Professionals Council and a Registration Board for each profession. These boards are responsible for establishing and maintaining a register of members of the profession, assessing and monitoring professional development and establishing a code of conduct and ethics and standards of performance (CORU, 2024). CORU currently regulates 12 professions, including five of the six covered in this report (dietitians, occupational therapists, physiotherapists, podiatrists, and speech and language therapists), with a further five professions soon to be regulated. The registers for these services opened between 2014 and 2021. To work in HSE primary and community care services all dietitians, occupational therapists, physiotherapists, podiatrists, and speech and language therapists must maintain annual registration with this board (HSE, 2019a; 2022a; 2023a; b). To utilise these services, a referral may be needed usually from a public health nurse (PHN), a Community Medical Officer or GP. HSCPs work as part of primary and community care services, within and across CHN teams, CSTs for older people and chronic disease, and in close collaboration with colleagues in acute settings.[7]

Audiologists

Audiologists are healthcare professionals that specialise in diagnosing, treating and managing hearing and balance disorders. HSE audiology services operate as part of primary and community care services across CHAs; diagnosing hearing problems, managing hearing loss, servicing and repairing hearing aids, advising on using assistive devices and providing support to children and adults experiencing hearing loss. This service is free for all children under 18 and eligible adults, including those with medical cards. It is also free for students in third-level education (Citizens Information, 2022). These services can also be provided by private providers who have a contract with the HSE (HSE, 2023c). Currently, audiologists or audiological scientists are not required to be registered with a regulatory body to work for the HSE and this profession is not currently regulated by CORU (HSE, 2020a).

Audiology is the only HSE primary and community care service that has an operational clinical management system.[8] A National Audiology Review Group (NARG) published a report in 2011 which advised the adoption of a National

7 CSTs for older people are excluded from consideration in the current analysis, as they fall under the remit of services designated for older people (not primary care).

8 National Audiology Clinical Management System – https://www.ehealthireland.ie/technology-and-transformation-functions/acute-delivery/national-audiology-clinical-management-system-nacms

Audiology Clinical Management System to facilitate the scheduling, conducting, reporting of examinations requests and reports and the ability to manage stock and repairs for audiology devices. The system has now been rolled out across other community services (eHealth Ireland, 2024).

Dietitians

Dietitians assess and manage diet and nutritional status and provide evidence-based advice on all aspects of nutrition and diet to promote health, prevent disease and help manage existing conditions. Individuals with issues relating to anaemia, diabetes, irritable bowel syndrome, coeliac disease, obesity, malnutrition and constipation may be referred/treated by a dietitian (INDI, 2025).

Occupational therapists

Occupational therapists assist individuals who suffer from compromised lifestyles due to their illness or disability to participate in everyday activities (Association of Occupational Therapists of Ireland, 2025). They work with service users to regain or maintain quality of life and independence, through assessing and adapting the home, providing information, equipment or education.

Physiotherapists

Physiotherapists support the restoration of health and wellbeing in individuals following injury, pain, disability or illness, thereby enabling individuals to improve, maintain and restore functional ability and movement (Irish Society of Chartered Physiotherapists, 2024). In June 2025, the Department of Health made the necessary legislative amendment required to designate physiotherapists as referrers for radiological procedures, and an expert working group has been established to support implementation (Department of Health, 2025b; HSE, 2025d). This initiative further expands the scope of physiotherapy practice and aligns with Sláintecare objectives.

Podiatrists

Podiatrists, also known as chiropodists, are healthcare professionals, usually working in a clinic setting, specialising in preventative care, diagnosis and treatment of various issues affecting the feet, ankles and legs (Podiatry Ireland, 2025). Podiatrists promote foot health, manage lower limb complications, and enhance overall mobility.

Speech and language therapists

Speech and language therapists assess, diagnose and provide a broad range of interventions and supports to people across the life span, with a variety of disorders and/or concerns relating to communication, voice, feeding, eating,

drinking and swallowing (IASLT, 2025). Their role involves assessing, diagnosing, managing and preventing speech disorders, often specialising in supporting specific groups of individuals, such as children with speech impairments or older people who have suffered from a brain injury. In addition to their work in primary and community care services, they also work closely with educational staff in pre-schools and schools to support children.

2.4.2 Health and social care assistants

Four of the six HSCPs under consideration in this report have associated assistant grades – HSCAs. These assistant grades work under the direction of a supervising HSCP to support the provision of services. The roles may include direct patient care, preparation of clinical areas, maintaining equipment and administrative duties to enhance service delivery; they typically require a Quality and Qualifications Ireland (QQI) level 5 qualification or equivalent.[9] The role of assistants for dietitians and podiatrists is not yet established in HSE primary and community care in Ireland.

- ***Audiology assistants*** provide support through duties such as coordinating hearing aid repairs, assisting with hearing assessments, fitting ear moulds, and advising patients on hearing aid care. They also manage appointments, patient records and stock control.
- ***Occupational therapy assistants*** help implement therapy plans for personal, domestic and community tasks, support clients in group settings, and assist with daily living skills.
- ***Physiotherapy assistants*** play a key role in patient rehabilitation by guiding therapeutic exercises and mobility routines under physiotherapist supervision. They prepare treatment areas, maintain equipment, and monitor patient progress to inform clinical decisions.
- ***Speech and language therapy assistants*** in primary and community care deliver direct client support and administrative assistance. They help during therapy sessions, facilitate group activities, prepare materials, and track client progress, alongside managing scheduling and maintaining equipment.

2.5 PUBLIC HEALTH AND COMMUNITY NURSING SERVICES

Public health and community nursing services include PHNs, community registered general nurses (CRGNs), clinical nurse specialists (CNSs), registered advanced nurse practitioners (RANPs) and HCAs. Nursing teams deliver care in primary care centres, community hubs, schools and patients' homes.

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9 For a detailed description of the job eligibility criteria and specifications see: https://www.hse.ie/eng/staff/jobs/eligibility-criteria/patient-client-care.html https://www.hse.ie/eng/staff/resources/recruitment-standards/before-you-recruit/patient-client-care-health-and-social-care-assistants.html (accessed 10 November 2025).

2.5.1 Public health and community nurses

Nursing care in HSE primary and community care services are governed by assistant directors and directors of public health nursing. The Office of the Nursing and Midwifery Director in the HSE serves as a central hub for nursing and midwifery within Ireland's public health system. It acts as a key link between the Department of Health, regulatory bodies such as the Nursing and Midwifery Board of Ireland and the Health Information and Quality Authority (HSE, 2019b), educational bodies, and healthcare leadership to translate policy and regulation into clinical practice across all care areas including primary and community care. It offers visible clinical leadership, supports workforce development, and drives service improvement aligned with Sláintecare. It also oversees continuous professional development and education programmes on the National Framework of Qualifications for nurses, midwives and health care assistants (QQI level 5 to level 9) aligned to service needs (HSE, 2022b). All nurses and midwives who practise in Ireland must be registered on the Register of Nurses and Midwives which is maintained by the Nursing and Midwifery Board of Ireland.

Public health nurses

PHNs are registered nurses who hold additional specialist nursing qualifications in public health nursing (HSE, 2025e). PHNs provide care to a wide range of patients including older adults living at home, individuals with acute, chronic, or life-limiting conditions, postnatal women, and people with disabilities (HSE, 2025e). A key role of PHNs is the delivery of care in the community to pre-school and school children. This includes five health and development assessments for pre-school children, beginning within 72 hours of maternity service discharge, screening for vision and hearing and delivering school immunisation programmes. They provide health education, support vaccine and screening programmes, link families to resources, and raise awareness of local services. They are core contributors to multidisciplinary teams through assessment, referral and ongoing case management.

Community registered general nurses

CRGNs are registered nurses working in the community setting. They focus on individual patient care, particularly for older adults (HSE, 2025e), assessing and planning nursing care and delivering clinical interventions such as wound management, oncology support and end-of-life care. They work collaboratively with PHNs and other primary and community care professionals to ensure coordinated and person-centred care.

Clinical nurse specialists and registered advanced nurse practitioners

RANPs and CNSs bring enhanced clinical expertise to community services through expanded scopes of practice. RANPs in Ireland are educated to master's level and

provide complete episodes of care, including advanced assessment, diagnosis, prescribing and discharge within their scope of practice. They act as senior clinical decision-makers and lead care for patients with complex needs (NMBI, 2017; Department of Health, 2019; HSE, 2020b; 2023d). CNSs are expert practitioners in a defined clinical area (e.g. chronic disease, tissue viability) and focus on five core competencies: clinical care, patient advocacy, education, research and consultancy. Both roles enhance service quality, reduce hospital admissions, and support integrated models of care, in line with Sláintecare reforms (Department of Health, 2019).

2.5.2 Health care assistants

HCAs work as part of public health and community nursing services in HSE primary and community care under the supervision and direction of qualified nursing personnel. The HSE describes the purpose of the role of the HCA[10] using the International Standard Classification of Occupations definition: 'Health care assistants provide assistance, support and direct personal care to patients and residents in a variety of healthcare settings such as hospitals, clinics, nursing homes, aged care facilities, as well as community and domestic settings. They support multi-disciplinary teams in the delivery of high-quality care.' The role requires a QQI level 5 qualification or equivalent.[11]

2.6 WORKFORCE MIX IN HSE PRIMARY AND COMMUNITY CARE SERVICES

As discussed in Keegan et al. (2022), many workforce demand projection models, including Hippocrates, model potential changes in service delivery. This can include changing the mix of the workforce providing services and moving towards a more community-based integrated care approach. It was a key recommendation of the Sláintecare Report to extend the roles of nurses and HSCPs in the community to allow for these service developments (Houses of the Oireachtas Committee on the Future of Healthcare, 2017).

Workforce mix can be split into two categories, grade-mix and skill-mix, and while the terms are sometimes used interchangeably, we follow the terminology used in the Taskforce on Staffing and Skill Mix for Nursing (2018):

- ***Grade-mix*** refers to the mix of individual grades in the workforce. It involves the transfer of tasks from one workforce group to another: for example, the transfer of tasks from CRGNs to HCAs or from HSCPs to HSCAs.
- ***Skill-mix*** refers to the mix of education, training, skills and experience within a professional group. It refers to the proportion of staff operating at various levels within a profession; for example, the proportion of nursing staff or

10 See https://www.oireachtas.ie/en/debates/question/2025-04-29/2117/ (accessed 10 November 2025).
11 https://careerhub.hse.ie/pathways_hca/

HSCPs operating at clinical specialist grades or advanced practice grades. Clinical specialists are those with clinical expertise within a specific clinical area or condition, while advanced practitioners are those who focus on managing whole episodes of clinical care (Department of Health, 2019; HSE, 2023d).

While evidence on the effectiveness of grade- and skill-mix policy changes is mixed, as discussed in Keegan et al. (2022) and recently in relation to the primary and community care workforce in the UK in Gibson et al. (2022), it remains central to non-acute care policy in Ireland. Guidelines regarding grade-mix are currently only available for nurses working in an acute hospital setting; there are no guidelines for the primary and community care workforce in Ireland.

Health and Social Care Professions: The roles of clinical specialist and advanced practitioner expand opportunities for a clinical career pathway for HSCPs, although there is variation in career structures across the professions. In HSE primary and community care, only a small number of clinical specialist posts currently exist. The development of advanced practitioner roles for HSCPs was a key commitment for the National HSCP Office in the strategic guidance framework (HSE, 2021b). In 2023, an advanced practice framework for HSCPs was published which set out an agreed definition of the advanced practice role for HSCPs, the core competencies required, development pathways and an implementation plan (HSE, 2023d). Commitment to establishing advanced practice roles for HSCPS was reiterated in the recent HSE National Service Plan, including the rollout of candidate advanced practitioner posts (HSE, 2025d). The Department of Health is developing a HSCP Advanced Practice policy,[12] with the HSE collaborating to establish education and credentialling frameworks. There are currently no published recommendations for the level of skill-mix for HSCPs. In Keegan et al. (2022), a 4 per cent assumption was modelled for advanced practitioners and 7 per cent for clinical specialists in the acute hospital setting by 2035.

Regarding grade-mix, there is no published recommendation as to the optimal ratio of HSCPs to HSCAs. In Keegan et al. (2022), a therapist to HSCA mix of 90:10 was modelled for occupational therapy, physiotherapy and speech and language therapy, and 95:5 was modelled for dietetics in the acute setting.

Public health and community nurses: The work of the Taskforce on Staffing and Skill Mix for Nursing, established by the Office of the Chief Nursing Officer in the Department of Health, is ongoing. Recommendations have been made on the appropriate grade-mix for selected acute hospital settings (CRGN: HCA 80%:20% in general and specialist medical and surgical care settings and 85%:15% in emergency care settings), but no such recommendations are yet available for

[12] See https://www.oireachtas.ie/en/debates/question/2025-04-29/2117/ (accessed 10 November 2025).

non-acute settings. With regard to skill-mix, the published target for advanced nurse practitioners is 3 per cent (Department of Health, 2022; HSE, 2025d) while in Keegan et al. (2022) a 4 per cent assumption was modelled for advanced nurse practitioners and 7 per cent for clinical nurse specialists in the acute hospital setting by 2035.

2.7 SAFE STAFFING AND BEST PRACTICE IN HSE PRIMARY AND COMMUNITY CARE SERVICES

Irish evidence

The work on the Framework for Safe Nurse Staffing and Skill Mix, established by the Office of the Chief Nursing Officer in the Department of Health, was planned in three phases. The first two phases, which covered care provided in selected acute hospital settings (Phase 1 – general and specialist medical and surgical care settings in adult hospitals and Phase 2 – adult emergency care settings), have been completed while the third phase, which covers care in general non-acute settings, is ongoing (Taskforce on Staffing and Skill Mix for Nursing, 2018; 2022). Given the breadth of Phase 3, it comprises three sub-phases covering (i) long-term residential care, (ii) general community care, and (iii) step-down and rehabilitation care settings. A policy for long-term residential care settings is expected in early 2026. Of relevance to this work is Phase 3 (ii), for which, at the time of writing, an expert oversight group has been convened to provide strategic governance and direction. A comprehensive research evaluation of the current public health nursing service delivery model will be undertaken as part of the group's work. The objective is to provide evidence-informed recommendations on the most appropriate and sustainable model of community nursing, in line with Sláintecare and population health need which will include a Framework for Safe Nurse Staffing.

The Department of Health-commissioned report from 2001 (Bacon, 2001) represents the most comprehensive and recent evaluation of workforce requirements for physiotherapists, occupational therapists, and speech and language therapists across both the public and private health sectors in Ireland. While the report forecasted substantial growth in demand for these professions, it did not delineate specific workforce needs within primary and community care settings. The report also did not provide 'best practice' type recommendations for the ratio of staff to population.

A HSE National Audiology Review (HSE, 2011) identified a significant shortfall in HSE audiology staffing and recommended a substantial increase in workforce to meet estimated national service needs across all public health services. Specifically, the report estimated that for the HSE to meet its vision to provide high-quality, safe, effective and efficient audiology services, current staff numbers should be more than doubled and proposed specific numbers of additional assistant audiologists, graduate-level audiologists and post-graduate-level audiologists to

meet the needs of the population. The number of audiologists proposed in the review was the equivalent of 1 audiologist WTE per 34,000 population.

International evidence

Similar to the Irish situation, there is some international evidence on appropriate staffing for nursing services. However, most evidence relates to the acute setting or specific services therein (e.g. emergency departments, stroke care, critical care). There is little evidence on nurse-to-patient ratios in the community setting (DeMaio et al., 2024).

The Health Research Board undertook an evidence brief for the Department of Health which examined available international literature on ratios/ranges of staff to demand/population recommended by international organisations to support workforce planning for six HSCPs (Moloney et al., 2021). While some recommended ratios were available in the UK and Australia, they were again related to subspecialities of acute services (e.g. stroke units, critical care).

Workforce planning reports for HSCPs in Scotland, similarly, do not prescribe explicit workforce-to-population ratios for HSCPs; however, they frame HSCP workforce development as a population-driven exercise. That is, ensuring Scotland has the right number, distribution, and skill-mix of HSCPs to meet evolving demographic, epidemiological, and social needs. They also note that the current absence of detailed data prevents them from modelling supply relative to population need, limiting the ability to project required staffing levels with accuracy (NHS Education for Scotland, 2021; Scottish Government, 2022).

The same picture arises across the literature in relation to specific HSCPs. For example, while audiology services reports have been published across the four UK nations, none have established universally fixed staffing ratios. All highlight the extent of service demand, unmet need and significant workforce shortfalls. Recommendations focus on aligning audiology staff numbers with population demand, especially given ageing demographics and rising prevalence of hearing loss (Sethi et al., 2016; British Academy of Audiology, 2023). The theme of data limitations is also highlighted in relation to occupational therapy with authors highlighting the need for standardised data to support workforce to population planning (RCOT, 2024; Matysiak et al., 2025).

2.8 WAITING LISTS FOR HSE PRIMARY AND COMMUNITY CARE SERVICES

Waiting lists for HSE primary and community care services in Ireland have been a persistent issue over many years and were exacerbated during the COVID-19 period (McGlacken-Byrne et al., 2024). The causes of a build-up in waiting lists or longer waiting times are well documented and are essentially an imbalance in the

demand for and supply of services (OECD, 2020). Demand drivers include, for example, an ageing population, rising chronic disease prevalence and changes in service delivery models. The introduction of new community-based Sláintecare initiatives, such as the Enhanced Community Care Programme, is an example of such a change. First results from the programme are promising, with a 15 per cent reduction in hospital admissions reported for patients with chronic disease between 2019 and 2023 (HSE, 2025f), but a shift from acute settings increases the workload for community-based teams. On the supply side, staff shortages, including difficulties recruiting and retaining staff, and physical capacity constraints, such as infrastructure and equipment, can also increase lists (OECD, 2020).

While there has been research on the impact of waiting lists on public acute hospital demand, workforce and expenditure in the Irish context (Brick and Keegan, 2020; Keegan et al., 2020; Brick and Connolly, 2021; Keegan et al., 2022; Brick et al., 2025), little analysis has been possible on the community waiting lists due to the paucity of data available (Walsh et al., 2021).

2.9 SUMMARY

This chapter provided an overview of the HSE primary and community care services and the professions and grades included in the analysis. We discussed the issue of workforce mix, particularly in relation to grade- and skill-mix, in primary and community care services. Finally, we discussed safe staffing, best practice and waiting lists as they relate to primary and community care.

CHAPTER 3

Hippocrates projection methods and data

3.1 INTRODUCTION

This chapter describes the data and methods used to project workforce requirements for selected professions and grades in HSE primary and community care. The Hippocrates projection methodology is described, in addition to the adaptations required to the methodology in the context of limited data available on HSE primary and community care activity. The workforce projection assumptions and scenarios are described in detail.

3.2 OVERVIEW OF PROJECTION METHODOLOGY

The Hippocrates model is designed to be broad in scope and has been used to project national demand, bed capacity, workforce and expenditure across a wide range of health and social care services. It has previously been regionalised to produce workforce projections for the public acute hospital sector, and was recently applied in a national and regional capacity review refresh covering general practice (GPs and general practice nurses), older people's services and public acute hospital services (Brick and Kakoulidou, 2025; Brick et al., 2025; Connolly et al., 2025a; b; Walsh and Kakoulidou, 2025a; b).

Hippocrates is a macro-simulation model. Macro-simulation models or cell-based models represent a large and important class of component-based models, which group individuals into cells according to key attributes such as age and sex, and project from that basis. This modelling framework was selected for Hippocrates as it provides flexibility in cases where the data available to underlie the projections are suboptimal.[13] For example, in the case of public acute hospital projections (Brick et al., 2025), the model is bottom-up in nature, and while not perfect for all services, for day and in-patient discharges/bed days data are at the patient level and, importantly, have single year of age and sex information along with detailed clinical data. Future demand is projected primarily based on projected demographic change applied to current utilisation rates. Additionally, the impact of, for example, healthy ageing assumptions, improvements in waiting list management and increases in community care provision, are modelled. Projected demand is then converted to bed capacity using an occupancy rate but can similarly be converted to expenditure using unit costs or workforce using workforce-to-demand ratios.

Most models of this type tend to be top-down in nature, projecting on aggregate demand or expenditure. Hippocrates, in contrast, belongs to a smaller class of

[13] See Wren et al. (2017) and Matias et al. (2022) for a description of approaches to projecting healthcare demand.

models that can project from a service-level, bottom-up perspective. While bottom-up models tend to be considerably more data-intensive, they allow for more flexibility and a wider range of applications (Keegan et al., 2020). However, feasibility of bottom-up modelling is contingent on the availability of sufficiently granular service utilisation data. Ideally, an age- and sex-specific activity rate profile is generated, preferably adjusted for patient complexity, which reflects resource input. A workforce-to-demand ratio would then be calculated for the base year and applied to projected demand across the projection horizon (Keegan et al., 2022). As documented in Walsh et al. (2021), the activity metrics available for HSE primary and community care services are currently insufficient to provide the level of granularity required. While a broad suite of metrics, key performance indicators (KPIs), are collected across the services, no single metric or combination of metrics provides a comprehensive utilisation profile for each service nor is there any patient complexity adjustment. Consequently, the Hippocrates model was adapted to project expenditure for a range of non-acute services in Walsh et al. (2021) using a top-down approach.

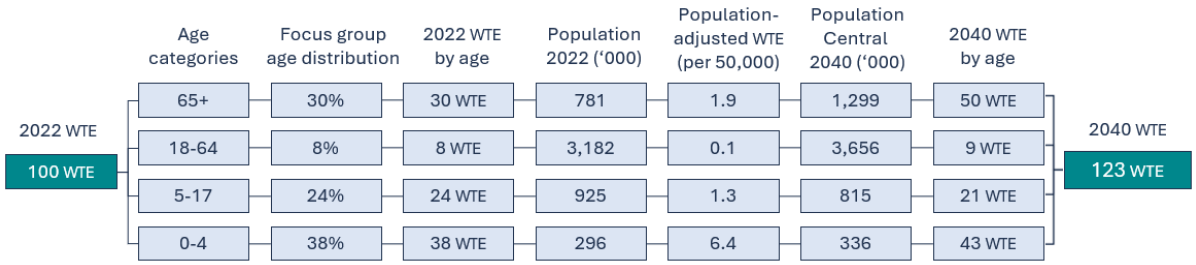
This report follows that adapted approach, taking the total number of HSE primary and community care services staff, incorporating directly employed WTE (including overtime) and agency, in the selected professions and grades in December 2022 as the starting point.[14] While the simplest top-down approach is to project workforce on a per capita basis, the available activity data, combined with insights from focus groups with service representatives, allow the estimation of age-specific workforce-per-capita profiles. This enables projections to reflect both population growth and population ageing. Additional grade- and skill-mix scenarios, developed in agreement with relevant stakeholders and professions through focus groups and follow-up consultation, further refined the projections.

Figure 3.1 provides an illustrative example of a demographic-only projection scenario using the top-down method. Taking 100 WTEs in 2022 as a starting point, the focus group approved age distribution is applied, so the number of WTE providing services to each category can be estimated. Each category is divided by the corresponding population in 2022, resulting in an estimate of age-adjusted WTE per capita. This rate is multiplied by the age-specific population projection for 2040 to provide an estimate of WTE requirements in 2040 (123 WTE). The data used and the methods are described in more detail in the following sections.

The report uses version 6 of the Hippocrates model adapted for this analysis and is automated using R software, with subsidiary analysis undertaken in SPSS and Microsoft Excel.

[14] At the time the work was undertaken, 2022 was the most recent year for which all the required data were available.

FIGURE 3.1 Hippocrates HSE primary and community care projection methodology – illustrative example of service demand central scenario



Source: Authors' representation.

3.3 DATA

Regional service-user age distribution: For each service, data on all KPIs with an associated age profile were requested from the HSE National Business Information Unit (BIU) Community Healthcare Team. Each service had at least one available metric with an age profile attached. The age categories available are 0–4 years, 5–17 years, 18–64 years, and 65 years and older. There is no information available on the sex of service-users. For public health and community nursing services, these data were supplemented with vaccine uptake data from the HSE Health Protection Surveillance Centre (HSE HPSC, 2023a; b);[15] data on infant/child development checks[16] as this activity was not captured in the KPIs. For audiology, data from the National Audiology Clinical Management System (NA-CMS) were provided and used to expand the age profile for the 65+ cohort. Most data were provided at Local Health Office level which were then aggregated to HSE Health Region level (HSE, 2023e). National level utilisation data from the Healthy Ireland Survey Wave 5 and the Irish Longitudinal Study on Ageing (TILDA – Waves 3, 4 and 5) were used to estimate an expanded age profile for some services.[17]

Workforce: The Health Service Personnel Census is the main source of data on the numbers of staff working in HSE primary and community care services. The HSE undertook an extensive validation of staff numbers across the HSE Health Regions specifically for this analysis. The purpose of this was to ensure that only staff working in HSE primary and community care services within the research scope (see section 2.3) and reporting their activity to HSE BIU Primary Care in December 2022 were included. This ensured that a previously reported limitation of the workforce data (Walsh et al., 2021), the inconsistency in alignment of workforce to activity metrics, was resolved. The data were provided at Local Health Office level and then aggregated to HSE Health Region level (HSE, 2023e). These were supplemented with overtime data and estimates on the use of agency in 2022, which were also provided by the HSE. The inclusion of agency and overtime is important to ensure that all WTE utilised are accounted for in the analysis. At the

15 Used to estimate nursing immunisation contacts.

16 Public health nurse data provided by the HSE BIU Community Healthcare Team separately from the KPI metric data.

17 Healthy Ireland Survey (W5 – 2019) and TILDA (W3 – 2014/2015, W4 – 2016, W5 – 2018), data were accessed via the Irish Social Science Data Archive – www.ucd.ie/issda and were the most recent applicable waves available at the time the analysis was undertaken.

time of data collection, workforce data could not be disaggregated into constituent teams (e.g. CHNs or CSTs), as the lower-level structure within the HSE Health Regions had not yet been finalised.

Population: The ESRI developed population projections form the basis of the workforce requirements projections in this analysis. The data and methods used to develop these projections, based on the CSO Census of Population 2022, are described in detail at the national level in Bergin and Egan (2024). HSE Health Region projections, developed specifically for the Hippocrates model are described in Brick and Kakoulidou (2025).

3.4 METHODS

In the absence of comprehensive complexity adjusted age- and sex-specific activity metrics (see section 3.2) which can be used to calculate a workforce-to-activity ratio, a pragmatic top-down approach is adopted. Using the method developed for, and described in, Walsh et al. (2021), the projections are developed as follows:

3.4.1 Development of service-user age profiles, 2022

The aim is to establish the most appropriate proxy for a complexity adjusted age profile of service users, to more accurately reflect resource use for each of the services under consideration. From the HSE BIU Primary Care KPI data we extract national and regional service-user age distributions for each metric with an age profile attached. For some services, just one metric was available, for example, for physiotherapy only the metric 'clients referred (accepted)' has an age profile attached. For others, for example dietetics, three metrics are available: 'patients referred (accepted)', 'new patients offered first appointment and seen' and 'number of existing patients offered an appointment and seen'. Most of the available metrics are not sensitive to the frequency or intensity of service use across the age distribution. While a similar number of patients may be referred or seen across age cohorts, the frequency of attendance or duration of visits may be quite different. This is not possible to overcome with currently available data.

Where possible, the age profiles are further disaggregated using available survey data to provide additional detail. For example, the age profiles for physiotherapy can be extended using data from TILDA so that instead of four age categories (0–4, 5–17, 18–64, 65+), we have eight (0–4, 5–17, 18–64, 65–69, 70–74, 75–79, 80–84, 85+). The survey age adjustment was applied at both national and HSE Health Region level. In the case of audiology, additional information from the NA-CMS was provided to refine the age categories for those 65 years and older.

While there are issues with the KPIs for all services, the metrics reflecting the service provided by public health and community nurses are particularly

challenging. The KPIs have incomplete information on infant/child development checks, and no information on school immunisation contacts or school vision and hearing screenings. Using the supplementary data sources described in section 3.3, combined with assumptions on population coverage, we estimate this additional activity and adjust the age profiles accordingly.[18]

Once provisional age profiles had been established, focus groups were held with representatives from each service. At each focus group, the Hippocrates methodology for the analysis was described and representatives were asked to examine the age profiles calculated for each of the metrics available for their service. It was requested that each service select the metric for which the age profile most closely reflected, based on their professional judgement, the totality of the service provided. Once the metric was selected, representatives were asked, again based on professional judgement, if the data should be adjusted to reflect a higher intensity of service use for particular age cohorts or patient types (e.g. first-time patients or older patients). Most professions took the opportunity to provide this adjustment following post-focus group consultations with their colleagues.

Based on the feedback from the focus groups, the age profiles were revised incorporating any additional data and applying adjustments at the national and regional level. The adjusted age profiles were re-circulated to the profession representatives for final sign off. Findings from this process, including the adjustments applied are presented in Chapter 4.

3.4.2 Development of age-specific WTE per capita, 2022

Whole-time equivalents (WTEs) are a comparable measure of staff resource which incorporate adjustments for different patterns in part- and full-time work. A WTE is calculated based on the number of hours worked in a period divided by the standard number of working hours (for the grade) worked over that period.[19]

Table 3.1 presents the validated number of WTE in scope in 2022 (see section 2.3). The *base* WTEs presented exclude any overtime (hours worked in excess of contracted hours) or agency. The *adjusted* WTEs account for overtime and the impact of agency staff by region in 2022. The WTE adjustments, provided by the HSE, incorporate overtime WTE based on average overtime per month over 2022 and a proxy WTE for agency, estimated by converting the monthly expenditure on agency in 2022. The adjustment ensures that the workforce underlying the projections accurately reflects the staff available to deliver care in 2022. The *adjusted* WTEs represent the best available estimate of workforce capacity for

[18] For CRGNs, only information on school immunisation contacts are included.
[19] WTE data included in this analysis exclude employees currently classified as on a career break.

that year and do not imply an assessment of optimal or best-practice staffing.[20] Throughout the remainder of the report, WTE refers to *adjusted* WTE.

The service-user age profiles, approved by the focus groups, allowed for the 2022 WTEs to be proportionately allocated by age. This allowed for the estimation of age-specific WTE per capita in 2022 at the national and HSE Health Region level.

[20] It is acknowledged that the use of agency and overtime hours provided would have been used to cover vacant posts, to respond to increased demand for care and to replace various absences (e.g. annual leave, sick leave) where supply is available. It is also known that most staff categories and organisations in the community do not have additional WTE to accommodate staff on leave.

TABLE 3.1 HSE primary and community care – base and adjusted WTE, December 2022

	National		DNE		DML		DSE		SW		MW		WNW	
	Base[a]	Adjusted[b]	Base	Adjusted	Base	Adjusted	Base	Adjusted	Base	Adjusted	Base	Adjusted	Base	Adjusted
Health and Social Care Profession services														
Health and Social Care Professionals[c]	2,197	2,371	417	472	379	406	409	446	327	331	218	231	447	485
Audiologists	57	62	12	13	11	12	7	8	9	10	5	5	13	14
Dietitians	199	215	38	43	37	40	39	43	25	26	17	18	42	46
Clinical specialists	4	4	-	-	1	1	1	1	1	1	-	-	1	1
Occupational therapists	636	686	119	135	115	124	120	131	100	101	61	65	120	131
Clinical specialists	1	1	-	-	-	-	-	-	-	-	-	-	1	1
Physiotherapists	654	706	118	134	113	121	127	139	94	95	70	74	132	143
Clinical specialists	17	18	2	2	5	5	4	4	1	1	3	3	3	3
Podiatrists	80	86	10	11	7	8	7	8	15	15	7	7	33	36
Clinical specialists	9	10	2	2	-	-	2	2	1	1	1	1	4	4
Speech and language therapists	571	616	120	136	95	102	108	118	83	84	59	62	106	115
Clinical specialists	5	5	1	1	-	-	1	1	1	1	1	1	1	1
Health and social care assistants	62	74	14	18	16	17	6	6	4	4	6	6	17	24
Audiology assistants	7	10	-	2	1	1	3	3	2	2	1	1	1	2
Occupational therapy assistants	23	26	7	7	8	9	1	1	1	1	1	1	5	7
Physiotherapy assistants	29	32	6	7	7	7	2	2	1	1	2	2	12	14
Speech and language therapy assistants	3	6	1	2	-	-	-	-	-	-	2	2	-	2
Public health and community nursing services														
Public health and community nurses[d]	2,764	3,010	604	688	491	549	469	519	432	443	225	231	544	579
Public health nurses	1,463	1,629	325	382	275	317	257	291	215	221	120	124	273	295
Registered general nurses	774	854	154	180	105	122	124	140	161	166	71	74	159	172
Registered advanced nurse practitioners	29	29	7	7	8	8	3	3	-	-	1	1	10	10
Clinical nurse specialists	103	103	27	27	20	20	14	14	7	7	6	6	30	30
Other[e]	395	395	93	93	83	83	70	70	50	50	27	27	72	72
Health care assistants[f]	68	193	19	59	5	20	15	24	4	17	10	13	14	59

Notes:
a Audited WTE, December 2022.
b Adjusted for agency and overtime
c There were no HSCP advanced practitioners in 2022. Figures for clinical specialists are included in the overall profession totals.
d Other services provided by HSE primary and community care such as dental, palliative care, ophthalmology/optometry and social inclusion are not included in the current research, this explains the difference between the validated figures for nursing presented here and those published for HSE primary and community care presented in Table 2.1.
e Predominantly managerial grades but also includes student nurses.
f Includes HCAs; attendant/aide grades.

Sources: HSE Health Service Personnel Census and HSE Strategic Workforce Planning calculations.

3.4.3 Projection assumptions

Once age-specific WTE per capita have been established for 2022, future WTE requirements are projected based on clearly defined assumptions. Below we describe how these assumptions are operationalised in Hippocrates. Given the limitations of currently available data and the consequent top-down method we are limited in the assumptions that can be applied. Specifically, we cannot model changes in service utilisation patterns (e.g. healthy ageing or waiting list management) or changing models of care delivery (e.g. increases in demand because of Sláintecare developments).

Population growth and ageing assumptions

The methodology underlying the population projections used in the report is outlined in detail in Bergin and Egan (2024). Table 3.2 presents a summary of the main assumptions for the national level projection scenarios. A discussion of the regional level adjustments required to aggregate the population projections to HSE Health Region level is provided in Brick and Kakoulidou (2025).

TABLE 3.2 Summary of main assumptions for population scenarios

Assumptions	Central	Low	High
Mortality	Life expectancy at birth for males (females) is expected to increase from 81.1 (84.6) in 2022 to 84.2 (87.1) for males (females) in 2040	No change from central scenario	No change from central scenario
Migration	Net immigration to average +35,000 p.a. to 2030 (higher at +45,000 in the short term) and +20,000 p.a. thereafter	Net immigration to average +25,000 p.a. to 2030 (higher at +35,000 in the short term) and +10,000 p.a. thereafter	Net immigration to average +45,000 p.a. to 2030 (higher at +55,000 in the short term) and +30,000 p.a. thereafter
Fertility	Total fertility rate is unchanged at 1.65 over the period	No change from central scenario	No change from central scenario

Note: p.a.=per annum.
Source: Bergin and Egan (2024).

Table 3.3 presents regional population size in 2022 and the projected population size in 2040 across the three scenarios. Nationally, in the central scenario, the population is projected to increase by 17.6 per cent by 2040 but there is substantive variation across the regions. The highest projected growth is in DML at 20.5 per cent compared to 14.3 per cent in the WNW.

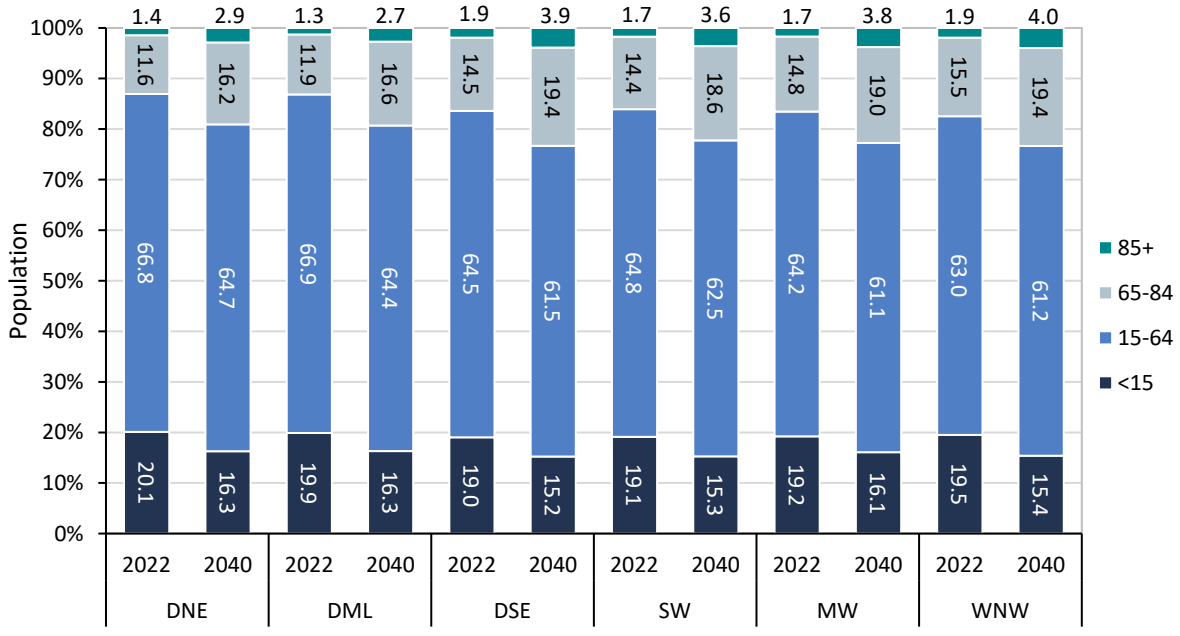
TABLE 3.3 HSE Health Region population by projection scenario, 2022–2040

	Population ('000)				Total growth (%) 2022–2040		
	2022	2040					
		Central	Low	High	Central	Low	High
DNE	1,195	1,429	1,375	1,483	19.5	15.0	24.1
DML	1,085	1,307	1,261	1,353	20.5	16.2	24.7
DSE	978	1,143	1,110	1,176	16.9	13.6	20.3
SW	746	874	847	901	17.2	13.5	20.8
MW	416	479	464	495	15.3	11.6	18.9
WNW	765	874	848	901	14.3	10.8	17.8
National	**5,184**	**6,097**	**5,892**	**6,302**	**17.6**	**13.7**	**21.6**

Source: Generated from Bergin and Egan (2024).

Of note is the change in the structure of the population over the projection period. Figure 3.2 presents the proportion of the population in each age group by HSE Health Region in 2022 and 2040 (central). In all regions, the proportion of the population aged less than 15 years is projected to decrease by between 3.1 (MW) and 4.1 (WNW) percentage points. At the other end of the age distribution, the proportion of the population aged over 65 is projected to increase by between 5.4 (WNW) and 6.3 (DSE) percentage points over the period in the central scenario, while the proportion aged 85+ is expected to more than double in all regions. These demographic shifts have significant implications for future workforce requirements, particularly for services predominantly used by the older or younger population.

FIGURE 3.2 Age-specific population distribution by HSE Health Region, 2022 and 2040 (central)



Source: Generated by the authors from Bergin and Egan (2024).

Workforce mix assumptions

Workforce demand challenges arising from policy changes such as Sláintecare can be managed in several ways, including through integrating staff within and across professions to improve efficiency and the optimisation of the available skills, enabling professions to practise at the top of their professional licence. In this regard, policy documents (HSE, 2018; Department of Health, 2019; HSE, 2021b; Department of Health, 2022; HSE, 2025d), combined with insights from the focus groups, helped to inform assumptions applied in this report in relation to grade- and skill-mix. Particularly, many of the skill-mix assumptions developed in this report align with a key HSE priority area for action in 2025 – the enabling of a *sustainable workforce with enhanced clinical expertise* (HSE, 2025d), including the development of specialist and advanced practice for nursing and midwifery (Department of Health, 2022) and HSCPs (HSE, 2021b; 2023d).

The following section outlines the grade- and skill-mix present in 2022 (including agency and overtime) in addition to the assumptions applied in this analysis. The baseline grade- and skill-mix presented below may not accurately reflect service needs or the most effective deployment of specific roles and professions. Instead, it may be influenced by factors such as the availability of certain staff in the labour market, budgetary constraints and/or specificity of agency utilisation data and its associated proxy WTE calculation.

The grade- and skill-mix assumptions modelled in this report have been selected in agreement with relevant stakeholders and professions through focus groups and follow-up consultation. It is important to note that these assumptions are best described as informing 'what-if' scenarios, to facilitate greater depth and understanding in relation to projections, and do not reflect recommendations regarding implementation. For example, ongoing work to develop frameworks for safe nurse staffing may inform future analyses.

Grade-mix

Grade-mix baseline, 2022

Table 3.4 presents the grade-mix baseline by HSE Health Region in 2022. The grade-mix assumptions examined are the ratio of therapists to therapy assistants and CRGNs to HCAs. While the ratios vary by HR, the overall ratio of CRGNs to HCAs was 82:18 and for therapists the ratio ranges from 85:15 for audiologists to audiology assistants to 100:0 for dietitians and podiatrists for whom there were no assistant grades in post.

TABLE 3.4 Grade-mix baseline by HSE Health Region, 2022

	National	DNE	DML	DSE	SW	MW	WNW
Therapists[a] : therapy assistants[b]							
Audiology	85 : 15	85 : 15	94 : 6	74 : 26	83 : 17	83 : 17	88 : 12
Occupational therapy	96 : 4	95 : 5	93 : 7	99 : 1	99 : 1	98 : 2	95 : 5
Physiotherapy	95 : 5	95 : 5	94 : 6	99 : 1	99 : 1	97 : 3	91 : 9
Speech and language therapy	99 : 1	98 : 2	100 : 0	100 : 0	100 : 0	97 : 3	98 : 2
CRGNs: HCAs							
Public health and community nursing	82 : 18	75 : 25	86 : 14	85 : 15	91 : 9	85 : 15	74 : 26

Notes: Includes agency and overtime.
a Calculation excludes managerial and clinical specialist grades except for audiologists which is calculated from total WTEs.
b No assistant WTEs for dietetics or podiatry in December 2022.
Source: HSE Strategic Workforce Planning – December 2022. Authors' calculations.

Grade-mix assumptions

Table 3.5 provides details in relation to the grade-mix assumptions modelled in this analysis, by service. Assumptions were developed through separate focus groups for nursing and HSCPs. Input was received from senior clinical leaders, representatives from the Office of the Nursing and Midwifery Services Director, the National Health and Social Care Professions Office, the Department of Health, and the HSE National HR Strategic Workforce Planning team. Grade-mix assumptions are modelled to be introduced in a variety of ways, with some starting from 2023, others in either 2028 or 2030 and others with a phased introduction timeline. In cases where the 2022 concentration of assistants exceeds the modelled grade-mix, no change is made (i.e. the concentration of assistants is not reduced in the modelling).

TABLE 3.5 Grade-mix assumptions by service

Service	Assumption	2040	Timeframe
Audiology	Audiologist to HSCA mix of	90:10	Apply from 2023
Occupational therapy Physiotherapy Speech and language therapy	Therapist to HSCA mix of	90:10	Apply from 2028
Dietetics	Dietitian to HSCA mix of	95:5	Apply from 2028
Podiatry	Podiatrist to HSCA mix of	95:5	Apply from 2030
Public health and community nursing	CRGN to HCA mix of	85:15	2023–2029 = 90:10; 2030+ = 85:15

Source: Authors' representation.

HSCPs and HSCAs: For audiology (starting 2023), occupational therapy, physiotherapy and speech and language therapy (all starting 2028), we apply a therapy profession to HSCA grade-mix of 90:10 with a range of implementation year starting points. For dietetics and podiatry, we apply a profession to HSCA

grade-mix of 95:5 starting in 2028 and 2030 respectively. We apply a higher profession to HSCA mix as these grades are not yet established.[21]

CRGNs and HCAs: The focus group determined that the application of grade-mix was applicable to the role of CRGNs working in the community only. As shown in Table 3.5, the overall national CRGN to HCA grade-mix in 2022 was 82:18 (including agency and overtime adjustments). The main grade-mix assumption models the impact of the incremental introduction of a greater concentration of HCAs in the delivery of care (90:10 to 85:15) over the medium term. Given the high concentration of HCAs in some regions in 2022, this assumption has limited impact.

Skill-mix

Skill-mix baseline, 2022

Table 3.6 presents the skill-mix baseline by HSE Health Region for 2022. In 2022, 3.4 per cent of nurses employed in primary and community care were at the clinical specialist grade and a further 1.0 per cent at the advanced practitioner grade. For the HSCP grades, the proportion of clinical specialists nationally varied from 0.2 per cent of occupational therapists to 11.8 per cent of podiatrists.[22] In 2022, advanced practice roles were not developed for HSCP staff; however, the advanced practice framework was in development at that time and subsequently published by the National Health and Social Care Professions Office in 2023 (HSE, 2023d). There was substantial variation in the proportion of clinical specialists across the HSE Health Regions. For example, for physiotherapists, 4.3 per cent of WTEs in the MW region were in clinical specialist roles compared to 0.5 per cent in the SW region.

TABLE 3.6 Skill-mix baseline by HSE Health Region, 2022

	Total	DNE	DML	DSE	SW	MW	WNW
	Clinical specialists (% total WTEs)						
Dietitians	1.9	-	2.6	2.2	4.0	-	2.4
Occupational therapists	0.2	-	-	-	-	-	0.8
Physiotherapists	2.5	1.7	4.2	2.8	0.5	4.3	2.1
Podiatrists	11.8	16.3	-	26.7	6.6	11.7	11.9
Speech and language therapists	0.9	1.1	-	1.0	1.0	1.4	0.9
Public health and community nurses	3.4	3.9	3.6	2.8	1.6	2.4	5.1
	Advanced practitioners (% total WTEs %)						
Public health and community nurses	1.0	1.0	1.5	0.5	-	0.5	1.7

Notes: Includes agency and overtime.
There were no recorded clinical specialist grades in Audiology in 2022.
Source: HSE Strategic Workforce Planning – December 2022. Author calculations.

21 There were no recorded HSCAs supporting dietitians and podiatrists in 2022.
22 There were no recorded clinical specialist audiologists in 2022.

Skill-mix assumptions

Table 3.7 provides details in relation to the skill-mix assumptions modelled in this analysis by staff category that were also determined by the focus groups. In cases where the 2022 base-year proportions in any region exceed the modelled skill-mixes, no change is made to the underlying percentages (i.e. proportions are not reduced in the modelling).

TABLE 3.7 Skill-mix assumptions by staff category

Staff	Assumptions		Timeframe
Health and Social Care Professions	Clinical specialist	7%	2023–2029 = 5%, 2030+ = 7%
	Advanced practitioner	4%	2025–2029 = 2%, 2030+ = 4%
Public health and community nurses	Clinical nurse specialist	7%	2023–2029 = 5%; 2030+ = 7%
	Registered advanced nurse practitioner	4%	2023–2029 = 2%; 2030+ = 4%

Source: Authors' representation.

Health and Social Care Professions: For HSCPs we model two skill-mix assumptions. The first assumption models 7 per cent of the HSCP WTEs within each profession employed at clinical specialist level by 2040. The assumption is modelled to be introduced in 2023, initially with clinical specialist representing 5 per cent of the respective professional workforce by 2030, rising to 7 per cent by 2040.[23]

The second assumption models 4 per cent of the HSCP WTEs employed at advanced practitioner level. This assumption is modelled to be introduced in 2025, initially with this grade group representing 2 per cent of the respective professional workforce by 2030, rising to 4 per cent by 2040. Currently, the advanced practitioner grade does not exist for HSCPs and is created within the model as the skill-mix assumption is applied.

Public health and community nurses: For public health and community nurses, we model two skill-mix assumptions. Under the first assumption, 7 per cent of total WTEs are employed at CNS grade by 2040. This assumption is modelled from 2023, reaching 5 per cent by 2030 and 7 per cent by 2040.

Under the second assumption, 4 per cent of total WTEs are employed at RANP grade by 2040. This assumption is also modelled from 2023, with this grade group initially representing 2 per cent of WTEs by 2030, rising to 4 per cent by 2040.

[23] There were no recorded clinical specialist audiologists in 2022.

Benchmarking assumption

This assumption explores the impact on required WTE in 2040 of benchmarking age-specific WTE per capita in each HSE Health Region to the region with the highest WTE per capita in 2022. The purpose is to assess workforce requirements in the absence of defined safe staffing standards or best practice targets within the Irish healthcare context. Significant variation in WTE per capita across regions (see Chapter 4) affords validity to this approach. However, it is important to note that benchmarking to the highest WTE per capita region does not imply that this region's staffing level is adequate or that its service age profile is optimal. For instance, despite relatively higher staffing levels, all regions, including the benchmark region, face considerable challenges such as extensive waiting lists (see Chapter 6 and Appendix A).

In 2022, the WNW region recorded the highest overall WTE per capita for each of the services examined. Therefore, this region serves as the benchmark for the analysis. The benchmarking assumption is not applied to assistant grades as the baseline regional WTE for these grades are so small.

3.4.4 Projection scenarios

Table 3.8 presents a summary of the projection scenarios modelled in this report. Due to the limitations of the data available, the range of scenarios that can be modelled is restricted; for example unmet demand (waiting list management) cannot be formally modelled (see section 3.5). We run three service demand scenarios in which we apply the three population scenarios described in section 3.4.3 to the age-specific WTE per capita. Building on the central service demand scenario, additional workforce-mix scenarios are specified. Two workforce-mix scenarios model changes to grade-mix and additionally skill-mix for respective workforce categories as described in section 3.4.3. Where the baseline grade-/skill-mix meet or exceed the targets outlined in Table 3.5 and Table 3.7 there are no downwards adjustments made to projected WTEs.

A final scenario, which is modelled outside of Hippocrates and is presented separately in the results, is the benchmarking scenario. It applies the age-specific WTE per capita of the WNW region in 2022 to the 2040 (central) population projected for the other regions.

TABLE 3.8 Projection assumptions and scenarios

		Service demand scenarios			Workforce-mix scenarios		Benchmarking scenario
		Central	Low pop	High pop	GM	SM	
Demographic assumption	Population growth and age structure	Central	Low	High	Central	Central	Central
Workforce-mix assumptions	Grade mix	-	-	-	✓	✓	-
	Skill mix	-	-	-	-	✓	-
Benchmarking assumption	Benchmark to WNW for all regions	-	-	-	-	-	✓

Source: Authors' representation.

3.5 HSE PRIMARY AND COMMUNITY CARE WAITING LISTS

Given the significant waiting lists that exist for HSE primary and community care services, it is important to acknowledge the impact this unmet demand will have on workforce requirements. While the available data do not allow for formal inclusion in the model, as a workforce-to-demand ratio cannot be quantified, some analysis of the scale of the issue relative to current utilisation metrics is possible. The results from this analysis should be considered alongside the formal projections from the Hippocrates model. It is expected that, as data available improves across services, the staffing impact of clearing waiting lists can be modelled. In this analysis, we employ a method originally developed in the UK (Findlay, 2017) and previously applied to Irish community waiting list data in Walsh et al. (2021).[24] This analysis covers waiting lists for HSCP services only, as there are no similar waiting list data available for public health and community nursing services.[25]

3.5.1 Data

The data used in the analysis were provided by the National BIU Community Healthcare Team. From the provided monthly waiting list data we extract:

- The number of referrals accepted (referrals accepted);
- The number of clients waiting for more than 12/16[26] weeks for a first-time appointment (backlog); and
- The total number of clients waiting for a first-time appointment (total waiting).

The metrics differ across services. For example, for speech and language therapy, several waiting lists are in operation: the number waiting for initial assessment,

[24] This method is described in detail in Brick and Keegan (2020).

[25] The existence of the National Caseload Prioritisation Procedure for Public Health Nursing Service shows that there are recognised resource challenges within the service which can lead to limited or delayed service provision (Dáil Éireann, 2026).

[26] The waiting times refer to 12 weeks for all services except speech and language therapy for which the figures relate to those waiting more than 16 weeks.

initial treatment and further treatment, while for other services it may only be initial assessment figures that are captured. For consistency in the analysis, we focus on lists for initial/first-time assessment across services. It is important to note that the figures are based on observed or reported waiting lists. It may be the case that long waiting times or lack of service in a particular area may act as a deterrent to referral. Therefore, these figures may underestimate the level of additional service required.

The data were provided at LHO level for each service and then aggregated to HSE Health Region level, and it is important to note that there are data quality issues. Where data allow, we have imputed values for missing data. Where an observation or observations are missing between time points, the missing data are linearly imputed. Where the missing data is at the end of the period the last reported value is imputed for all missing values. Significant monthly fluctuations in the metrics remain for some services, some of which may be driven by service fluctuations (e.g. seasonal), but in many cases are driven by missing data/imputation for some LHOs.

3.5.2 Methods

Following Brick and Keegan (2020), we estimate the number of first-time appointments required to clear the waiting list backlog and ensure waiting times do not increase going forward.

Estimating non-recurring activity: To calculate the backlog for reduction the analysis assumes that waiting list pressures will stop growing at the end of December 2025. We apply the total list growth rate (referrals accepted growth rate) to the total number waiting (referrals accepted) in each month between January 2024 and December 2024 to estimate the projected total list size (manageable list size) at the end of December 2025 in each month.

Differentials between the projected total list size and manageable list size provide estimates of the size of the non-recurring activity or backlog requiring clearance. This is calculated separately for each service. The non-recurring activity estimate is the mean of the monthly backlog estimates over the period January–December 2024. This varies based on the growth rate periods under consideration.

Estimating recurring activity: The differential between the projected list size based on the total list growth rate and that based on the referrals accepted growth rate estimates the extra activity above the trend required to maintain waiting times at 12/16 weeks during the backlog clearance and thereafter.[27] This is calculated

[27] For the acute system, the Sláintecare Report proposed a target waiting time of 10 weeks for outpatient appointments and 12 weeks for admitted treatment. In the Sláintecare Implementation Strategy and Action Plan 2021–2023, a 10-week waiting target for 'outpatient appointment (*including hospital and community*)' is referenced (Government of Ireland, 2021b). Given the data available, we use the HSE KPI *patients seen within 12/16 weeks* as the target.

separately for each service. In this analysis, we present the additional activity that would be required in 2026. For future years, this could be converted to a rate to account for the impact of population change on demand.

The data quality issues can impact these estimates of recurring activity in several ways but of greatest significance is the potential to artificially inflate/deflate year-on-year growth rates due to underreporting in particular months. We use two analysis periods to try to account for this and the volatility of waiting lists over time:

1) Rates from the pre-COVID-19 period combined with the more recent January 2022 to December 2024 period.
2) Rates from January 2022 to December 2024 only.

3.6 SUMMARY

This chapter presented an overview of the Hippocrates projection methods and the adapted methods used to project WTEs in the context of the significant data limitations. We present the assumptions included in the analysis: population growth and ageing, workforce mix and benchmarking. Finally, we present the data and methods used to estimate the level of additional activity required to reduce waiting lists to a target level, albeit not formally included in the projections.

CHAPTER 4

Findings | Service profiles, 2022

4.1 INTRODUCTION

This chapter outlines the estimated age distribution of service users and applies this distribution to the 2022 WTE baseline to generate age-specific WTE estimates. For each service we present:

- The focus group advised proxy complexity adjustments where relevant,
- The unadjusted national-level age distribution extracted from the available service utilisation data,[28] and
- The estimated national and HSE Health Region age distributions following survey data and focus group advised adjustments.

Finally, we present age-specific WTE adjusted for HSE Health Region population, the basis for the workforce projections presented in Chapter 5.[29]

There are many potential reasons why WTE per capita vary across HSE Health Regions and it is beyond the scope of this analysis to determine this. Some possible reasons for differences in rates to consider when interpreting the analysis are variations in regional need, private provision, or rurality. Variations in service delivery models (e.g. outreach services provided by acute hospitals) or in the service employing the staff may be behind the variation. For example, in the MW HSE Health Region 80 per cent of audiologists employed by the HSE are working in HSE primary and community care services and the remainder in the acute hospitals, while in DML 62 per cent of audiologists work in HSE primary and community care services.

Recruitment challenges across primary and community care persist, particularly in filling vacant positions which could also lead to variations across HSE Health Regions. For example, the purpose of the Public Health Nurse Sponsorship Programme is to support the HSE in meeting its need for PHNs; however, unfilled places have led to ongoing vacancies in PHN roles.[30] Urban areas, especially within Dublin city, face acute difficulties in attracting and retaining PHNs (Dáil Éireann, 2025a), further exacerbating workforce shortages and subsequently variances with other HSE Health Regions.

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28 Labelled 'National BIU Original' in the figures. Presented at national level only to demonstrate the scale of the adjustments for survey/NA-CMS data and focus group proxy complexity adjustments.

29 Presented per 50,000 population for ease of interpretation.

30 Personal communication, HSE Strategic Workforce Planning and Intelligence, 6 November 2025.

4.2 HEALTH AND SOCIAL CARE PROFESSIONAL SERVICES

Table 4.1 outlines which of the available HSE BIU Primary Care metrics were selected by the service representatives during the focus groups as best reflecting the age profile of their current service provision. The table also presents the adjustments recommended by the focus groups, which further refine the service age profiles. The adjustments reflect a higher intensity of service use for particular age cohorts or patient types (e.g. first-time patients or older patients). For most services, the chosen metric was the 'number of patients seen'. This could be further broken down, when required for the proxy complexity adjustment, into 'new patients offered a first appointment and seen' and 'existing patients offered an appointment and seen'. For physiotherapy, there was just one age distribution available, 'clients referred (accepted)' and this did not require adjustment to better reflect the full scope of service provision. As the data does not distinguish between HSCP and HSCA provision, the same age profile is assumed for the entirety of the service.

TABLE 4.1 HSCP services – HSE BIU primary care activity metrics and proxy complexity adjustments

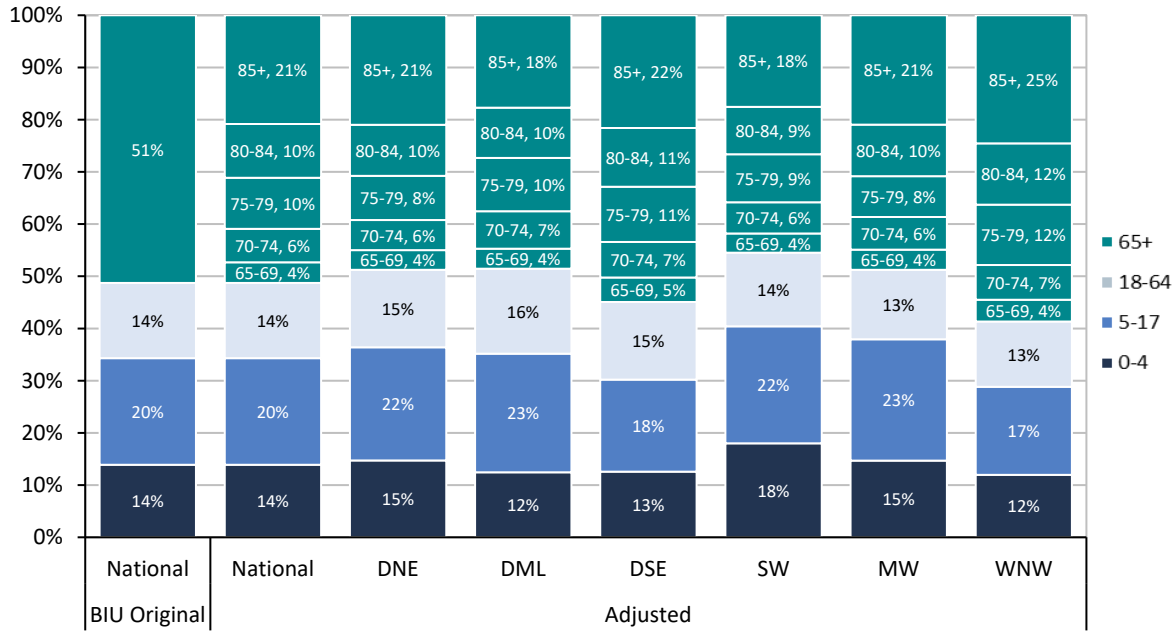
Service	Metric	Proxy complexity adjustments			
		0–4	5–17	18–64	65+
Audiology	Patient seen – total	-	-	-	-
Dietetics	Patient seen – first visit	2	1.25	1.75	2.5
	Patient seen – subsequent visit	1.5	1	1.25	1.5
Occupational therapy	Patient seen – first visit	1.5	1.5	2	1.5
	Patient seen – subsequent visit	1	1	1.5	1
Podiatry	Patient seen – first visit	2	2	2	2
	Patient seen – subsequent visit	1	1.5	1	1.5
Physiotherapy	Clients referred (accepted)	-	-	-	-
Speech and language therapy	Patient seen – first visit	1.5	1	2	2.5

Source: Adjustments were provided by the service representatives following focus groups.

4.2.1 Audiology

Figure 4.1 presents the original and adjusted age profiles for audiology services. There was no proxy complexity adjustment required but regional NA-CMS data were available to estimate additional age categories for the 65+ years age category in each region. The final age profiles show relatively little variation across regions, albeit a slightly older profile in WNW.

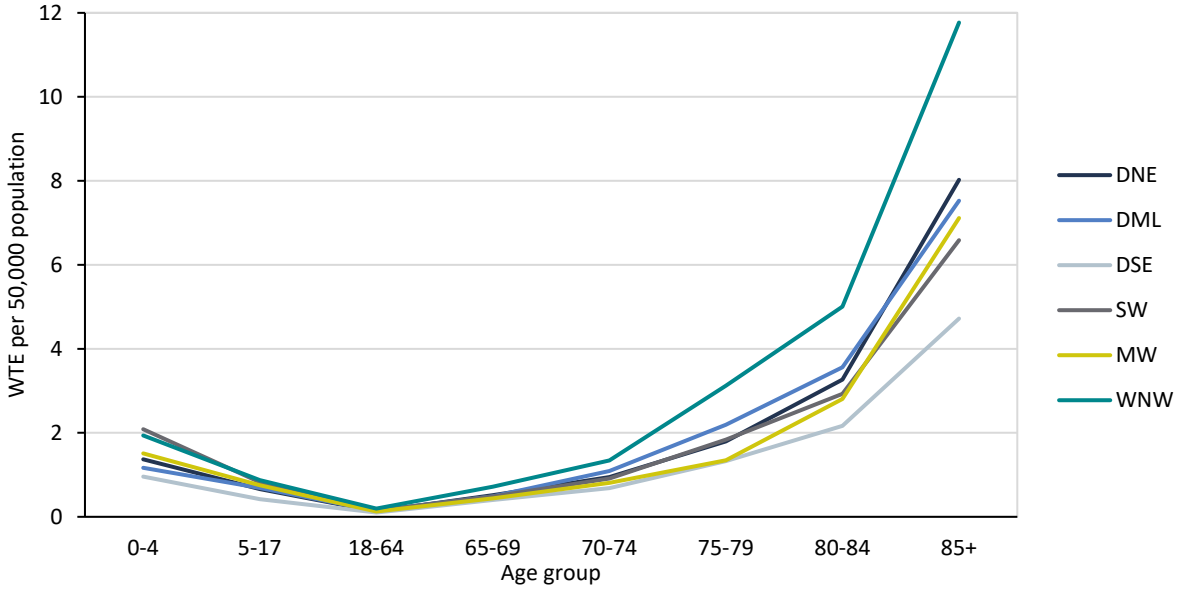
FIGURE 4.1 Audiology – estimated service age profile by HSE Health Region, 2022



Sources: See section 3.3 for an overview of data sources; authors' calculations.

To estimate WTEs by age group, the audiologist WTEs in each region are distributed based on the estimated age profile and adjusted for population size (Figure 4.2). This approach highlights regional variations. In 2022, there were 62 audiologist WTEs nationally, equating to 0.6 WTEs per 50,000 population. This ratio varied across regions, ranging from 0.4 in DSE to 0.9 in WNW. The biggest concentration of WTEs, when adjusted for population, was in the 85+ years age category, although the level also varied by HSE Health Region. In 2022, there were 10 audiology assistants, equating to 0.1 WTE per 50,000 of the national population.

FIGURE 4.2 Audiologists – WTE per 50,000 population by HSE Health Region, 2022



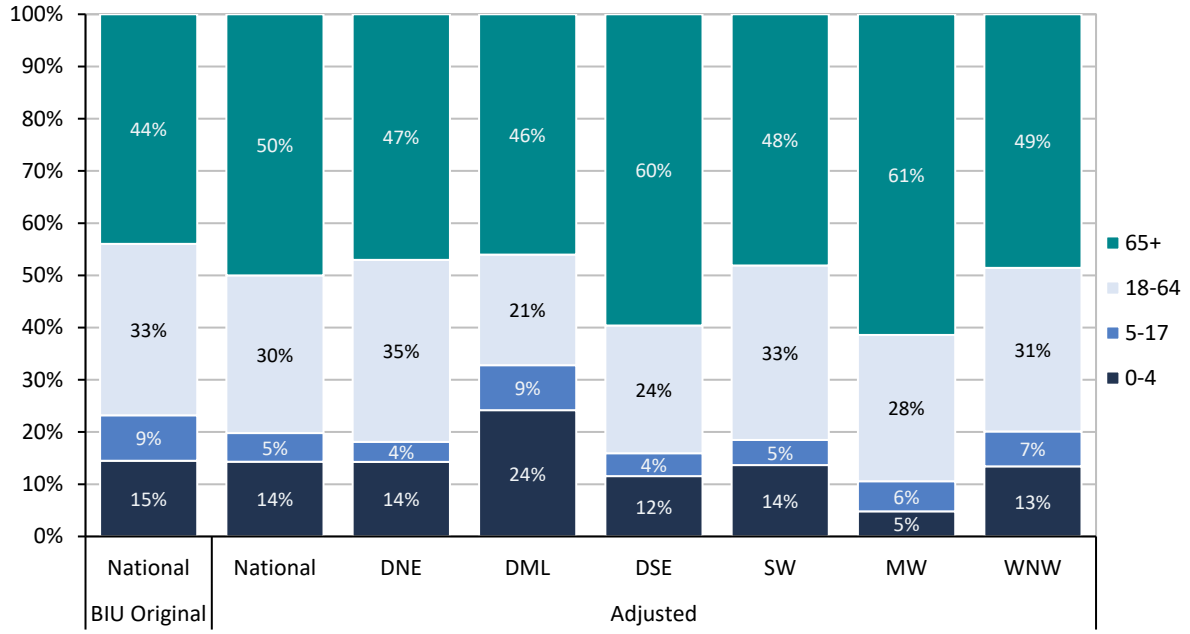
	National	DNE	DML	DSE	SW	MW	WNW
WTE (adjusted)	62	13	12	8	10	5	14
WTE per 50,000 population	0.6	0.6	0.5	0.4	0.6	0.6	0.9

Sources: See section 3.3 for an overview of data sources; authors' calculations.

4.2.2 Dietetics

Figure 4.3 presents the original and adjusted age profiles for dietetics. For this service there are no survey data available to broaden the age categories. The national and regional adjusted profiles reflect the proxy complexity adjustment provided by services. Comparing the national profile pre- and post-adjustment, we observe the impact of the higher adjustment applied to those aged 65+ years. Looking at the regional distribution, comparing DML and MW we can see the differential in service provision across the country. In DML, the proportion of services related to children aged 0–4 years is the highest of any region in the country at 24 per cent, while the proportion of services related to children in this age cohort is just 5 per cent in the MW.

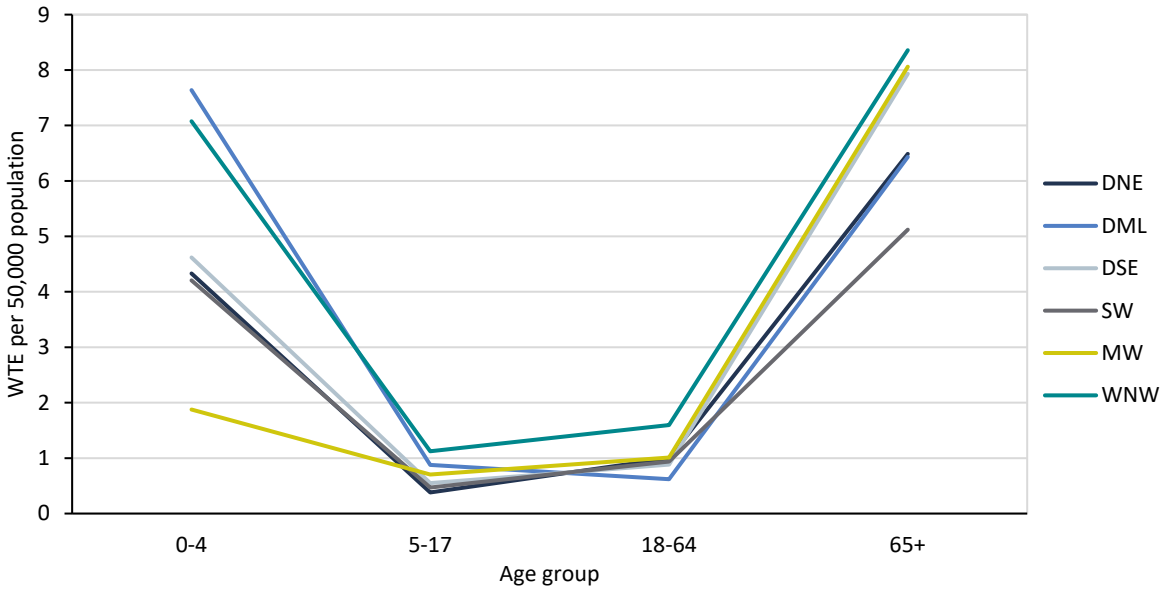
FIGURE 4.3 Dietetics – estimated service age profile by HSE Health Region, 2022



Sources: See section 3.3 for an overview of data sources; authors' calculations.

To estimate WTEs by age group, the dietitian WTEs in each HSE Health Region are distributed based on the estimated age profile and adjusted for population size (Figure 4.4). In 2022, there were 215 dietitian WTEs nationally, equating to 2.1 WTEs per 50,000 population. This varied across regions, ranging from 1.7 in SW to 3.0 in WNW. The highest WTE per capita varied by HSE Health Region between 0–4 years and 65 years and over. In 2022, there were no dietitian assistants in the HSE.

FIGURE 4.4 Dietitians – WTE per 50,000 population by HSE Health Region, 2022



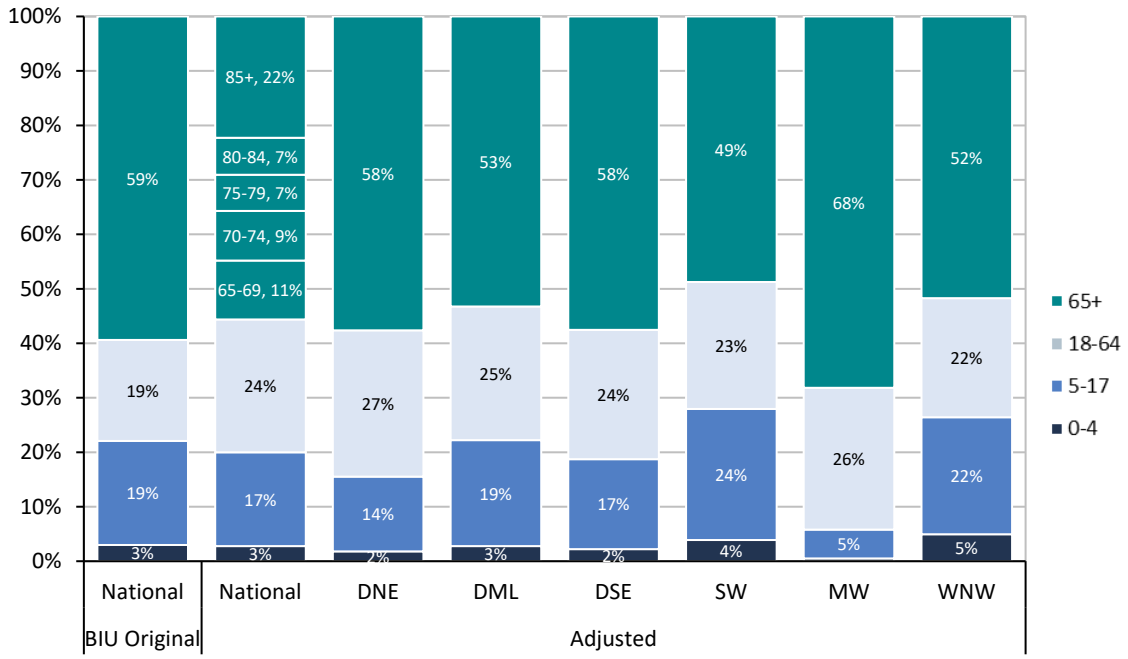
	National	DNE	DML	DSE	SW	MW	WNW
WTE (adjusted)	215	43	40	43	26	18	46
WTE per 50,000 population	2.1	1.8	1.8	2.2	1.7	2.2	3.0

Sources: See section 3.3 for an overview of data sources; authors' calculations.

4.2.3 Occupational therapy

Figure 4.5 presents the original and adjusted age profiles for occupational therapy services. The activity is adjusted as per Table 4.1, and TILDA is used to estimate additional age categories in the 65+ years cohort. The national level TILDA adjustments are applied across all HSE Health Regions. The age profiles across regions shows variation in the patient cohorts seen. For example, in the SW, 49 per cent of services are provided to those aged 65 and over, compared to almost 70 per cent in the MW. In contrast, just 5 per cent of services are provided to children in the MW compared to 28 per cent in the SW.

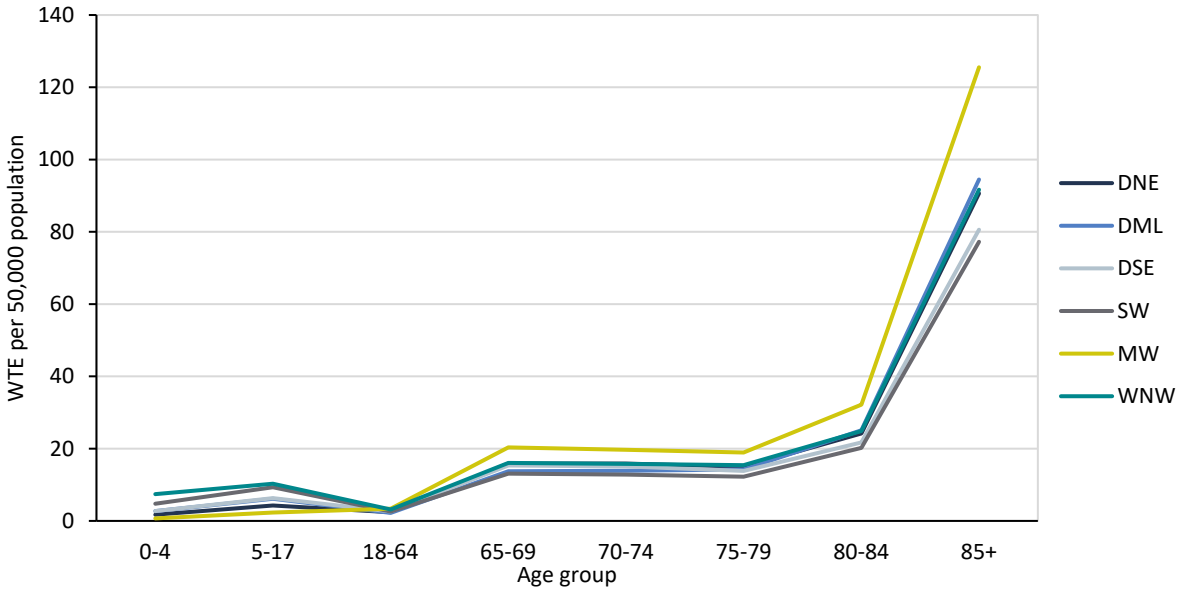
FIGURE 4.5 Occupational therapy – estimated service age profile by HSE Health Region, 2022



Note: The national survey-based adjustment for those aged 65+ is applied to all regions.
Source: See section 3.3 for an overview of data sources; authors' calculations.

To estimate WTEs by age group, the occupational therapist WTEs in each HSE Health Region are distributed based on the estimated age profile and adjusted for population size (Figure 4.6). In 2022, there were 686 occupational therapist WTEs nationally, equating to 6.6 WTEs per 50,000 population. This ratio varied across regions, from 5.7 in DNE and DML to 8.5 in WNW. The biggest concentration of WTEs, when adjusted for population, was in the 85 and over age group. In 2022, there were 26 occupational therapy assistants, equating to 0.2 WTE per 50,000 of the national population, ranging from 0.0 to 0.4 across regions.

FIGURE 4.6 Occupational therapists – WTE per 50,000 population by HSE Health Region, 2022



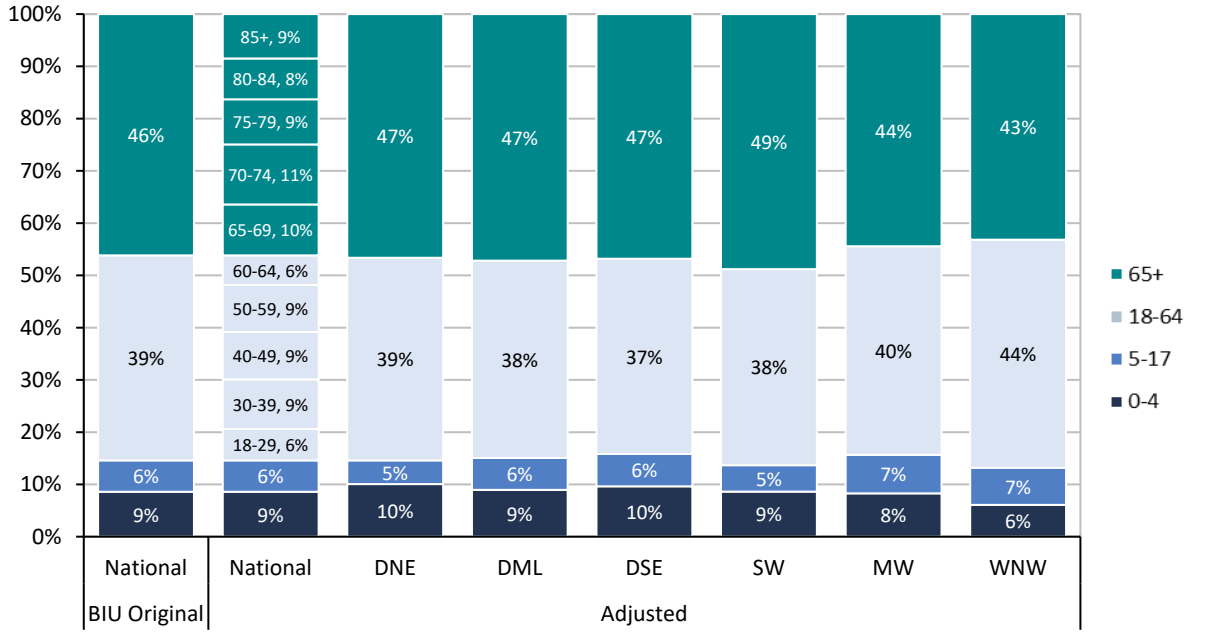
	National	DNE	DML	DSE	SW	MW	WNW
WTE (adjusted)	686	135	124	131	101	65	131
WTE per 50,000 population	6.6	5.7	5.7	6.7	6.8	7.8	8.5

Source: See section 3.3 for an overview of data sources; authors' calculations.

4.2.4 Physiotherapy

Figure 4.7 presents the original and adjusted age profiles for physiotherapy services. There was no proxy complexity adjustment required, but survey data were available to estimate additional age categories. Healthy Ireland is used to extend the age categories for the 18–64 years cohort and TILDA is used to estimate additional age categories in the 65+ years cohort. The national level survey adjustments are applied across all HSE Health Regions. The age profiles across regions show little variation in the service provided by age category.

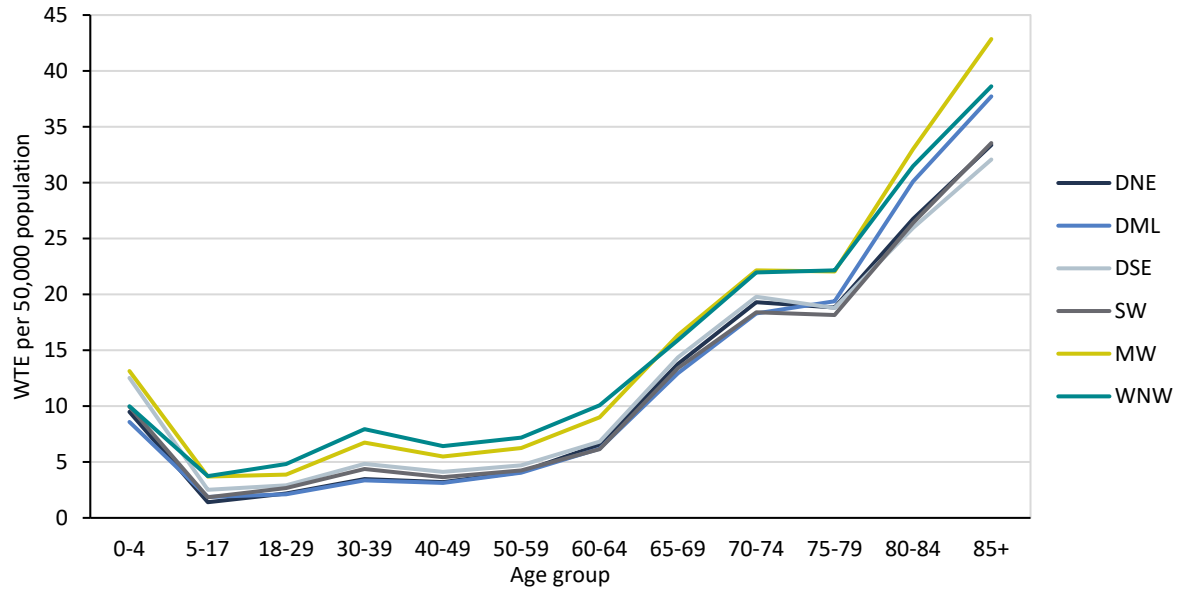
FIGURE 4.7 Physiotherapy – estimated service age profile by HSE Health Region, 2022



Note: The national survey-based adjustments for those aged 18–64 and 65+ years are applied to all regions.
Source: See section 3.3 for an overview of data sources; authors' calculations.

To estimate WTEs by age group, the physiotherapist WTEs in each HSE Health Region are distributed based on the estimated age profile and adjusted for population size (Figure 4.8). In 2022, there were 706 physiotherapist WTEs nationally, equating to 6.8 WTEs per 50,000 population. This ratio varied across regions, from 5.6 in DNE and DML to 9.4 in WNW. The biggest concentration of WTEs, when adjusted for population, was in the 80–84 age group. In 2022, there were 32 physiotherapy assistants, equating to 0.3 WTE per 50,000 of the national population, ranging from 0.1 to 0.9 regionally.

FIGURE 4.8 Physiotherapists – WTE per 50,000 population by HSE Health Region, 2022



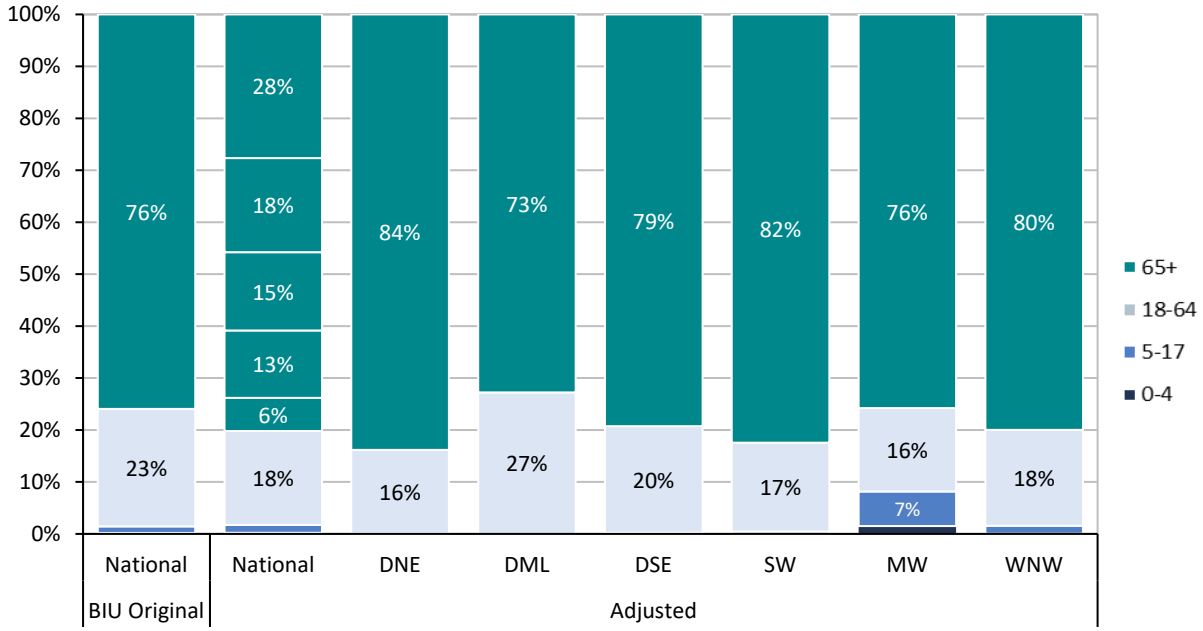
	National	DNE	DML	DSE	SW	MW	WNW
WTE (adjusted)	706	134	121	139	95	74	143
WTE per 50,000 population	6.8	5.6	5.6	7.1	6.4	8.9	9.4

Source: See section 3.3 for an overview of data sources; authors' calculations.

4.2.5 Podiatry

Figure 4.9 presents the original and adjusted age profiles for podiatry. The activity is adjusted as per Table 4.1, and TILDA is used to estimate additional age categories in the 65+ years cohort. The national level TILDA adjustments are applied across all HSE Health Regions. Comparing the national profile pre- and post-adjustment, we observe the higher adjustment applied to those aged 65+ years. Looking at the regional distribution, it is quite similar across areas except for DML and the MW. In DML, almost 30 per cent of service is provided to those aged 18–64 years compared to 18 per cent nationally. In MW, some services are provided to children, which is not the case in other regions.

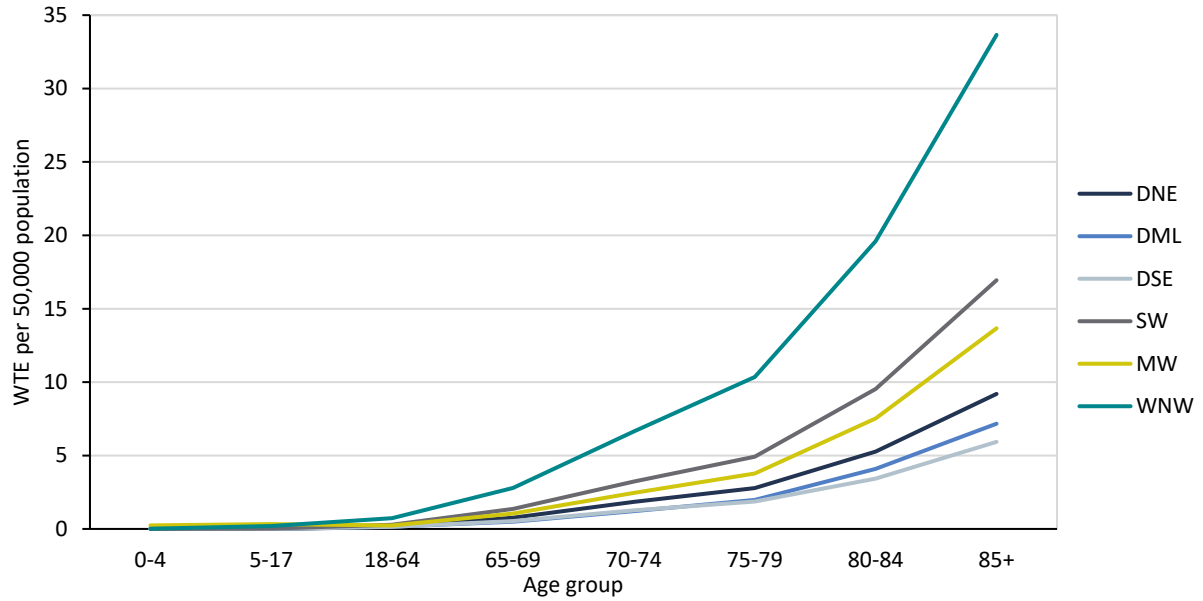
FIGURE 4.9 Podiatry – estimated service age profile by HSE Health Region, 2022



Source: See section 3.3 for an overview of data sources; authors' calculations.

To estimate WTEs by age group, the podiatry WTEs in each HSE Health Region are distributed based on the estimated age profile and adjusted for population size (Figure 4.10). In 2022, there were 86 podiatrist WTEs nationally, equating to 0.8 WTEs per 50,000 population. This ratio varied across regions, from 0.4 in DML and DSE to 2.4 in WNW. The biggest concentration of WTEs, when adjusted for population, was in the 65 and over age group. In 2022, there were no podiatry assistants in the HSE.

FIGURE 4.10 Podiatrists – WTE per 50,000 population by HSE Health Region, 2022



	National	DNE	DML	DSE	SW	MW	WNW
WTE (adjusted)	86	11	8	8	15	7	36
WTE per 50,000 population	0.8	0.5	0.4	0.4	1.0	0.9	2.4

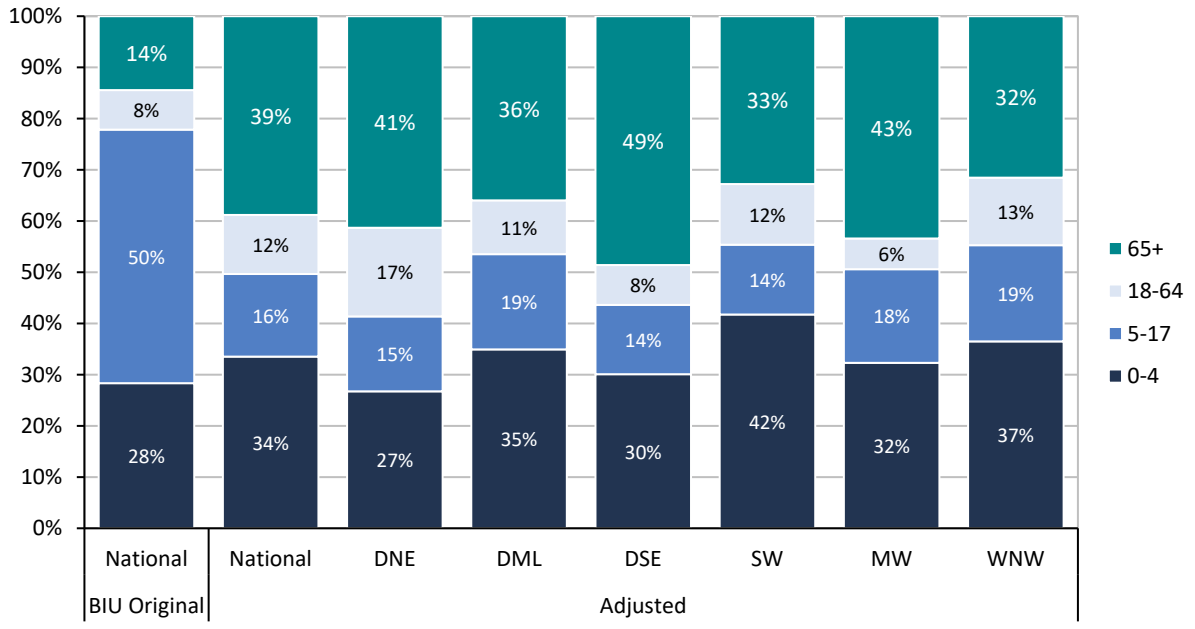
Source: See section 3.3 for an overview of data sources; authors' calculations.

4.2.6 Speech and language therapy

Figure 4.11 presents the original and adjusted age profiles for speech and language therapy. For this service there are no survey data available to broaden the age categories. The national and regional adjusted profiles reflect the adjustment provided by services, which in this case have a substantive impact on the age profile. The proportion of the service provided to 0–4-year-olds increases from 28 to 34 per cent and the proportion provided to those aged 5–17 years reduces from 50 per cent to 16 per cent. Of particular interest is the increase from 14 to 39 per cent in the oldest age cohort. The adjustments reflect the increased complexity of patients in particular age cohorts, as judged by the profession themselves.

There is some regional variation in service provision observed. For example, in the SW, one-third of services are provided to those aged 65+ compared to almost half in DSE. The proportion of service provided to young children also varies, with 27 per cent in DNE compared to 42 per cent in the SW.

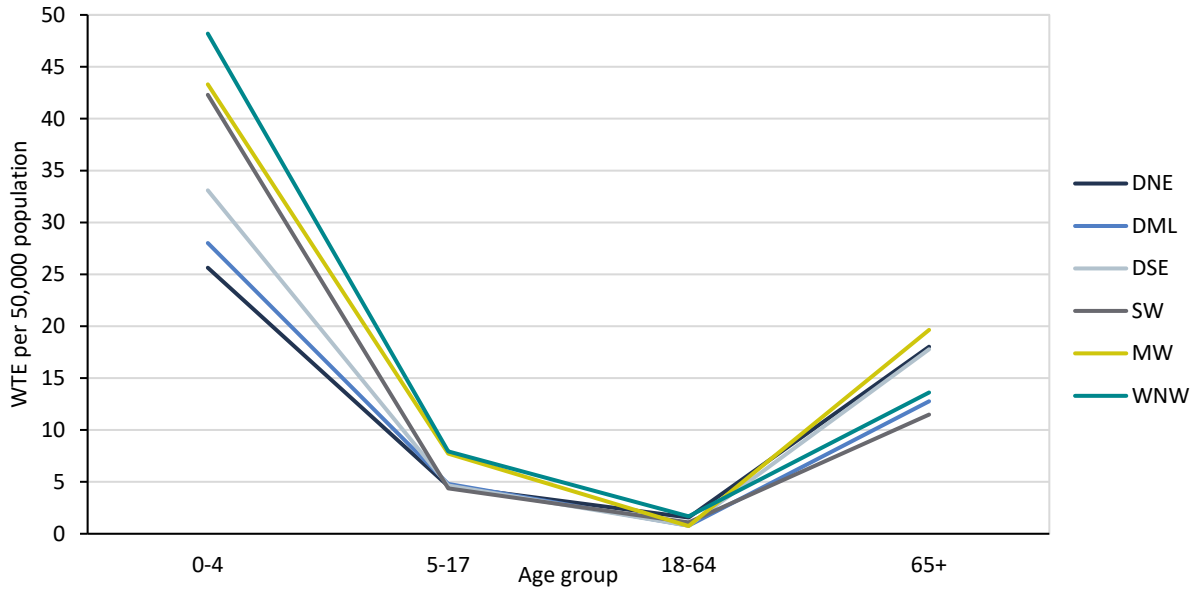
FIGURE 4.11 Speech and language therapy – estimated service age profile by HSE Health Region, 2022



Source: See section 3.3 for an overview of data sources; authors' calculations.

To estimate WTEs by age group, the WTEs in each HSE Health Region are distributed based on the estimated age profile and adjusted for population size (Figure 4.12). In 2022, there were 616 speech and language therapist WTEs nationally, equating to 5.9 WTEs per 50,000 population. This ratio varied across regions, from 4.7 in DML to 7.5 in MW and WNW. The biggest concentration of WTEs, when adjusted for population, was in the 0–4 years age group. In 2022, there were just 6 speech and language therapy assistants, equating to 0.1 WTE per 50,000 of the national population.

FIGURE 4.12 Speech and language therapists – WTE per 50,000 population by HSE Health Region, 2022



	National	DNE	DML	DSE	SW	MW	WNW
WTE (adjusted)	616	136	102	118	84	62	115
WTE per 50,000 population	5.9	5.7	4.7	6.0	5.6	7.5	7.5

Source: See section 3.3 for an overview of data sources; authors' calculations.

4.3 PUBLIC HEALTH AND COMMUNITY NURSING SERVICES

4.3.1 Public health and community nurses

For public health and community nursing, several metrics are reported to HSE BIU which have an age profile available. These unadjusted metrics were shown to the focus group, and the metric face-to-face appointments was selected as most representative of service provision.

What is notable in Figure 4.13 is the small proportion of activity related to children. This is because HSE BIU Primary Care nursing metrics do not include the five developmental assessments for pre-school-aged children, school hearing and vision screening, or the school immunisation programme. It was necessary to use supplementary data and professional expertise to estimate this activity. For the three developmental assessments for children aged up to 1 year, data separately reported to HSE BIU Primary Care are utilised. For older children, the nursing representatives advised that a 70 per cent uptake rate for the two developmental assessments was a reasonable estimate of the level of provision in 2022, somewhat higher than that used (50%) in Walsh et al. (2021). The school vision and hearing screening is estimated at two visits for 95 per cent of 5-year-olds, consistent with Walsh et al. (2021) and confirmed by the focus group. Development checks and school vision and hearing screenings are not included in the age profile estimation for the CRGNs. For the immunisation programme, we utilise uptake rate data from the HSE Health Protection Surveillance Centre (HSE HPSC, 2023a; b).

In addition to the activity estimates for children, proxy complexity adjustments are also applied to the visits (Walsh et al., 2021). For example, subsequent face-to-face visits receive a lower adjustment value than an initial visit to reflect the higher resource requirement of a first visit. This includes a longer visit and more indirect contact related to a first-time patient, such as phone calls to arrange additional services. Table 4.2 summarises the additional activity estimates methods, and the adjustments applied which were all approved by the focus group. Like other services, TILDA survey data are also used to estimate additional age categories for those aged 65 and over.

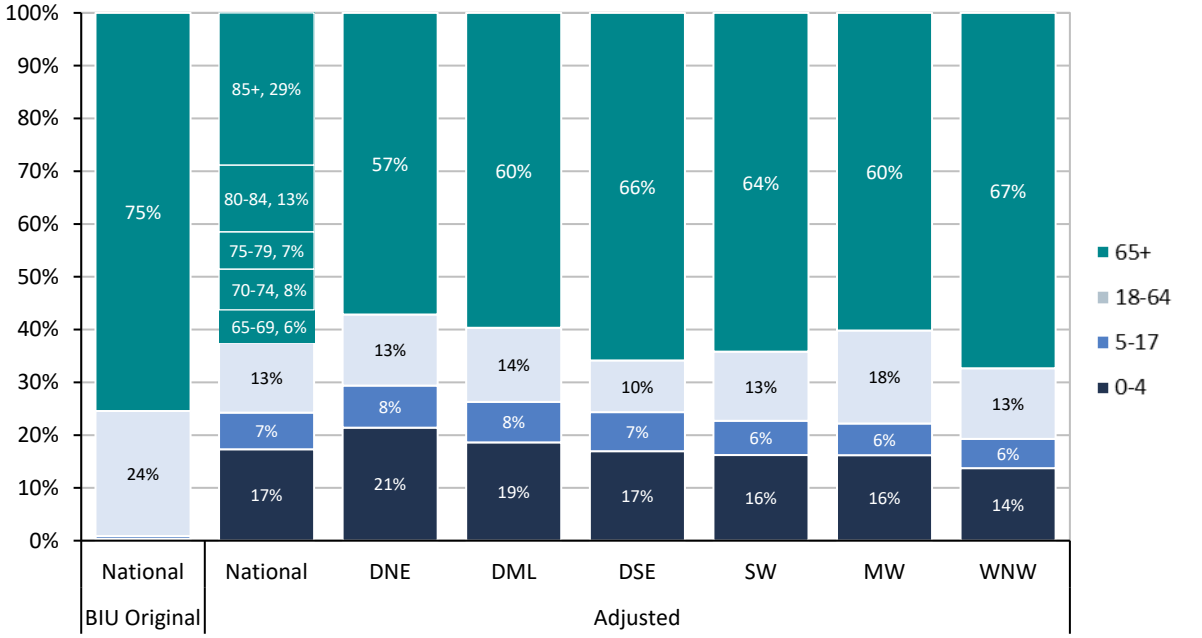
TABLE 4.2 Public health and community nurses – utilisation metrics, additional data and age weighting

Adjustments	0–4 years[a]	5–17	18–64	65+
First visit adjustment	2	2	1	1.5
Subsequent visit adjustment	1.5	1.5	0.5	65–79: 0.67 80+: 1
Additional activity adjustment	Development checks[b] –actual figures for newborn (1.5), 3-month (1) and <= 12 months (1) assessments as reported to HSE BIU for 2022 are included. For the two additional development visits the HSE previously advised that 70% of the population in those age groups would be a reasonable estimate (1).	School vision and hearing screening – no data available so figures are estimated. Estimated at two visits for 95% of the population aged 5 years. Immunisation contacts – no data available so figures are estimated. One contact for 5-year-olds based on the immunisation uptake rate in 2021/2022 which is applied to the 2022 population. Two contacts for older children based on published 2021/2022 uptake figures.[c] All adjusted to 0.30.	–	–
Additional age categories	–	–	–	TILDA

Notes: a Additional activity adjustments for 0–4 years in parentheses.
b Development checks and school vision and hearing screening are not included in the age profile calculation for the CRGNs.
c Uptake figures from HSE HPSC (2023a).
Source: See section 3.3 for an overview of data sources.

Figure 4.13 presents the original and adjusted age profiles for public health and community nursing. The national and regional adjusted profiles reflect the inclusion of the additional child activity and the proxy complexity adjustments approved by the service representatives at the focus group, which in this case have a substantive impact on the age profile. Across all regions most services are provided to those aged 65+ years, at a national level over one-quarter are provided to those aged 85+ years. The quantum of services provided to young children varies by HSE Health Region from 14 per cent in WNW to 21 per cent in DNE. These profiles are applied to all nursing groups except for CRGNs for whom the development checks are excluded to better reflect the focus of these grades on an older patient cohort.

FIGURE 4.13 Public health and community nurses – estimated service age profile by HSE Health Region, 2022

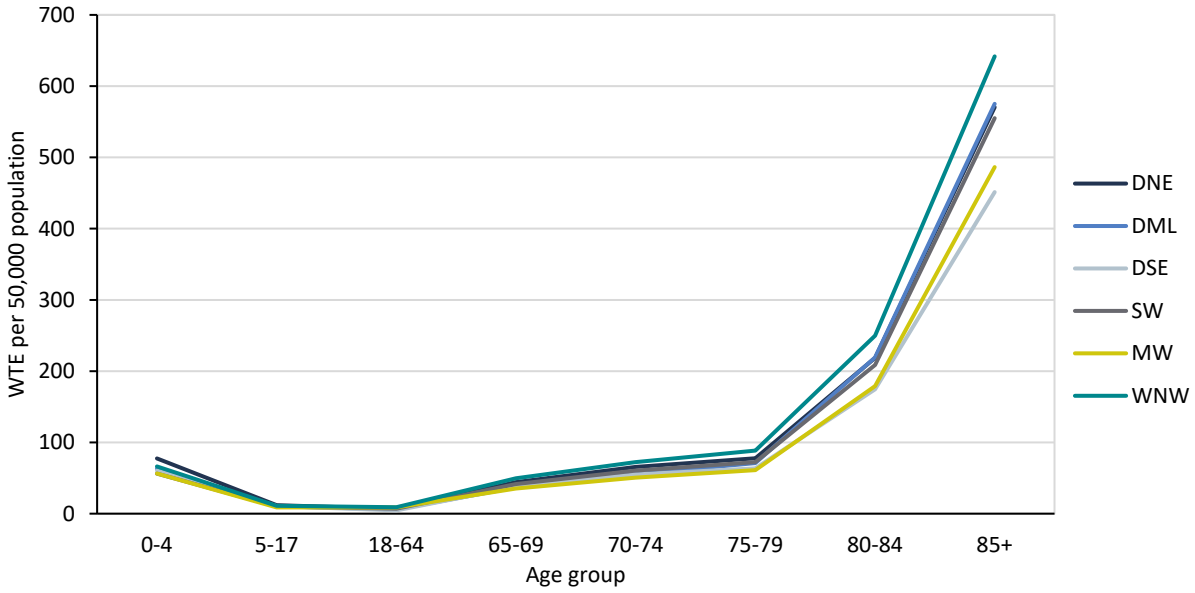


Note: The national survey-based adjustment for those aged 65+ is applied to all regions.
Represents the age profile used for all nurses except for CRGNs for whom development checks and school vision and hearing screening are not included in the age profile estimation.

Sources: See section 3.3 for an overview of data sources; authors' calculations.

To estimate WTEs by age group, the public health and community nurse WTEs in each region are distributed based on the estimated age profile and adjusted for population size (Figure 4.14). In 2022, there were 3,010 public health and community nurse WTEs nationally, equating to 29.0 WTEs per 50,000 population. This ratio varied across HSE Health Regions, from 25.3 in DML to 37.9 in WNW. The biggest concentration of WTEs, when adjusted for population, was in the 85+ years age group.

FIGURE 4.14 Public health and community nurses – WTE per 50,000 population by HSE Health Region, 2022



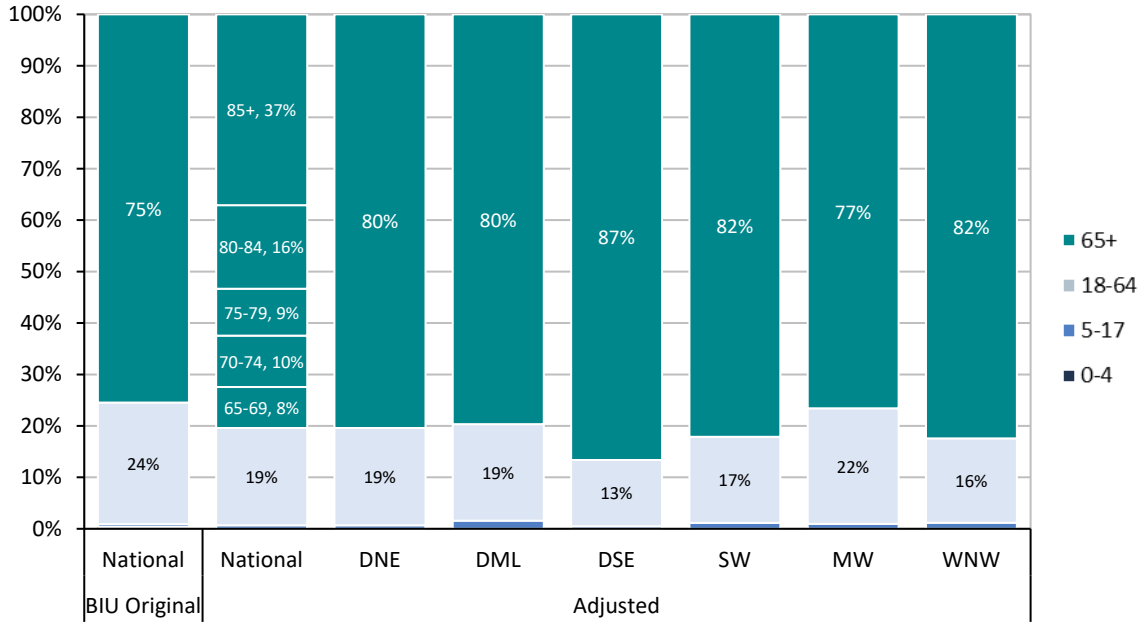
	National	DNE	DML	DSE	SW	MW	WNW
WTE (adjusted)	3,010	688	549	519	443	231	579
WTE per 50,000 population	29.0	28.8	25.3	26.5	29.7	27.8	37.9

Source: See section 3.3 for an overview of data sources; authors' calculations.

4.3.2 Health care assistants

Activity data for HCAs are included in the nursing data and cannot be extracted. For this service we assume that the age profile reflects that of the unadjusted service with the further exclusion of children aged 0–4 years (Figure 4.15). This assumes a focus on an older patient cohort as advised by service leads.

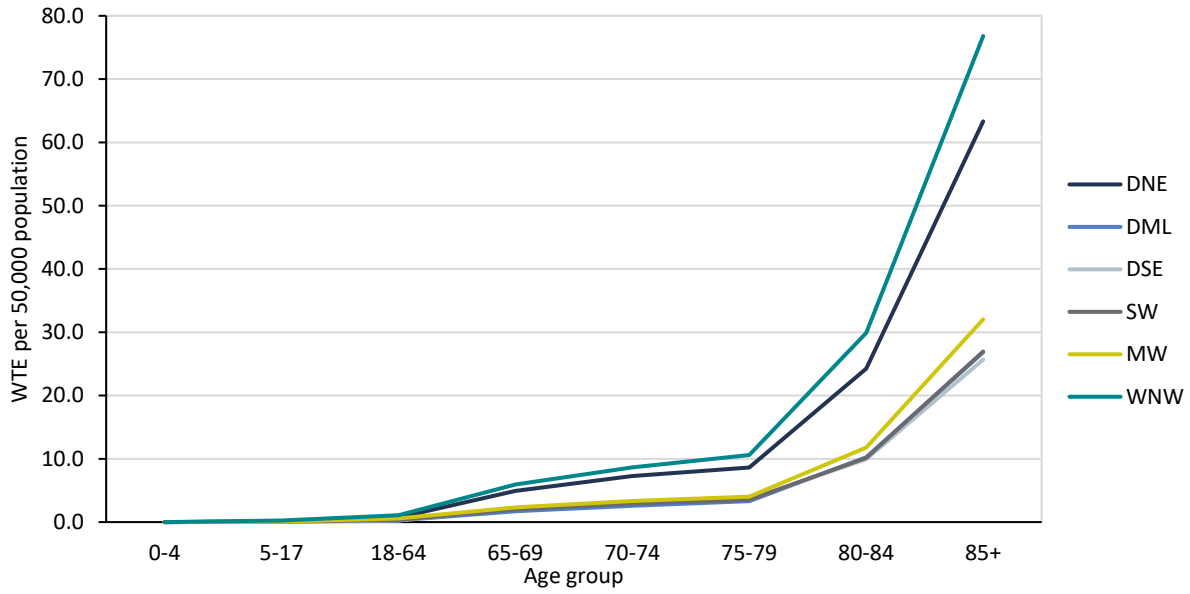
FIGURE 4.15 Health care assistants – estimated service age profile by HSE Health Region, 2022



Note: The national survey-based adjustment for those aged 65+ is applied to all regions.
Sources: See section 3.3 for an overview of data sources; authors' calculations.

To estimate WTEs by age group, the HCA WTEs in each HSE Health Region are distributed based on the estimated age profile and adjusted for population size (Figure 4.16). In 2022, there were 193 HCA WTEs nationally, equating to 1.9 WTEs per 50,000 population. This ratio varied across HSE Health Regions, from 0.9 in DML to 3.9 in WNW. The biggest concentration of WTEs, when adjusted for population, was in the 85+ years age group.

FIGURE 4.16 Health care assistants – WTE per 50,000 population by HSE Health Region, 2022



	National	DNE	DML	DSE	SW	MW	WNW
WTE (adjusted)	193	59	20	24	17	13	59
WTE per 50,000 population	1.9	2.5	0.9	1.2	1.2	1.5	3.9

Source: See section 3.3 for an overview of data sources; authors' calculations.

4.4 SUMMARY

This chapter presented the results of our age-specific WTE estimates which are the foundation for the WTE projections presented in Chapter 5. The service age profiles use available activity metrics and are adjusted to reflect the entirety of the workload based on the input of the professions through focus groups. Total region level WTEs are distributed by age and combined with population to get age-specific WTE. For most services there is notable variation in WTE per capita population across regions. For all services considered, the highest WTE per capita were in the WNW; it is beyond the scope of this analysis to unpick why this is the case but some possible reasons for regional variation are outlined in section 4.1. Most services are concentrated in the older age groups.

CHAPTER 5

Findings | Workforce projections, 2022–2040

5.1 INTRODUCTION

This chapter presents findings for projected HSE primary and community care workforce to 2040.[31] Base-year and projected WTE requirements are presented both nationally and regionally.[32] For HSE Health Regions, aggregate findings are presented (e.g. physiotherapists) in this chapter; projections at a more disaggregated level are presented in Appendix B e.g. advanced practitioners, clinical specialists). In addition to base year and projected WTE we present average annual growth from 2022 to 2040. The average annual growth rates are reported to provide a guide to the smoothed level of WTE growth required to meet 2040 requirements.

In sections 5.2 and 5.3, we project workforce requirements under five main scenarios (see Table 3.8): three service demand (SD) scenarios and two workforce-mix (WM) scenarios. The SD scenarios consider projected workforce requirements maintaining baseline age profiles and adjusting for three population projections (central, low and high). The WM scenarios build on the SD central scenario and additionally model the impact of how changes to grade-mix (GM) (Table 3.5) and skill-mix (SM) (Table 3.7) could impact on the workforce mix used to deliver services. In section 5.5, we decompose projected growth into its constituent drivers.

Finally, in section 5.6, results from the additional benchmarking (BM) scenario are presented. The BM scenario benchmarks each region to the region with the highest overall ratio of staff to population. In 2022, for all services this was the WNW region. This is not a clinical benchmarking exercise; it simply illustrates the level of staffing that would be required to increase per capita provision in all regions to that in the region with the highest ratio.

It is important to reiterate that the results of the projections need to be interpreted in the context of the top-down methodological approach undertaken. Importantly, it has not been possible to calculate base year activity rates, workforce-to-activity ratios, or formally incorporate unmet demand (waiting list) data into the projections.[33] In addition, similar to other service areas there are no available safe staffing standards or best practice targets to inform what the appropriate level of staffing should have been in the base year.

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31 Where the projected additional WTE required are less than 10, an additional decimal place is presented to distinguish between scenarios. Where base-year WTE are less than 5 we do not present average annual growth requirements.

32 The projections are based on 2022 WTE adjusted to account for the contribution of overtime and agency.

33 See Chapter 6 for an analysis of the available waiting list data.

5.2 HEALTH AND SOCIAL CARE PROFESSIONAL SERVICES

The grade of advanced practitioner (AP) did not exist in 2022 for any of the HSCPs; while audiology was the only HSCP for which there were no clinical specialists in place in 2022. The introduction of these grades is modelled as part of the skill-mix scenario (WM SM).

5.2.1 Audiology

Table 5.1 presents the baseline and projected WTE requirements for audiology services by grade group. Assuming current grade- and skill-mix ratios remain unchanged (SD scenarios), we project a requirement for an additional 32 to 34 audiologist WTEs, and 5 to 6 audiology assistant WTEs. This corresponds to an average annual growth of between 2.2 and 2.5 per cent over the projection period.

The grade-mix assumption modelled in the WM GM scenario assumes a therapist to assistant ratio of 90:10. This reduces the projected additional audiologist WTE and increases audiology assistant requirements by 0.6 WTE. The final scenario (WM SM) builds on WM GM and introduces a skill-mix assumption on a phased basis, with a linear increase from 2023 to reach 5 per cent of total WTE at clinical specialist (CS) level by 2029. For APs, we model a linear increase from 2025 to reach 2 per cent by 2029. These proportions are further increased linearly to 7 and 4 per cent respectively by 2040, resulting in additional requirements of 6.5 WTE for CS and 3.7 WTE for AP.

TABLE 5.1 Audiology – WTE projections by scenario, 2022–2040

	2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
		Service demand			Workforce mix		Service demand			Workforce mix[b]	
	WTE[a]	Central	Low Pop	High Pop	GM	SM	Central	Low Pop	High Pop	GM	SM
Advanced practitioners	0	-	-	-	-	3.7	-	-	-	-	-
Clinical specialists	0	-	-	-	-	6.5	-	-	-	-	-
Other	62	32	30	34	32	21	2.4	2.2	2.5	2.3	1.7
Audiologists	**62**	**32**	**30**	**34**	**32**	**32**	**2.4**	**2.2**	**2.5**	**2.3**	**2.3**
Audiology assistants	**10**	**5.2**	**4.9**	**5.5**	**5.8**	**5.8**	**2.3**	**2.2**	**2.4**	**2.5**	**2.5**

Notes: GM: grade-mix, SM: skill-mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results by grade.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b The grades of AP and CS did not exist in 2022, and their introduction is modelled as part of the skill-mix scenario.
Source: See section 3.3 for an overview of data sources; authors' calculations.

Table 5.2 presents base year and projected audiologist WTE disaggregated by HSE Health Region. In 2022, WNW recorded the largest number of WTEs at 14. In contrast, MW recorded the fewest at 5. Variation in projected additional WTE growth across HSE Health Regions is driven by variation in patterns of underlying population change. In the SD central scenario, we see the highest projected average annual growth in DML at 2.5 per cent compared to 2.1 per cent in the SW. The relative impact of the WM GM assumption on projected WTE requirements is influenced by differences in base-year regional mix of profession to assistant. The WM GM scenario has limited impact for this service, as the target mix of 90:10 is achieved in the base year for five of the six regions

(see Table 3.4). This results in no differences in the projected WTEs compared to the SD central scenario, except for DML.

TABLE 5.2 Audiologists – WTE projections by scenario and HSE Health Region, 2022–2040

	2022	Projected additional WTE – 2040				Average annual growth 2022–2040 (%)			
		Service demand			WM	Service demand			WM
	WTE[a]	Central	Low Pop	High Pop		Central	Low Pop	High Pop	
DNE	13	6.9	6.4	7.3	6.9	2.4	2.2	2.5	2.4
DML	12	6.5	6.1	6.9	5.9	2.5	2.3	2.6	2.3
DSE	8	4.4	4.2	4.6	4.4	2.4	2.3	2.5	2.4
SW	10	4.3	4.0	4.6	4.3	2.1	2.0	2.2	2.1
MW	5	2.5	2.3	2.6	2.5	2.3	2.2	2.5	2.3
WNW	14	7.6	7.2	7.9	7.6	2.4	2.3	2.5	2.4
National	**62**	**32**	**30**	**34**	**32**	**2.4**	**2.2**	**2.5**	**2.3**

Notes: WM: workforce mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results for HSCAs.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
Source: See section 3.3 for an overview of data sources, authors' calculations.

Audiology is the only service for which Irish *high-quality service* WTE estimates currently exist, albeit that they incorporate the totality (community- and hospital-based) of public services (HSE, 2011). The number of audiologists proposed in the 2011 HSE National Audiology Review was the equivalent of 1 audiologist WTE per 34,000 population. Applying this ratio to the 2022 population and maintaining the current distribution of posts between community- and hospital-based services suggests a requirement for approximately 88 audiologist WTEs in HSE primary and community care to meet these standards. The actual number of audiologist WTEs in 2022 in HSE primary and community care was 57 (62 adjusted for agency/overtime). Projecting forward to 2040 using the central population projection indicates a requirement for around 104 audiologist WTEs, which is slightly higher than the 94 projected in the Hippocrates SD central scenario.

5.2.2 Dietetics

Table 5.3 presents the baseline and projected WTE requirements for dietetic services by grade group. Assuming current grade- and skill-mix ratios remain in place (SD scenarios), we project a requirement for between an additional 77 and 90 dietitian WTE. This represents an average annual growth of between 1.7 and 2.0 per cent over the period.

The grade-mix assumption modelled in the WM GM scenario assumes a dietitian to assistant ratio of 95:5. As there were no dietitian assistants in 2022, the grade is introduced in the WM GM scenario and projects WTE requirements of 14 WTE and a commensurate reduction in requirements for dietitian WTE to 70 WTE. The additional skill-mix assumption modelled in WM SM, take WM GM as a starting point and assume 5 per cent of total WTE at CS level and 2 per cent at AP level by 2029, increasing to

7 per cent and 4 per cent respectively by 2040.[34] This represents an increase in requirements of 16 WTEs for CS and 11 WTEs for AP.

TABLE 5.3 Dietetics – WTE projections by scenario, 2022–2040

	2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
		Service demand			Workforce mix		Service demand			Workforce mix[b]	
	WTE[a]	Central	Low Pop	High Pop	GM	SM	Central	Low Pop	High Pop	GM	SM
Advanced practitioners	0	-	-	-	-	11	-	-	-	-	-
Clinical specialists	4	1.5	1.4	1.6	1.5	16	1.8	1.7	1.9	1.8	-
Other	211	82	76	88	68	43	1.8	1.7	2.0	1.6	1.0
Dietitians	**215**	**84**	**77**	**90**	**70**	**70**	**1.8**	**1.7**	**2.0**	**1.6**	**1.6**
Dietetics assistants	**-**	**-**	**-**	**-**	**14**	**14**	**-**	**-**	**-**	**-**	**-**

Notes: GM: grade-mix, SM: skill-mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results by grade.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b The grade of AP did not exist in 2022, its introduction is modelled as part of the skill-mix scenario.
Source: See section 3.3 for an overview of data sources, authors' calculations.

Table 5.4 presents base year and projected dietitian WTEs disaggregated by HSE Health Region. In 2022, WNW recorded the largest number of WTEs at 46. In contrast, MW recorded the fewest at 18. In the SD central scenario, we see the highest projected average annual growth requirements in DNE, DML and DSE at 2.0 per cent compared to 1.5 per cent in WNW.

As the assistant grade did not exist for dietetics in 2022, the WM GM scenario impacts all regions. Average annual growth in WTE requirements for dietitians reduce by about 0.3 percentage points for all regions compared to the SD central scenario.

TABLE 5.4 Dietetics – WTE projections by scenario and HSE Health Region, 2022–2040

	2022	Projected additional WTE – 2040				Average annual growth 2022–2040 (%)			
		Service demand			WM	Service demand			WM
	WTE[a]	Central	Low Pop	High Pop		Central	Low Pop	High Pop	
DNE	43	18	17	20	15	2.0	1.8	2.1	1.7
DML	40	17	15	18	14	2.0	1.8	2.1	1.7
DSE	43	19	18	20	16	2.0	1.9	2.1	1.8
SW	26	9.2	8.4	9.9	7.5	1.7	1.6	1.8	1.4
MW	18	7.1	6.7	7.5	6.0	1.9	1.8	2.0	1.6
WNW	46	14	13	15	11	1.5	1.4	1.6	1.2
National	**215**	**84**	**77**	**90**	**70**	**1.8**	**1.7**	**2.0**	**1.6**

Notes: WM: workforce mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results for HSCAs.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
Source: See section 3.3 for an overview of data sources, authors' calculations.

[34] All increases are modelled linearly with 2023 as the starting point for CS and 2025 as the starting point for AP.

5.2.3 Occupational therapy

Table 5.5 presents the baseline and projected WTE requirements for occupational therapy services by grade group. Assuming current grade- and skill-mix ratios remain in place (SD scenarios), we project a requirement for between an additional 348 and 383 occupational therapist WTEs, and 13 to 15 occupational therapy assistant WTEs. This represents an average annual growth over the period of between 2.3 and 2.5 per cent.

The grade-mix assumption modelled in the WM GM scenario assumes an occupational therapist to assistant ratio of 90:10. This reduces the projected additional occupational therapist WTEs and increases occupational therapy assistant WTEs requirements by 65. The additional skill-mix assumption modelled in the final scenario (WM SM) takes WM GM as a starting point and assumes 5 per cent of total WTE at CS level and 2 per cent at AP level by 2029, increasing to 7 per cent and 4 per cent respectively by 2040.[35] This represents an increase in requirements of 68 WTEs for CS and 39 WTEs for AP.

TABLE 5.5 Occupational therapy – WTE projections by scenario, 2022–2040

	2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
		Service demand			Workforce mix		Service demand			Workforce mix[b]	
	WTE[a]	Central	Low pop	High pop	Grade mix	Skill mix	Central	Low pop	High pop	Grade mix	Skill mix
Advanced practitioners	0	-	-	-	-	39	-	-	-	-	-
Clinical specialists	1	0.5	0.4	0.5	0.5	68	2.0	1.9	2.1	1.9	-.
Other	685	365	348	382	300	193	2.4	2.3	2.5	2.0	1.4
Occupational therapists	**686**	**365**	**348**	**383**	**300**	**300**	**2.4**	**2.3**	**2.5**	**2.0**	**2.0**
Occupational therapy assistants	**26**	**14**	**13**	**15**	**79**	**79**	**2.4**	**2.3**	**2.5**	**8.1**	**8.1**

Notes: GM: grade-mix, SM: skill-mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results by grade.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b The grade of AP did not exist in 2022, its introduction is modelled as part of the skill-mix scenario.
Source: See section 3.3 for an overview of data sources, authors' calculations.

Table 5.6 presents base year and projected occupational therapist WTEs disaggregated by HSE Health Region. In 2022, DNE recorded the largest number of WTEs at 135. In contrast, MW recorded the fewest, at 65. In the SD central scenario, we see the highest projected average annual growth in MW at 2.9 per cent compared to the lowest at 2.0 per cent in WNW.

The WM GM scenario has varying impact across the regions for this service, as the target mix of 90:10 was not achieved in any region in the base year (see Table 3.4). Average annual growth in WTE requirements for occupational therapist WTEs reduce by between about 0.2 and 0.5 percentage points compared to the SD central scenario.

35 All increases are modelled linearly with 2023 as the starting point for CS and 2025 as the starting point for AP.

TABLE 5.6 Occupational therapists – WTE projections by scenario and HSE Health Region, 2022–2040

	2022	Projected additional WTE – 2040				Average annual growth 2022–2040 (%)			
		Service demand			WM	Service demand			WM
	WTE[a]	Central	Low pop	High pop		Central	Low pop	High pop	
DNE	135	80	76	84	69	2.6	2.5	2.7	2.3
DML	124	73	69	76	67	2.6	2.5	2.7	2.4
DSE	131	69	66	72	52	2.4	2.3	2.5	1.9
SW	101	46	43	48	33	2.1	2.0	2.2	1.6
MW	65	43	42	44	34	2.9	2.8	2.9	2.4
WNW	131	55	52	58	46	2.0	1.9	2.1	1.7
National	**686**	**365**	**348**	**383**	**300**	**2.4**	**2.3**	**2.5**	**2.0**

Notes: WM: workforce mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results for HSCAs.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
Source: See section 3.3 for an overview of data sources, authors' calculations.

5.2.4 Physiotherapy

Table 5.7 presents the baseline and projected WTE requirements for physiotherapy services by grade group. Assuming current grade- and skill-mix ratios remain in place (SD scenarios), we project a requirement for between an additional 273 and 315 physiotherapist WTEs, and 12 and 14 physiotherapy assistant WTEs. This represents an average annual growth of between 1.8 and 2.1 per cent over the period.

The grade-mix assumption modelled in the WM GM scenario assumes a therapist to assistant ratio of 90:10. This reduces the projected additional physiotherapist WTEs and increases physiotherapy assistant WTE requirements by 52, to 242 and 65 WTEs respectively. The additional skill-mix assumption modelled in the final scenario (WM SM) takes WM GM as a starting point and assumes 5 per cent of total WTE at CS level and 2 per cent at AP level by 2029, increasing to 7 per cent and 4 per cent respectively by 2040.[36] This represents an increase in requirements of 48 WTEs for CS and 38 WTEs for AP.

TABLE 5.7 Physiotherapy – WTE projections by scenario, 2022–2040

	2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
		Service demand			Workforce mix		Service demand			Workforce mix[b]	
	WTE[a]	Central	Low pop	High pop	GM	SM	Central	Low pop	High pop	GM	SM
Advanced practitioners	0	-	-	-	-	38	-	-	-	-	-
Clinical specialists	18	7.6	7.0	8.1	7.6	48	2.0	1.9	2.1	2.0	7.5
Other	688	286	266	307	234	155	2.0	1.8	2.1	1.6	1.1
Physiotherapists	**706**	**294**	**273**	**315**	**242**	**242**	**2.0**	**1.8**	**2.1**	**1.6**	**1.6**
Physiotherapy assistants	**32**	**13**	**12**	**14**	**65**	**65**	**1.9**	**1.8**	**2.0**	**6.3**	**6.3**

Notes: GM: grade-mix, SM: skill-mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results by grade.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b The grade of AP did not exist in 2022, its introduction is modelled as part of the skill-mix scenario.
Source: See section 3.3 for an overview of data sources, authors' calculations.

36 All increases are modelled linearly with 2023 as the starting point for CS and 2025 as the starting point for AP.

Table 5.6 presents base year and projected physiotherapist WTEs disaggregated by HSE Health Region. In 2022, WNW recorded the largest number of WTEs at 143. In contrast, MW recorded the fewest at 74. In the SD central scenario, we see the highest projected average annual growth in DML at 2.3 per cent compared to 1.6 per cent in WNW.

The WM GM scenario has varying impact across the regions for this service, as the target mix of 90:10 was not achieved in any region in the base year (see Table 3.4). Average annual growth in WTE requirements for physiotherapist WTEs decreases by between 0 and 0.5 percentage points compared to the SD central scenario.

TABLE 5.8 Physiotherapists – WTE projections by scenario and HSE Health Region, 2022–2040

	2022	Projected additional WTE – 2040				Average annual growth 2022–2040 (%)			
		Service demand			WM	Service demand			WM
	WTE[a]	Central	Low pop	High pop		Central	Low pop	High pop	
DNE	134	63	58	68	53	2.2	2.0	2.3	1.9
DML	121	61	57	65	54	2.3	2.2	2.4	2.1
DSE	139	56	52	60	40	1.9	1.8	2.0	1.4
SW	95	40	37	42	28	2.0	1.9	2.1	1.4
MW	74	28	25	30	21	1.8	1.7	1.9	1.4
WNW	143	47	43	51	46	1.6	1.5	1.7	1.6
National	**706**	**294**	**273**	**315**	**242**	**2.0**	**1.8**	**2.1**	**1.6**

Notes: WM: workforce mix; BM: benchmarking. Figures may be subject to rounding. See Appendix B for HSE Health Region level results for HSCAs.

a 2022 WTE adjusted to account for the contribution of overtime and agency.

Source: See section 3.3 for an overview of data sources, authors' calculations.

5.2.5 Podiatry

Table 5.9 presents the baseline and projected WTE requirements for podiatry services by grade group. Assuming current grade- and skill-mix ratios remain in place (SD scenarios), we project a requirement for between an additional 63 and 66 podiatrist WTEs. This represents an average annual growth of between 3.1 and 3.2 per cent over the period.

The grade-mix assumption modelled in the WM GM scenario assumes a podiatrist to assistant ratio of 95:5. As there were no podiatry assistants in 2022, the grade is introduced in the WM GM scenario which projects WTE requirements of 6.6, together with a commensurate reduction in additional WTE requirements for podiatrists to 58. The additional skill-mix assumption modelled in WM SM, takes WM GM as a starting point and assumes 5 per cent of total WTE at CS level and 2 per cent at AP level by 2029, increasing to 7 per cent and 4 per cent respectively by 2040.[37] This represents an increase in requirements of 8.5 WTEs for CS and 6 WTEs for AP.

37 All increases are modelled linearly with 2023 as the starting point for CS and 2025 as the starting point for AP.

TABLE 5.9 Podiatry – WTE projections by scenario, 2022–2040

	2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
		Service demand			Workforce mix		Service demand			Workforce mix[b]	
	WTE[a]	Central	Low pop	High pop	GM	SM	Central	Low pop	High pop	GM	SM
Advanced practitioners	0	-	-	-	-	5.7	-	-	-	-	-
Clinical specialists	10	7.6	7.4	7.7	7.5	8.5	3.2	3.1	3.2	3.1	3.5
Other	75	57	55	58	50	44	3.2	3.1	3.2	2.9	2.6
Podiatrists	**86**	**64**	**63**	**66**	**58**	**58**	**3.2**	**3.1**	**3.2**	**2.9**	**2.9**
Podiatry assistants	**0**	**-**	**-**	**-**	**6.6**	**6.6**	**-**	**-**	**-**	**-**	**-**

Notes: GM: grade-mix, SM: skill-mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results by grade.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b The grade of AP did not exist in 2022, its introduction is modelled as part of the skill-mix scenario.
Source: See section 3.3 for an overview of data sources, authors' calculations.

Table 5.4 presents base year and projected podiatrist WTEs disaggregated by HSE Health Region. In 2022, WNW recorded the largest number of WTE at 36. In contrast, MW recorded the fewest at 7. In the SD central scenario, we see the highest projected average annual growth in DNE and DML at 3.4 per cent and the lowest at 3.0 per cent in WNW.

As the assistant grade did not exist for podiatry in 2022, the WM GM scenario impacts all regions. Average annual growth in WTE requirements for podiatrist WTEs reduce by between 0.2 and 0.3 percentage points compared to the SD central scenario.

TABLE 5.10 Podiatrists – WTE projections by scenario and HSE Health Region, 2022–2040

	2022	Projected additional WTE – 2040				Average annual growth 2022–2040 (%)			
		Service demand			WM	Service demand			WM
	WTE[a]	Central	Low pop	High pop		Central	Low pop	High pop	
DNE	11	9.2	9.0	9.4	8.4	3.4	3.4	3.5	3.2
DML	8	6.5	6.3	6.7	5.8	3.4	3.3	3.5	3.1
DSE	8	6.1	5.9	6.2	5.6	3.2	3.1	3.2	2.9
SW	15	12	12	12	11	3.3	3.2	3.3	3.0
MW	7	5.4	5.3	5.6	4.9	3.1	3.1	3.2	2.9
WNW	36	25	25	26	22	3.0	2.9	3.0	2.7
National	**86**	**64**	**63**	**66**	**58**	**3.2**	**3.1**	**3.2**	**2.9**

Notes: WM: workforce mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results for HSCAs.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
Source: See section 3.3 for an overview of data sources, authors' calculations.

5.2.6 Speech and language therapy

Table 5.11 presents the baseline and projected WTE requirements for speech and language therapy services by grade group. Assuming current grade- and skill-mix ratios remain in place (SD scenarios), we project a requirement for between an additional 164 and 208 speech and language therapist WTEs, and 1.4 and 1.9 speech and language therapy assistant WTEs. This represents an average annual growth of between 1.2 and 1.6 per cent over the period.

The grade-mix assumption modelled in the WM GM scenario assumes a therapist to assistant ratio of 90:10. This reduces the projected additional speech and language therapist WTE and increases speech and language therapy assistant WTE requirements by 69, to 117 and 70 WTEs respectively. The additional skill-mix assumption modelled in the final scenario (WM SM) takes WM GM as a starting point and assumes 5 per cent of total WTE at CS level and 2 per cent at AP level by 2029, increasing to 7 per cent and 4 per cent respectively by 2040.[38] This represents an increase in requirements of 46 WTEs for CS and 29 WTEs for AP.

TABLE 5.11 Speech and language therapy – WTE projections by scenario, 2022–2040

	2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
		Service demand (SD)			Workforce mix		Service demand (SD)			Workforce mix[b]	
	WTE[a]	Central	Low pop	High pop	GM	SM	Central	Low pop	High pop	GM	SM
Advanced practitioners	0	-	-	-	-	29	-	-	-	-	-
Clinical specialists	5	1.6	1.4	1.8	1.6	46	1.5	1.3	1.6	1.5	13
Other	611	184	162	206	116	42	1.5	1.3	1.6	1.0	0.4
Speech and language therapists	**616**	**186**	**164**	**208**	**117**	**117**	**1.5**	**1.3**	**1.6**	**1.0**	**1.0**
Speech and language therapy assistants	**6**	**1.6**	**1.4**	**1.9**	**70**	**70**	**1.4**	**1.2**	**1.5**	**15.3**	**15.3**

Notes: GM: grade-mix, SM: skill-mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results by grade.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b The grade of AP did not exist in 2022, its introduction is modelled as part of the skill-mix scenario.
Source: See section 3.3 for an overview of data sources, authors' calculations.

Table 5.12 presents base year and projected speech and language therapist WTEs disaggregated by HSE Health Region. In 2022, DNE recorded the largest number of WTEs at 136. In contrast, MW recorded the fewest at 62. In the SD central scenario, we see the highest projected average annual growth in DNE at 1.7 per cent compared to 1.0 per cent in WNW.

The WM GM scenario has varying impact across the regions for this service, the target mix of 90:10 was not achieved in any region in the base year (see Table 3.4). Average annual growth in WTE requirements for speech and language therapist WTEs reduce by between 0.4 and 0.6 percentage points compared to the SD central scenario.

38 All increases are modelled linearly with 2023 as the starting point for CS and 2025 as the starting point for AP.

TABLE 5.12 Speech and language therapy – WTE projections by scenario and HSE Health Region, 2022–2040

	2022	Projected additional WTE – 2040				Average annual growth 2022–2040 (%)			
		Service demand			WM	Service demand			WM
	WTE[a]	Central	Low pop	High pop		Central	Low pop	High pop	
DNE	136	48	43	54	33	1.7	1.5	1.9	1.2
DML	102	34	30	38	21	1.6	1.4	1.8	1.1
DSE	118	41	38	45	27	1.7	1.6	1.8	1.2
SW	84	22	19	25	11	1.3	1.1	1.5	0.7
MW	62	18	16	20	13	1.5	1.3	1.6	1.1
WNW	115	22	18	26	11	1.0	0.8	1.2	0.5
National	**616**	**186**	**164**	**208**	**117**	**1.5**	**1.3**	**1.6**	**1.0**

Notes: WM: workforce mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results for HSCAs.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
Source: See section 3.3 for an overview of data sources, authors' calculations.

5.3 PUBLIC HEALTH AND COMMUNITY NURSING SERVICES

As shown in Table 5.13, of total public health and community nurse WTEs employed in care delivery nationally in 2022, over half (54.1%) were PHN WTEs followed by CRGN WTEs (28.4%). In 2022, CNS and RANP grades accounted for 3.4 and 1.0 per cent, respectively, of total public health and community nurse WTEs employed in the delivery of care. HCAs working with nurses in HSE primary and community care numbered 193 in 2022.

Assuming the current grade- and skill-mix ratios remain in place, the SD scenarios project a requirement for between an additional 1,057 and 1,149 PHN WTEs; 677 and 694 CRGN WTEs; 256 and 278 nurse (other) WTEs;[39] 66 and 72 CNS WTEs; and ~20 RANPs WTE, by 2040. This represents an average annual growth over the period of between 2.8 and 3.0 per cent for most grades. Due to the older age of the service user population, the average annual growth rate for CRGN and HCA WTEs is higher than for the other grades, at between 3.3 and 3.4 per cent and 3.4 and 3.5 per cent respectively.

The grade-mix assumption modelled in the WM GM scenario assumes a CRGN to HCA ratio of 85:15. This reduces the projected additional WTE requirements for CRGNs to 677 or an average annual growth of 3.3 per cent. We see the opposite impact on HCA WTEs, with an increase in the projected additional WTEs to 182, or an average annual growth of 3.8 per cent.

The additional skill-mix assumptions modelled in the final scenario, (WM SM) take WM GM as a starting point and assume 7 per cent of total nursing at CNS level by 2040 (5% by 2029) and 4 per cent at RANP level by 2040 (2% by 2029).[40] This represents an average annual growth in CS of 7.2 per cent, and of 11.5 per cent in AP over the period.

39 Predominantly managerial grades but also includes student nurses.
40 All increases are modelled linearly with 2023 as the starting point for CS and AP.

TABLE 5.13 Public health and community nursing – WTE projections by scenario, 2022–2040

	2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
		Service demand			Workforce mix		Service demand			Workforce mix	
	WTE[a]	Central	Low pop	High pop	Grade mix	Skill mix	Central	Low pop	High pop	Grade mix	Skill mix
Public health nurses	1,629	1,103	1,057	1,149	1,103	912	2.9	2.8	3.0	2.9	2.5
Registered general nurse	854	694	677	711	677	568	3.4	3.3	3.4	3.3	2.9
Advanced practitioners	29	20	19	21	20	177	2.9	2.8	3.0	2.9	11.5
Clinical specialists	103	69	66	72	69	257	2.9	2.8	3.0	2.9	7.2
Nurses other[b]	395	267	256	278	267	221	2.9	2.8	3.0	2.9	2.5
Public health and community nurses	**3,010**	**2,153**	**2,075**	**2,231**	**2,136**	**2,136**	**3.0**	**3.0**	**3.1**	**3.0**	**3.0**
Health care assistants	**193**	**165**	**161**	**169**	**182**	**182**	**3.5**	**3.4**	**3.5**	**3.8**	**3.8**

Notes: GM: grade-mix, SM: skill-mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results by grade.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b Predominantly managerial grades but also includes student nurses.
Source: See section 3.3 for an overview of data sources, authors' calculations.

Table 5.14 presents base year and projected nurse WTEs disaggregated by HSE Health Region. In 2022, DNE recorded the largest number of WTEs at 688. In contrast, MW recorded the fewest at 231. Variation in projected additional WTE growth across HSE Health Regions is driven by variation in patterns of underlying population change. In the SD central scenario, we find the highest projected average annual growth in DML at 3.2 per cent.

The WM GM has little impact for this service, as the target mix of 85:15 was achieved in the base year in five of the six regions (see Table 3.4). In these cases, there is no difference in the projected WTEs compared to the SD central scenario. The only exception is the SW, where the average annual growth in WTE requirements for CRGN WTEs reduce the overall growth requirements by 0.1 percentage points compared to the SD central scenario.

TABLE 5.14 Public health and community nursing – WTE projections by scenario and HSE Health Region, 2022–2040

	2022	Projected additional WTE – 2040				Average annual growth 2022–2040 (%)			
		Service demand			WM	Service demand			WM
	WTE[a]	Central	Low pop	High pop		Central	Low pop	High pop	
DNE	688	469	447	491	469	2.9	2.8	3.0	2.9
DML	549	421	405	438	420	3.2	3.1	3.3	3.2
DSE	519	374	363	386	374	3.1	3.0	3.1	3.1
SW	443	326	316	336	310	3.1	3.0	3.2	3.0
MW	231	167	161	173	167	3.1	3.0	3.1	3.1
WNW	579	395	384	407	395	2.9	2.9	3.0	2.9
National	**3,010**	**2,153**	**2,075**	**2,231**	**2,136**	**3.0**	**3.0**	**3.1**	**3.0**

Notes: WM: workforce mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results for HSCAs.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
Source: See section 3.3 for an overview of data sources, authors' calculations.

5.4 HEALTH CARE/HEALTH AND SOCIAL CARE ASSISTANTS SUMMARY

Table 5.15 provides a summary of the HCA and HSCA projections. The highest growth in the service demand scenarios is projected for HCAs at between 3.4 and 3.5 per cent. In this case, the WM GM scenario has little impact as all but two of the regions had reached the grade-mix target in 2022. For HSCAs there is also little difference between the service demand scenarios, but the WM GM scenario is more significant. Except for audiology, the gap between the 2022 grade-mix and the target is substantial, thus requiring larger increases in WTE over the projection horizon.

TABLE 5.15 HCA and HSCA – WTE projections by scenario, 2022–2040

	2022	Projected additional WTE – 2040				Average annual growth 2022–2040 (%)			
		Service demand			WM GM	Service demand			WM GM
	WTE[a]	Central	Low pop	High pop		Central	Low pop	High pop	
Health care assistants	193	165	161	169	182	3.5	3.4	3.5	3.8
Health and social care assistants									
Audiology assistants	10	5.2	4.9	5.5	5.8	2.3	2.2	2.4	2.5
Dietitian assistants	-	-	-	-	14	-	-	-	-
Occupational therapy assistants	26	14	13	15	79	2.4	2.3	2.5	8.1
Physiotherapy assistants	32	13	12	14	65	1.9	1.8	2.0	6.3
Podiatry assistants	-	-	-	-	6.6	-	-	-	-
Speech and language therapy assistants	6	1.6	1.4	1.9	70	1.4	1.2	1.5	15.3

Notes: WM GM: workforce mix – grade-mix. Figures may be subject to rounding. See Appendix B for HSE Health Region level results.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
Source: See section 3.3 for an overview of data sources; authors' calculations.

5.5 DECOMPOSITION ANALYSIS

Table 5.16 presents total projected WTE growth by 2040 in the SD central and WM GM scenarios and decomposes it into its constituent drivers. The contribution of population growth is similar across all services at between 16 and 18 per cent. However, the contribution of changing population age structure varies depending on the concentration of WTEs across the patient age distribution. Services with relatively higher provision to older patients experience higher growth, while those with a greater concentration of provision to children have lower growth.

The offsetting impact of the grade-mix scenario varies by service, depending on the base year therapist to assistant ratio. For audiologists and public health and community nurses the impact is small, as almost all regions met the target ratio in 2022. For others, such as speech and language therapists where the base year ratio was further from the target, the deflating impact is much greater.

TABLE 5.16 WTE – decomposition of growth by projection scenario

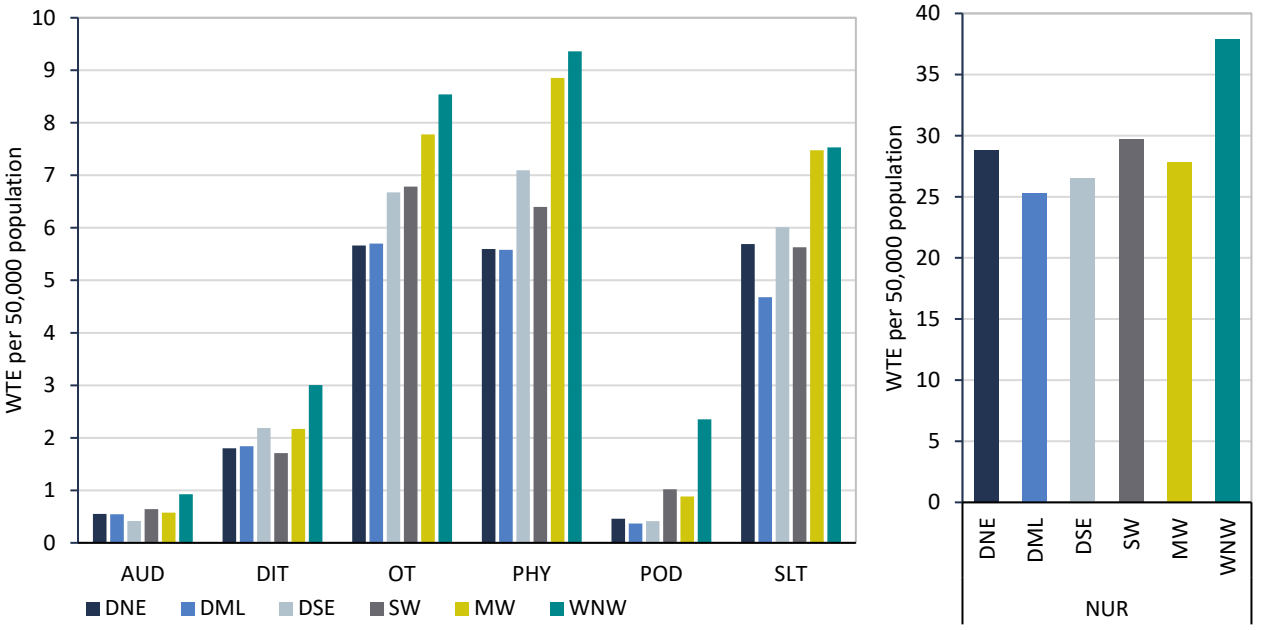
	SD central scenario		SD central scenario total growth	Workforce mix	Workforce mix scenario total growth
	Population growth	Population age structure		GM	
	%	%	%	%	%
Audiologists	17.5	34.5	52.0	-0.6	51.1
Dietitians	17.4	21.4	38.9	-4.8	32.5
Occupational therapists	17.5	35.8	53.2	-6.6	43.8
Physiotherapists	17.4	24.3	41.7	-5.5	34.2
Podiatrists	16.4	58.9	75.3	-4.6	67.5
Speech and language therapists	17.5	12.7	30.2	-9.4	19.0
Public health and community nurses	17.6	54.0	71.5	-0.3	70.9

Notes: See Appendix C for HSE Health Region level results. Figures may be subject to rounding.

5.6 BENCHMARKING SCENARIO

Following the methodology outlined in Chapter 3, the benchmarking (BM) scenario elevates all regions to the age-adjusted WTE per capita of the highest region in 2022 by 2040 – HSE WNW for all services. Figure 5.1 summarises the regional variation for all services discussed in detail in Chapter 4. WTE provision is highest in HSE WNW for all services, albeit there is only a small difference for speech and language therapy in the MW (MW 7.48 vs. WNW 7.53).

FIGURE 5.1 Summary – WTE per 50,000 population by service and HSE Health Region, 2022



Source: See section 3.3 for an overview of data sources; authors' calculations. See also section 4.2 and 4.3 for further discussion.

Table 5.17 compares projected additional WTE requirements in 2040 and average annual growth rates under the benchmarking (BM) scenario with those in the SD central scenario. Overall, the BM scenario requires substantially higher growth across most professions, often double or more compared to SD central.

Audiologists: the BM scenario requires, on average, twice the average annual growth when compared to the SD central scenario (4.6% vs. 2.4% respectively). The largest difference is in DSE, where the required growth is three times higher in the BM compared to SD central.

Dietitians: the BM scenario requires, on average, twice the average annual growth rate when compared to the SD central scenario (3.5% vs. 1.8% respectively). The most significant difference is in the SW, where the required growth is nearly three times higher.

Occupational therapists: the BM scenario requires, on average, 1.3 times the average annual growth rate compared to the SD central scenario (3.2% vs. 2.4% respectively). The outlier is the MW, where the average annual growth required in the benchmarking scenario is less than in the SD central scenario due to the interaction of the MW population projections and the WNW age-specific WTE per capita.

Physiotherapists: the BM scenario requires, on average, 1.7 times the average annual growth rate compared to the SD central scenario (3.3% vs. 2.0% respectively). Except for the MW, similar additional growth is required in all areas in the BM scenario.

Podiatrists: the BM scenario requires, on average, 2.7 times the average annual growth rate compared to the SD central scenario (8.7% vs. 3.2% respectively). The most significant differences are in DML and DSE, where the required growth is four times higher in the BM scenario.

Speech and language therapists: the BM scenario requires, on average, 1.6 times the average annual growth rate compared to the SD central scenario (2.3% vs. 1.5% respectively). The greatest difference is in DML, where the required growth is 2.3 times higher in the BM scenario compared to SD central. Similar to occupational therapy, in the case of the MW the WTE requirements projected in the benchmarking scenario are less than in the SD central scenario due to the interaction of the MW population projections and the WNW age-specific WTE per capita.

Public health and community nurses: the BM scenario requires, on average, 1.3 times the average annual growth rate compared to the SD central scenario (4.0% vs. 3.0% respectively). The most significant difference is for DSE, where the required growth is 1.6 times higher in the BM scenario.

TABLE 5.17 Benchmarking scenario – projected additional WTE requirements 2040 by scenario and HSE Health Region

	Audiologists				Dietitians			
	SD central		Benchmarking		SD central		Benchmarking	
	WTE 2040	Average annual growth %	WTE 2040	Average annual growth %	WTE 2040	Average annual growth %	WTE 2040	Average annual growth %
DNE	7	2.4	16	4.6	18	2.0	46	4.1
DML	6	2.5	15	4.6	17	2.0	42	4.1
DSE	4	2.4	20	7.1	19	2.0	35	3.4
SW	4.3	2.1	11	4.3	9.2	1.7	33	4.7
MW	2.5	2.3	6.9	5.1	7.1	1.9	14	3.3
WNW	7.6	2.4	7.6	2.4	14	1.5	14	1.5
National	**32**	**2.4**	**76**	**4.6**	**84**	**1.8**	**184**	**3.5**

	Occupational therapists				Physiotherapists			
	SD central		Benchmarking		SD central		Benchmarking	
	WTE 2040	Average annual growth %	WTE 2040	Average annual growth %	WTE 2040	Average annual growth %	WTE 2040	Average annual growth %
DNE	80	2.6	128	3.8	63	2.2	150	4.3
DML	73	2.6	114	3.7	61	2.3	138	4.3
DSE	69	2.4	110	3.5	56	1.9	109	3.3
SW	46	2.1	76	3.2	40	2.0	90	3.8
MW	43	2.9	35	2.4	28	1.8	29	1.9
WNW	55	2.0	55	2.0	47	1.6	47	1.6
National	**365**	**2.4**	**518**	**3.2**	**294**	**2.0**	**564**	**3.3**

	Podiatrists				Speech and language therapists			
	SD central		Benchmarking		SD central		Benchmarking	
	WTE 2040	Average annual growth %	WTE 2040	Average annual growth %	WTE 2040	Average annual growth %	WTE 2040	Average annual growth %
DNE	9	3.4	69	11.7	48	1.7	75	2.5
DML	7	3.4	64	13.0	34	1.6	93	3.7
DSE	6	3.2	71	13.5	41	1.7	59	2.3
SW	12	3.3	42	7.6	22	1.3	50	2.6
MW	5	3.1	25	8.6	18	1.5	13	1.1
WNW	25	3.0	25	3.0	22	1.0	22	1.0
National	**64**	**3.2**	**296**	**8.7**	**186**	**1.5**	**313**	**2.3**

	Public health and community nurses			
	SD central		Benchmarking	
	WTE 2040	Average annual growth %	WTE 2040	Average annual growth %
DNE	469	2.9	600	3.5
DML	421	3.2	601	4.2
DSE	374	3.1	737	5.0
SW	326	3.1	469	4.1
MW	167	3.1	288	4.6
WNW	395	2.9	395	2.9
National	**2,153**	**3.0**	**3,090**	**4.0**

Source: See section 3.3 for an overview of data sources; authors' calculations. Figures may be subject to rounding.

5.7 SUMMARY

The WTE requirements for the workforce categories considered are projected to increase substantially by 2040. These increases are largely driven by increases in the underlying population and, in particular, changes in the age structure. Percentage increases are projected to be relatively higher for services with a higher concentration of WTEs in the older age categories. Regional variation in projected requirements is also observed, with relatively higher increases in eastern regions again largely driven by population change. The benchmarking scenario, which benchmarks WTE per capita in each region to the WNW is impactful for most services, with results for audiology and podiatry being particularly large, albeit impacted by low numbers of WTE for these services in the base year.

CHAPTER 6

Findings | Waiting lists for HSE primary and community care services

6.1 INTRODUCTION

Waiting lists are a persistent ongoing issue across the health service and primary and community care services are no exception. Waiting lists for HSE primary and community care services are substantial and growing for most services. Formal modelling of the impact of waiting lists on service demand, and consequently workforce requirements is not possible due to insufficient data needed to formulate a workforce-to-demand ratio. It is important however to acknowledge the scale of the issue by using available data to give a sense of the additional activity that would be required to clear the lists as this may have an impact on the workforce required to eliminate and maintain lower waiting lists into the future.

6.2 TRENDS IN WAITING LISTS, 2017–2024

For context, we first examine the size of the total waiting list per 50,000 population in December 2022 and December 2024 (Table 6.1). This varies by service and region. Nationally the largest lists are for physiotherapy, at 780 per 50,000 population in 2024. The smallest lists are for podiatry, at 79 per 50,000 population nationally in 2024. For each service we include a heat map, which highlights regional variation in 2024. For example, for occupational therapy the lowest rate (green) is in DSE at 311 per 50,000 population and the highest (red) in DNE at 629 per 50,000 population.

TABLE 6.1 Total waiting list size per 50,000 population, December 2022 and 2024 by service and HSE Health Region

		Total waiting list size per 50,000 population					
		Audiology	Dietetics	Occupational therapy	Physio-therapy	Podiatry	Speech and language therapy
DNE	2022	81	188	368	594	52	214
	2024	221	179	629	792	51	347
DML	2022	164	308	359	536	5	220
	2024	299	242	516	783	1	255
DSE	2022	212	271	305	741	45	190
	2024	155	202	311	816	59	163
SW	2022	302	484	357	468	46	112
	2024	316	272	438	552	66	115
MW	2022	244	335	262	710	207	194
	2024	301	261	338	888	203	264
WNW	2022	309	382	341	765	158	174
	2024	397	216	327	875	203	145
National	2022	201	312	340	626	68	189
	2024	271	222	450	780	79	224

Lowest

Highest

Source: HSE BIU Primary Care (2022, 2024) with author imputation for missing data, authors' calculations.

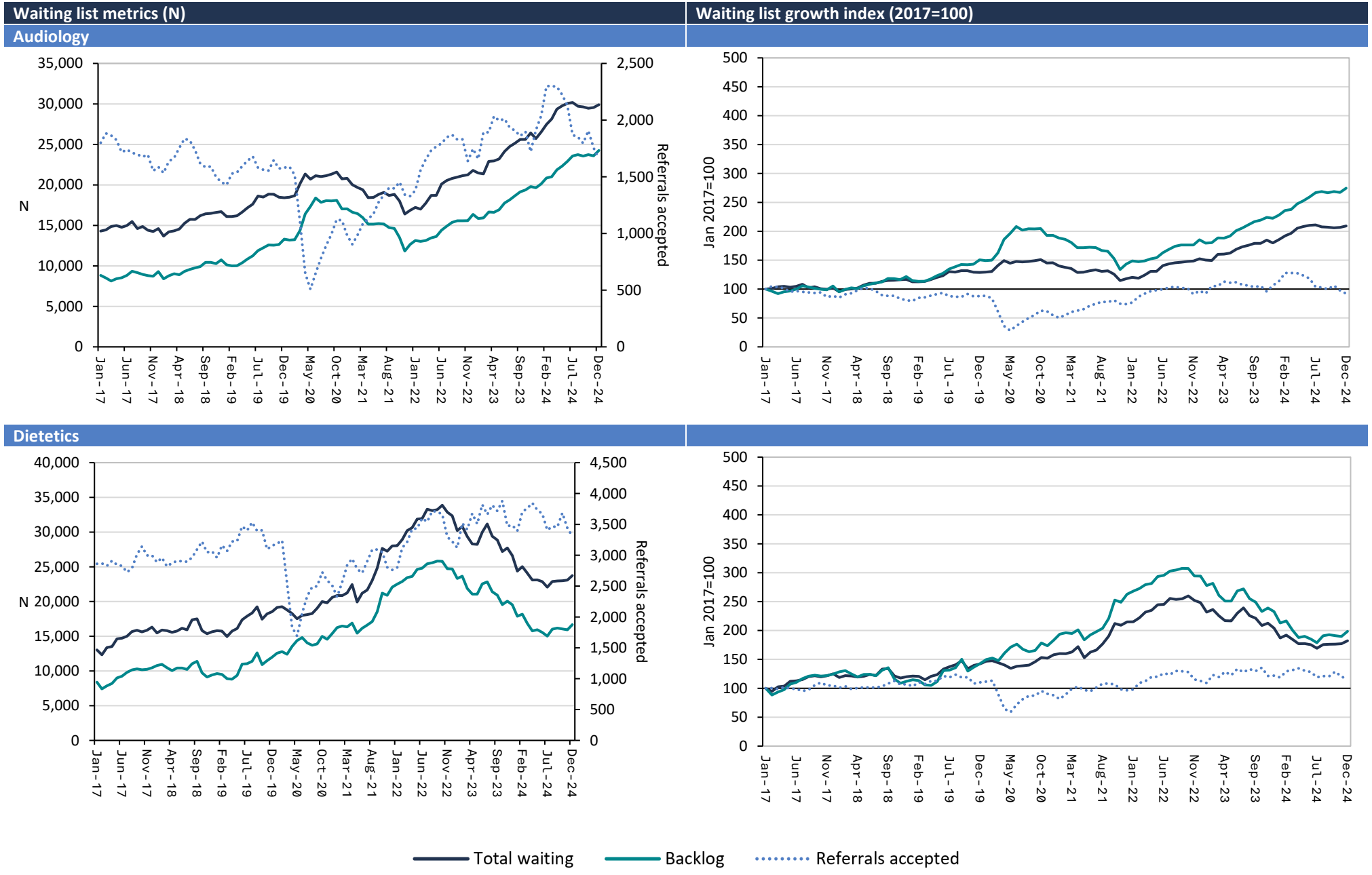
Figure 6.1 illustrates waiting list volume trends (see section 3.5.2) for all services and to allow for comparison across services the changes in national-level[41] waiting list metrics between 2017 and 2024 are presented as an index (January 2017=100). This time span includes three years pre-COVID-19 (2017, 2018, 2019) and three years post-COVID-19 (2022, 2023, 2024).

In December 2024, the number of clients awaiting a first-time appointment was as follows: 30,000 for audiology, 24,000 for dietetics, 51,000 for occupational therapy, 83,500 for physiotherapy, 9,000 for podiatry, and 25,000 for speech and language therapy. Except for dietetics, post-COVID-19 the numbers on the waiting lists and the proportion waiting more than 12/16 weeks (backlog) have been increasing over time. The average number of referrals accepted per month in 2024 was similar to 2019 for occupational therapy (+3%), physiotherapy (+3%) and podiatry (-4%). For audiology (28%) and dietetics (10%) the average in 2024 was higher than in 2019, while for speech and language therapy (-22%) it was lower. It is difficult to decompose the drivers of these changes given the data available. Trend analysis is further complicated by, for example, the establishment of Children's Disability Network Teams from 2021, as prior to their existence waiting list data for some services was included in primary and community care – this appears to have particularly impacted speech and language therapy referrals.[42]

41 See Appendix A for regional-level metrics.

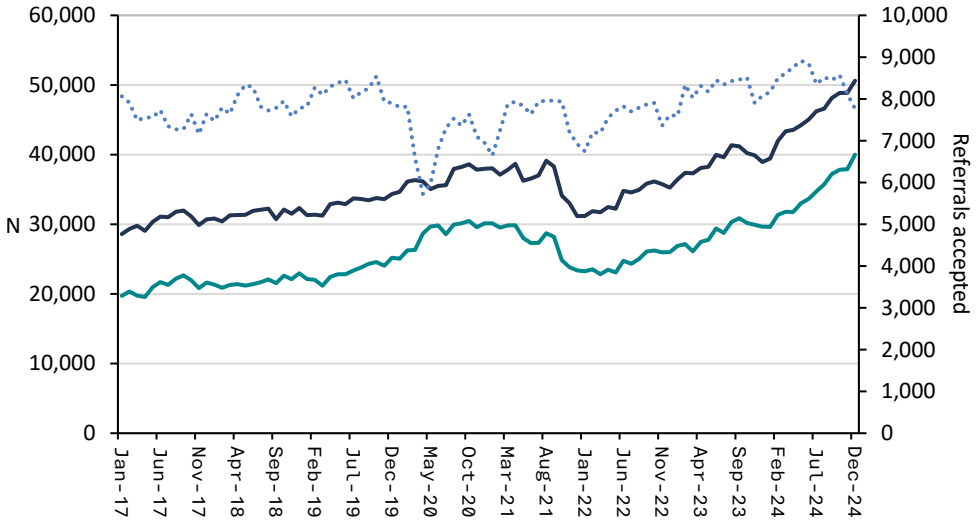
42 Personal communication, HSE Strategic Workforce Planning and Intelligence, 19 January 2026.

FIGURE 6.1 National waiting list metrics and growth index (2017=100) by service, 2017–2024

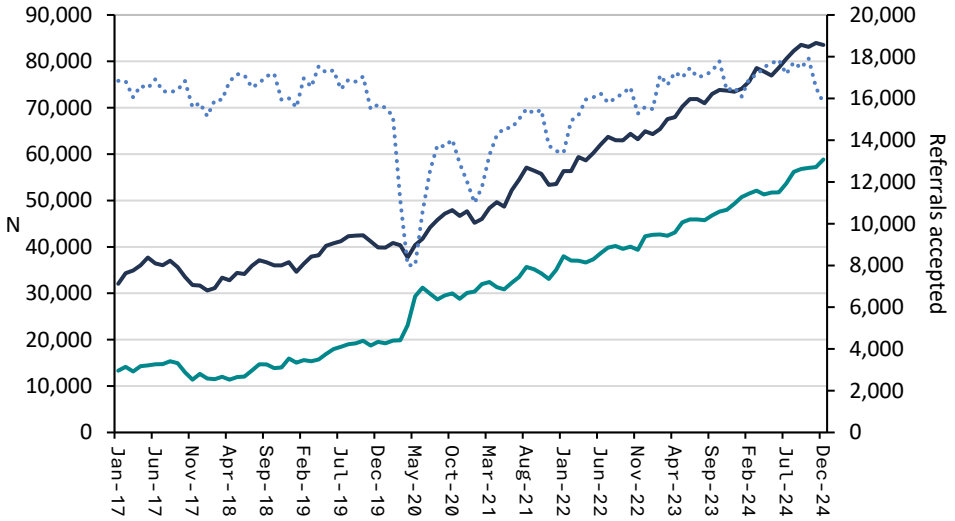


Waiting list metrics (N)

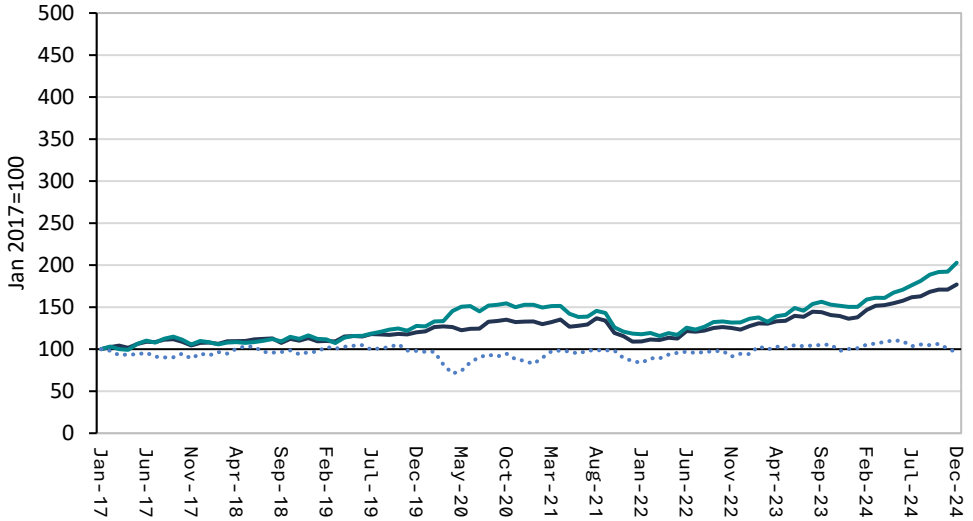
Occupational therapy

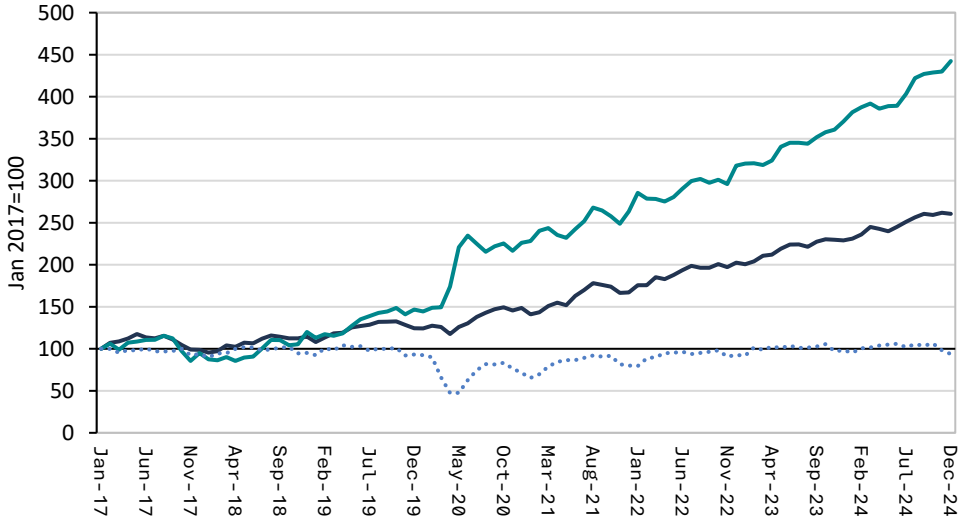


Physiotherapy

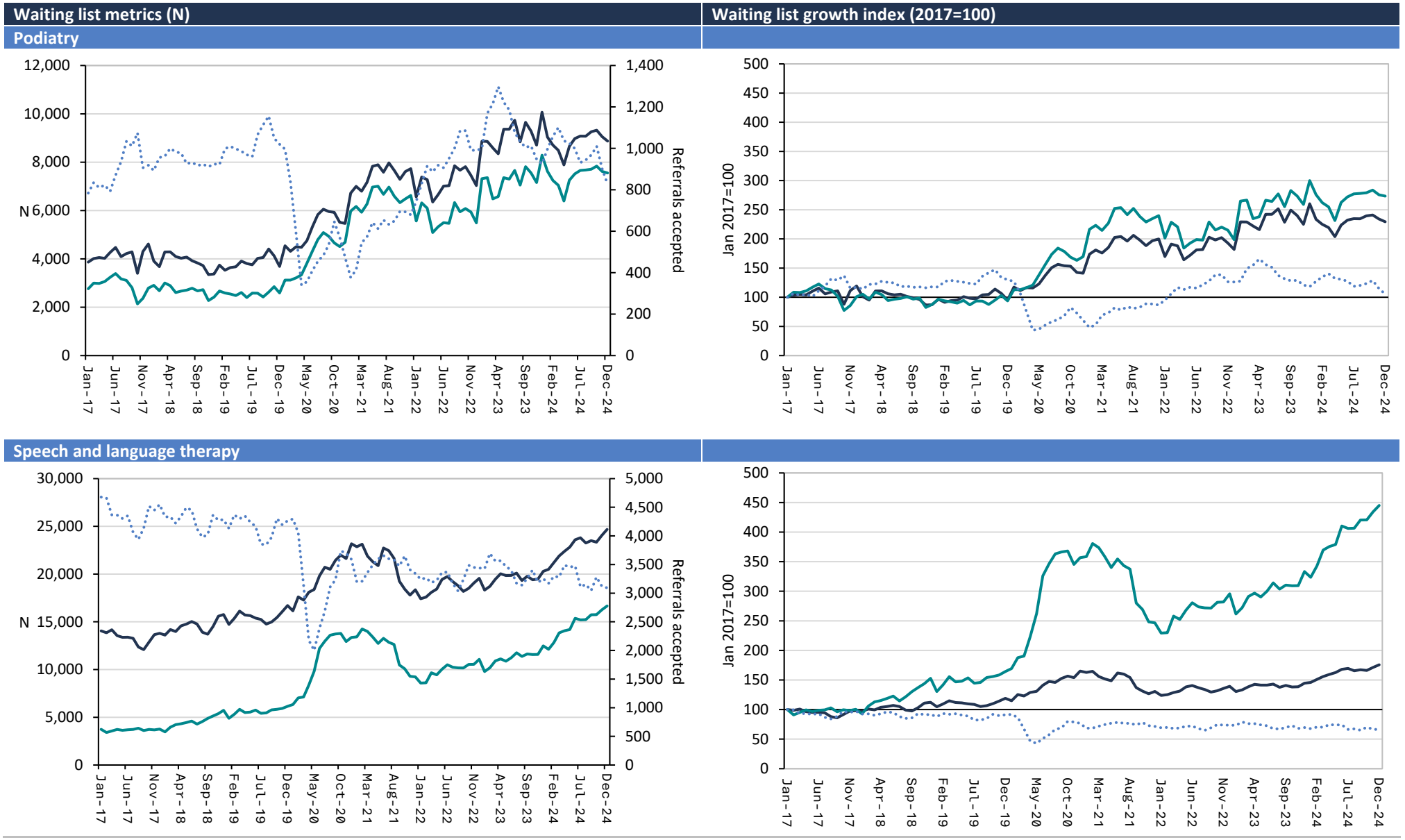


Waiting list growth index (2017=100)





Total waiting Backlog Referrals accepted



Source: HSE BIU Primary Care (2017–2024) with author imputation for missing data, authors' calculations.

6.3 ESTIMATES OF ACTIVITY REQUIREMENTS

The results of the analysis are presented by service below. For each service we estimate the backlog of first-time appointments at the end of 2025 and any additional appointments that may accrue based on recent growth trends, such that waiting times do not exceed 12/16 weeks. It is important to reiterate that due to data availability, we consider first-time appointments only and not any subsequent appointments that may arise. In addition, data quality, discussed in section 3.5.1 means that careful consideration is required when interpreting the analysis. The waiting list data for podiatry are particularly problematic in the early period with large numbers of missing observations. For this reason, we base the analysis on calculated growth rates across 2022–2024 for this service rather than providing a range.

Table 6.2 presents the growth rate calculations for the total waiting list and the number of referrals accepted nationally. If the total list growth is greater than the growth in referrals accepted, additional recurring activity is required. In cases such as dietetics, where the national-level total list growth is less than the growth in referrals accepted in both time periods, additional activity is required in some regions. Similarly, where the national figures indicate that additional recurring activity is required, this may not be the case in all regions. The figures presented below are based on an aggregation of the regional analysis.

TABLE 6.2 Waiting list management – total list and referrals accepted growth trends

	2017–2019 and 2022–2024		2022–2024	
	Total list	Referrals accepted	Total list	Referrals accepted
Audiology	16%	2%	22%	8%
Dietetics	-3%	4%	-14%	3%
Occupational therapy	10%	5%	16%	6%
Physiotherapy	11%	3%	14%	5%
Podiatry[a]	-	-	13%	4%
Speech and language therapy	9%	-1%	11%	0%

Note: a Based on the later period only due to data quality issues.
Source: HSE BIU Primary Care (2017–2019, 2022–2024) with author imputation for missing data, authors' calculations.

Audiology: In December 2024, there was a backlog of 24,200 clients waiting for more than 12 weeks for a first-time appointment. To clear the backlog, which based on recent trends, we estimate will be between 30,000 and 33,700 by the end of 2025, an additional 6,000 to 6,700 first-time appointments would be required annually over the next five years. In addition, to stop waiting lists from growing due to demand pressures, an additional 4,500 to 6,300 first-time appointments would be required annually from 2026, adjusting with population change in subsequent years. Consequently, we estimate that in 2026 an additional 880 to 1,080 new clients would need to be seen per month to address the estimated backlog and demand pressure growth over five years. This equates to a 74 to 91 per cent increase on the average number of monthly first-time appointments in 2022. The impact across regions varies with the greatest pressure in DNE and DML.

Dietetics: In December 2024, there was a backlog of 16,700 clients waiting more than 12 weeks for a first-time appointment. To clear the backlog, which based on recent trends, we estimate will be between 12,300 and 16,400 by the end of 2025, an additional 2,500 to 3,300 first-time appointments would be required annually over the next five years. Furthermore, to stop waiting lists from growing due to demand pressures, an additional 1,100 to 1,200 first-time appointments would be required annually from 2026, adjusting with population change in subsequent years. Consequently, we estimate that in 2026, an additional 300 to 370 new clients would need to be seen per month to address both the backlog and demand pressure growth over five years. This equates to a 15 to 18 per cent increase on the average number of monthly first-time appointments in 2022. The impact across regions varies, with the greatest pressure in the SW.

Occupational therapy: In December 2024, there was a backlog of 40,000 clients waiting more than 12 weeks for a first-time appointment. To clear the backlog, which based on recent trends, we estimate will be between 41,400 and 45,900 by the end of 2025, an additional 8,300 to 9,200 first-time appointments would be required annually over the next five years. Furthermore, to prevent further growth in waiting lists from 2026 onwards, an extra 4,000 to 7,600 first-time appointments would be needed annually, adjusting with population change in future years. Consequently, in 2026, we estimate an additional 1,000 to 1,400 new clients would need to be seen per month to address both the backlog and demand pressure growth over five years. This equates to a 14 to 19 per cent increase on the average number of monthly first-time appointments in 2022. The greatest regional pressures are observed in DNE and DML.

Physiotherapy: In December 2024, there was a backlog of 58,800 clients waiting more than 12 weeks for a first-time appointment. To clear the backlog, which is projected to be between approximately 67,900 and 70,400 by the end of 2025, an additional 13,600 to 14,100 first-time appointments would be required annually over the next five years. To prevent waiting lists from increasing due to demand pressures, an additional 7,700 to 8,100 appointments would be needed annually from 2026, adjusting with population in future years. As a result, in 2026, an additional 1,800 new clients would need to be seen per month to address both the backlog and demand pressure growth over five years. This equates to a 15 per cent increase on the average number of monthly first-time appointments in 2022. The greatest regional pressures are observed in DML.

Podiatry: In December 2024, there was a backlog of 7,550 clients waiting for more than 12 weeks for a first-time appointment. To clear the backlog of cases, an estimated 1,900 new clients would need to be seen annually over the next five years. In addition, to stop waiting lists from growing due to demand pressures, an additional 1,400 first-time appointments would be required annually from 2026. Consequently, we estimate that in 2026 an additional 270 new clients would need to be seen per month to address the estimated backlog and demand pressure growth over five years. This equates to a

37 per cent increase on the average number of monthly first-time appointments in 2022. The impact across regions varies, with the greatest pressure in DSE.

Speech and language therapy: In December 2024, there was a backlog of 16,700 clients waiting more than 12 weeks for a first-time appointment. To clear the backlog, which is estimated to be between approximately 19,100 and 20,100 by the end of 2025, an additional 3,800 to 4,000 first-time appointments would be required annually over the next five years. In addition, to stop waiting lists from growing due to demand pressures, an additional 3,400 to 4,100 first-time appointments would be required annually from 2026, adjusting with population in subsequent years. Consequently, we estimate that in 2026 an additional 600 to 670 new clients would need to be seen per month to address the estimated backlog and demand pressure growth over five years. This equates to a 23 to 26 per cent increase on the average number of monthly first-time appointments in 2022. The impact across regions varies, with the greatest pressure in DNE. Given the current concentration of service provision in the youngest age groups, should the model of care remain the same, it is likely that demand will fall due to the projected decrease in population in the youngest age groups.

TABLE 6.3 First-time appointments to clear waiting list backlog and maintain waiting lists over five years by service and HSE Health Region

First-time appointments	Total	DNE	DML	DSE	SW	MW	WNW
Audiology							
Increase required per month (N)	880–1,080	230–340	220–290	40–60	90–100	50–70	230–260
Increase on 2022 monthly average (%)	74–91	92–137	100–132	21–37	47–50	46–64	89–103
Dietetics							
Increase required per month (N)	300–370	30–100	50–50	20–40	130–180	0–20	20–20
Increase on 2022 monthly average (%)	15–18	9–28	17–20	8–14	22–31	2–21	5–6
Occupational therapy							
Increase required per month (N)	1,020–1,400	410–600	280–450	80–90	60–70	30–40	150–170
Increase on 2022 monthly average (%)	14–19	25–37	20–32	6–6	6–6	4–5	14–16
Physiotherapy							
Increase required per month (N)	1,770–1,850	220–440	400–470	330–550	260–360	80–100	140–220
Increase on 2022 monthly average (%)	15–15	15–21	20–22	13–17	17–20	8–10	7–9
Podiatry[a]							
Increase required per month (N)	270	20	0	70	60	70	60
Increase on 2022 monthly average (%)	37	27	1	94	41	46	25
Speech and language therapy							
Increase required per month (N)	600–670	320–410	120–150	40–50	10–30	40–70	10–20
Increase on 2022 monthly average (%)	23–26	65–82	31–36	9–12	3–6	14–20	3–4

Notes: Analysis based on backlog and additional requirements estimated using 2017–2019 and 2022–2024 monthly year-on-year growth rates and the 2022–2024 monthly year-on-year growth rates. The min and max estimates are presented.

a Based on the later period only due to data quality issues.

6.4 SUMMARY

This chapter highlights the scale and persistence of waiting lists across HSE primary and community care services, with significant regional variation and growing demand pressures. Despite data limitations which do not allow for formal inclusion in the projections, estimates suggest substantial additional activity is required to address both current backlogs and future demand and this may have an impact on the workforce required. Regional disparities are evident, with DNE and DML frequently experiencing the greatest pressures.

CHAPTER 7

Summary and conclusions

7.1 INTRODUCTION

This report uses the ESRI Hippocrates model to provide regional projections for HSE primary and community care workforce to 2040. The analysis provides regional base-year WTE profiles for 2022 and, under a set of clearly defined scenarios, projects WTE requirements to 2040. In considering its findings, it is important to note that we model projections, not forecasts; projected requirements are based on underlying assumptions in relation to the evolution of the population over the projection horizon and possible policy changes in relation to workforce mix. In the following sections, we provide a summary of the main findings, discuss the limitations of the analysis, particularly in relation to data availability, and conclude with some policy implications, reflections and conclusions.

7.2 SUMMARY FINDINGS

The key finding from this report is that workforce requirements for all professions and grades examined are projected to increase substantially by 2040. For most services this is driven by large projected increases in the population, particularly those aged 65 years and older.

For HSCPs, the application of grade-mix assumptions had the impact of offsetting some of the additional projected WTE requirements for these professions through increasing the proportion of care delivered by assistant grades. The impact of skill-mix assumptions increased projected requirements for public health and community nurses and HSCPs operating at advanced practice and clinical specialist level. For HSCPs, there were no WTEs in post at advanced practice level and the roles are currently in development.

Table 7.1 presents a summary of the projection findings from the five main scenarios. Average annual growth of between 1.0 and 3.2 per cent is projected for HSCPs. Services with a higher concentration of current service delivery in children (e.g. speech and language therapy), demonstrate lower growth requirements than those services where service delivery is concentrated in the oldest age cohorts (e.g. podiatry). For HSCA grades, minimum growth requirements are generally marginally higher than those of the associated HSCPs. The upper end of the range is significantly higher, particularly for services where the gap between the baseline and modelled grade-mix ratio is pronounced.

For public health and community nursing, growth requirements of between 2,000 to 2,200 WTE are projected, equating to average annual growth of between 3.0

and 3.1 per cent. Average annual growth requirements for HCAs are higher, in this case driven by the older service age profile applied to this grade. The grade-mix scenario has limited impact on this service due to the 2022 mix being close to or above the target modelled.

TABLE 7.1 WTE projection range by service, 2022–2040

	2022 WTE[a]	2040 WTE		Average annual growth 2022–2040
		Additional	Total	
		min–max[b]	min–max	min%–max%
Health and Social Care Profession services				
Health and Social Care Professions				
Audiologists	62	30–34	92–96	2.2–2.5
Dietitians	215	70–90	285–305	1.6–2.0
Occupational therapists	686	300–383	986–1,069	2.0–2.5
Physiotherapists	706	242–315	947–1,021	1.6–2.1
Podiatrists	86	58–66	143–152	2.9–3.2
Speech and language therapists	616	117–208	734–825	1.0–1.6
Health and social care assistants				
Audiology assistants	10	5–6	15–16	2.2–2.5
Dietitian assistants	–	(-) –14	(-) –14	–
Occupational therapy assistants	26	13–79	39–104	2.3–8.1
Physiotherapy assistants	32	12–65	44–98	1.8–6.3
Podiatry assistants	–	(-) –7	(-) –7	–
Speech and language therapy assistants	6	1–70	7–76	1.2–15.3
Public health and community nursing services				
Public health and community nurses	3,010	2,075–2,231	5,085–5,240	3.0–3.1
Health care assistants	193	161–182	355–376	3.4–3.8

Notes: Growth rates are not calculated where the 2022 WTE is zero.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b Reflect the min and max projection from the five main scenarios – Service Demand (Central, Low, High) and Workforce Mix (grade-mix and skill-mix).
Source: See section 3.3 for an overview of data sources; authors' calculations.

Table 7.2 illustrates additional WTE requirements across the services. All HSE Health Regions are projected to require substantial workforce increases, with the greatest additional needs expected in the east of the country due to higher population growth. Regional projections are also sensitive to the application of modelled grade-mix scenarios and the extent to which base-year regional grade-mix ratios differ from modelled ratios.

TABLE 7.2 WTE projection range by service and HSE Health Region, 2022–2040

	Additional WTE requirements (min – max)					
	DNE	DML	DSE	SW	MW	WNW
Health and Social Care Professions services						
Health and Social Care Professions						
Audiologists	6.4–7.3	5.9–6.9	4.2–4.6	4.0–4.6	2.3–2.6	7.2–7.9
Dietitians	15–20	14–18	16–20	7.5–9.9	6.0–7.5	11–15
Occupational therapists	69–84	67–76	52–72	33–48	34–44	46–58
Physiotherapists	53–68	54–65	40–60	28–42	21–30	43–51
Podiatrists	8.4–9.4	5.8–6.7	5.6–6.2	11–12	4.9–5.6	22–26
Speech and language therapists	33–54	21–38	27–45	11–25	13–20	11–26
Health and social care assistants						
Audiology assistants	1.0–1.1	0.3–0.9	1.5–1.6	0.8–1.0	0.5–0.5	0.8–0.9
Dietitian assistants	(-)–2.9	(-)–2.6	(-)–2.8	(-)–1.7	(-)–1.2	(-)–2.7
Occupational therapy assistants	3.9–15	5.1–11	0.5–18	0.4–14	0.6–9.4	2.6–12
Physiotherapy assistants	2.9–13	40–62	0.7–16	0.4–13	0.7–7.4	4.2–5.7
Podiatry assistants	(-)–0.8	4.3–6.7	(-)–0.5	(-)–1.3	(-)–0.6	(-)–2.7
Speech and language therapy assistants	0.6–16	0.0–12	(-)–14	(-)–10	0.5–5.9	0.3–11
Public health and community nursing services						
Public health and community nurses	447–491	405–438	363–386	310–336	161–173	384–407
Health care assistants	50–53	19–20	21–21	15–32	11–11	46–48

Notes: a Reflect the min and max projection from the five main scenarios – Service Demand (Central, Low, High) and Workforce Mix (grade-mix and skill-mix).

Source: See section 3.3 for an overview of data sources; authors' calculations.

The additional benchmarking scenario modelled elevating the WTE per capita of all regions to that of the highest in 2022 (HSE WNW) for HSCPs and public health and community nurses. Overall, the scenario indicates significantly higher workforce growth requirements than the SD central scenario, typically about double the average annual growth rate. Some professions show even greater differences, such as podiatrists (almost three times higher) and some significant regional requirements for audiologists in DSE and dietitians in SW. More moderate differences are observed for occupational therapists and public health and community nurses.

While it is not possible to model the impact of waiting lists for HSCP services formally in the methodology employed, a separate analysis highlights the significant levels of additional activity that would be required to reduce waiting times for first-time appointments to 12/16 weeks which may have an impact on the workforce required into the future.

7.3 LIMITATIONS

Like any modelling exercise, this analysis is subject to limitations, which we outline below.

Service utilisation data: Service utilisation data currently available is not at the granular level required to support detailed workforce projections utilising the Hippocrates model. Current data collection is focused on a limited number of key performance indicators which provide highly aggregated metrics. This significantly

limits the analysis that can be undertaken, and the results should be interpreted in this context. For most services, there is no caseload metric, that is the number of patients or clients actively receiving care. Ideally, such a metric would capture service intensity, including case complexity and frequency of interactions, and be disaggregated by single year of age and sex. In practice, even when contact frequency data are available, demographic detail is often missing. Patient sex is not collected and where age is reported, it is typically in four highly aggregated categories (0–4, 5–17, 18–64, and 65+). As noted by Wren et al. (2017), this level of aggregation reduces the sensitivity of projections to future changes in population age structure (see Appendix D). For some services, survey data have been used to partially expand age categories, but this is not ideal and was not possible for all services.

The absence of granular utilisation data, ideally incorporating a unique patient identifier, means it is not possible to derive a workforce-to-complexity-adjusted activity ratio. Consequently, activity-based demand projections cannot be generated, nor can estimates of the additional workforce required to reduce waiting lists be calculated.

Healthy ageing: Healthy ageing assumptions allow for an examination of how health care demand, and consequently workforce, might change given improvements in life expectancy and are a common assumption in healthcare demand projection models including the Hippocrates model (Keegan et al., 2022; Rachet-Jacquet et al., 2023; European Commission, 2024). The significant data limitations outlined above which led to the pragmatic selection of a WTE per capita-based projection methodology, rather than the age- and sex-specific service demand-based projections usually adopted in the Hippocrates model, means that healthy ageing assumptions cannot be applied in this analysis.

Electronic Health Record (EHR): In addition to the lack of service utilisation information, the lack of an EHR means it is not possible to capture the full continuum of care or assess the impact of integrated care initiatives across settings. Important information such as the time patients spend in treatment from referral to service discharge, combined with the frequency and intensity of service received, is not available. This would provide a picture of the level of resources required by patient type and allow for more accurate service planning and, for example, allow for the monitoring of care pathways across regions.

Best practice/safe staffing: While it was possible for the HSE to adjust 2022 workforce data to account for the contribution of overtime and agency in care delivery, both regionally and by staff category, this does not indicate the extent to which current staffing reflects best practice or safe staffing levels. Work is ongoing, led by the Chief Nursing Office in the Department of Health, to develop

frameworks for safe nurse staffing which may inform future analyses. It is worthwhile to note that in some of the focus groups it was highlighted that due to resource limitations in some cases, they prioritise services for particular age cohorts.

Regional variation: The analysis has demonstrated substantial regional variations in service provision, the reasons for which cannot be currently explained. In particular, the lack of information on private provision and the extent to which it may be substituting for a lack of public provision in particular areas is a limitation of the analysis.

7.4 POLICY IMPLICATIONS, REFLECTIONS AND CONCLUSIONS

The main finding of this report is that workforce requirements for the selected HSE primary and community care services will increase significantly by 2040, driven by population growth and particularly population ageing. The findings have important implications for service planning, workforce planning and training, and infrastructure at the regional and national level over the coming years.

The limitations of the analysis are clearly outlined throughout the report, and while the full implications of these limitations are difficult to quantify, particularly the impact of waiting list pressures, even the lower end of the projections suggest significant growth requirements by 2040 for all the professions and grades considered. While some analysis was undertaken to estimate the volume of first appointments required to reduce waiting lists, the inability to convert this to a WTE requirement means that the growth requirements projected may underestimate future requirements.

More broadly, in this analysis, while we model changes to service delivery in terms of the workforce mix in the community providing the service, we do not model the demand pressure that may arise from the continued implementation of Sláintecare-related policies. Currently, there are no best practice or safe staffing targets available, nor are there estimates of the staffing impact of the rollout of the Integrated Service Delivery model, which aims to divert care where appropriate from the acute hospital to the community setting. New programmes may increase pressure on community-based services, and further analysis will be required to monitor these pressures, and future projections adjusted accordingly.

This report highlights many data limitations which meant that the existing Hippocrates model infrastructure had to be adapted to project from a WTE per capita rather than a service demand basis. It is important to note that there are many digital initiatives at various stages of development which should ensure significant improvements in data availability into the future. With a clear focus

now on the importance of digital technology by both the Department of Health and the HSE, several important initiatives are underway or in the pipeline (HSE, 2023f; Department of Health, 2024). These include the expansion of telehealth capabilities, the rollout of the National Shared Care Record and the HSE Health App.

An integrated EHR with a unique patient identifier is in the planning stage in the HSE (HSE, 2025g). In an important step towards a national EHR, the HSE is introducing a digital system for managing patient information across all community services. The Community Care Record will be a centralised digital platform for recording and sharing patient information across community-based services (HSE, 2025g; h). Implementation of the new system is planned to commence in 2026 (Department of Health, 2026) with full implementation to be completed by the end of 2027.[43] The Community Care Record has the potential to improve data quality by enabling real-time data entry, standardising demographic and service utilisation fields, and supporting integration across different service areas. The introduction of a unified EHR will ultimately enable a more complete view of patient pathways across both acute and non-acute services. At a regional level, such a comprehensive dataset will greatly enhance our ability to monitor and evaluate the impact of programmes, including those aimed at improving care for individuals with chronic conditions. From a modelling perspective, such data would greatly enhance the level of analysis that could be undertaken and ultimately improve the accuracy of projections.

In the Irish context, the introduction of the Community Care Record and ultimately an EHR will provide significant benefits to the system going forward. In addition, it is important to also acknowledge the emerging evidence on the productivity gains that could be realised through the integration of artificial intelligence (AI) tools (Allas et al., 2025; Department of Health and Social Care and NHS England, 2025). In the AI for Care strategy (2026–2030), the Department of Health and HSE outline four key areas (strategic pillars) in which there are opportunities for AI deployment: clinical care, operations, research and innovation and public health. Often cited is the ability of AI tools to reduce the administrative burden on staff, thus freeing up time for patient care (Department of Health and HSE, 2026). The extent to which such tools can mitigate the demand pressures of a growing and ageing population are yet unknown but combined with improvements in data collection could be significant.

On the supply side, recruitment and retention of staff is an ongoing challenge both in Ireland and internationally (Department of Health, 2025a; HSE, 2025h). A recent OECD report highlighted that in 2023, 43.4 per cent of doctors and 51.8 per cent of nurses in Ireland were foreign trained, while significant numbers of Irish-trained

[43] https://about.hse.ie/our-work/technology/community-care-record/

professionals were migrating to countries with better pay and working conditions. They argue that this raises both equity and sustainability concerns (OECD/European Commission, 2024). This is combined with a reported downturn in applications to nursing education internationally and a declining interest in healthcare careers more broadly. However, recent Irish data from the Central Applications Office shows an uptick in first preference applications to nursing and midwifery programmes between 2024 and 2026 (CAO, 2025; 2026), above that in total applications. As well as recruitment, retention is a significant challenge. The HSE reports significant levels of staff turnover, with higher rates for therapy professions in 2024 (8.1%) than the overall national average across all staff categories (7.4%) (HSE, 2025i).

In this context, it is important that health and social care policy reforms are implemented to build capacity and capability through the development of advanced skills, optimisation of skill-mix, and scoping the introduction of new roles where appropriate. Work to introduce advanced practice roles in HSCPs is ongoing within the Department of Health and the HSE and in Budget 2025, funding was allocated for candidate advanced practice HSCP posts for the first time (Dáil Éireann, 2025b).

Finally, with regard to projection modelling, it is important to understand that it is an iterative process. As previously highlighted in relation to Hippocrates and other projections, models and assumptions must be updated to account for changes in the data environment, new population projections, new policies or service reconfiguration (Ono et al., 2013; Kinsella and Kiersey, 2016; Brick et al., 2025). These projections should be seen as a medium-term guide to future requirements, taking account of the assumptions incorporated and significant data limitations. For example, for public health and community nursing services, the work on Phase 3 (ii) of the Taskforce on Staffing and Skill Mix for Nursing, which covers general community nursing care, is now underway. The outcome of that work may impact future workforce requirements and should be considered in future projections. Similarly, waiting lists for primary care therapies have been highlighted as a priority issue in the ongoing Sláintecare reform programme, with efforts underway to establish a Primary Care Waiting List Management Protocol as part of a programmatic approach to addressing demand (Government of Ireland, 2025b). This may impact on future workforce requirements, at least in the short term while backlogs are reduced using targeted investment through the National Service Plan (HSE, 2025h).

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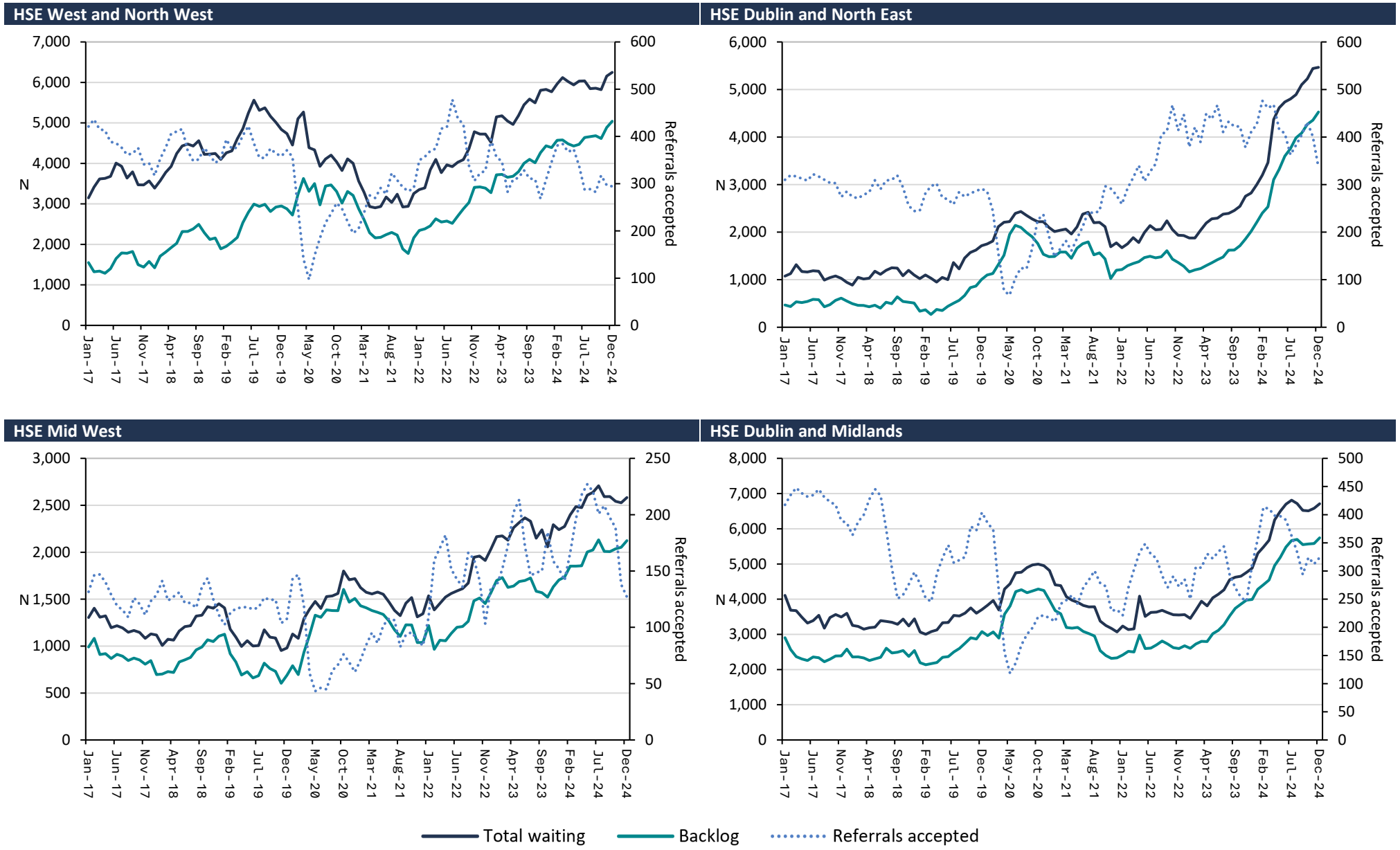
APPENDIX A

Waiting lists for HSE primary and community care services

Regional level waiting list metrics and growth indices by services are presented in Figures A.2 and A.3. While in many cases the patterns and trajectories are like the national aggregate in Figure A.1, there are some variations across HSE Health Regions for some services.

Regional waiting list metrics, 2017–2024

FIGURE A.1a Audiology – regional waiting list metrics, 2017–2024



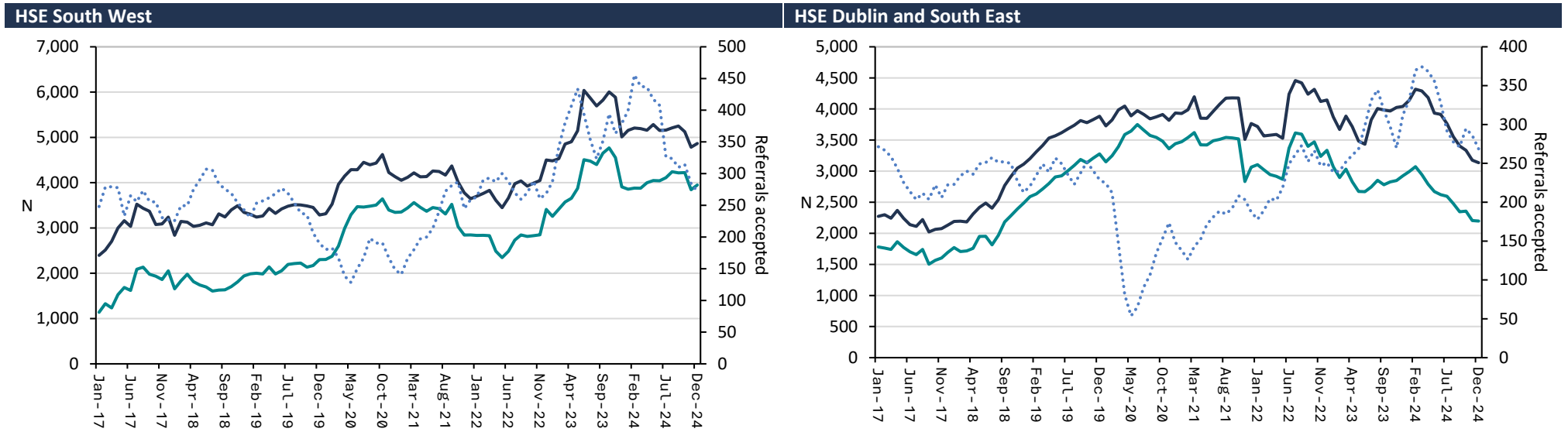
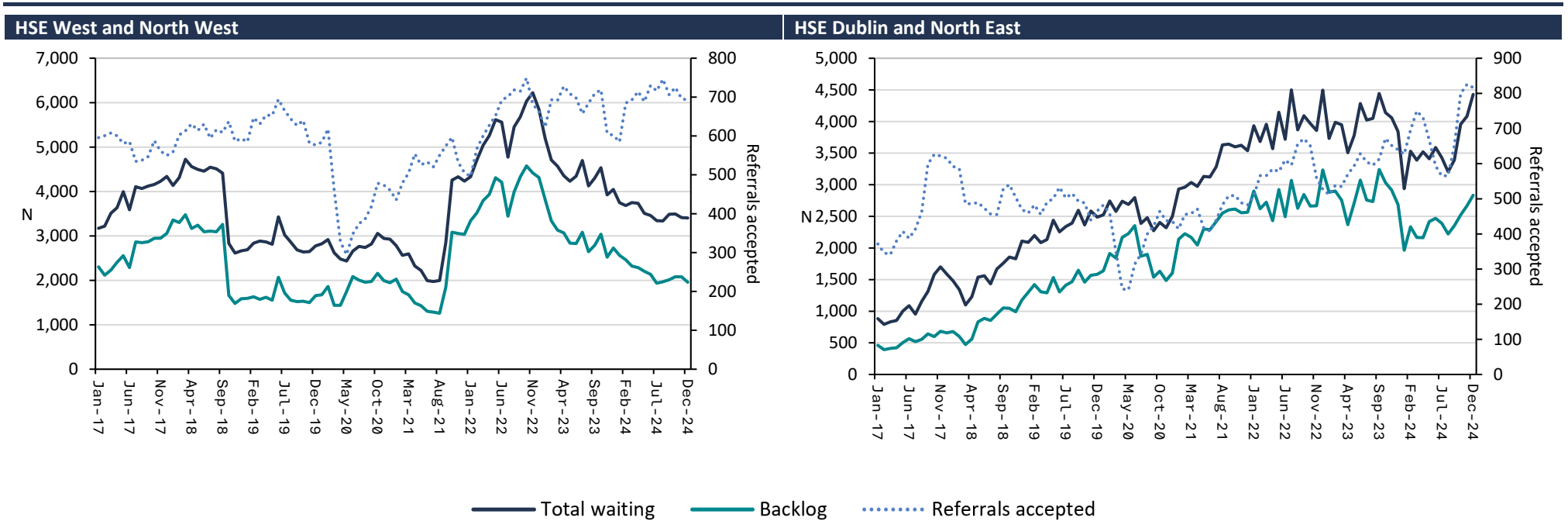
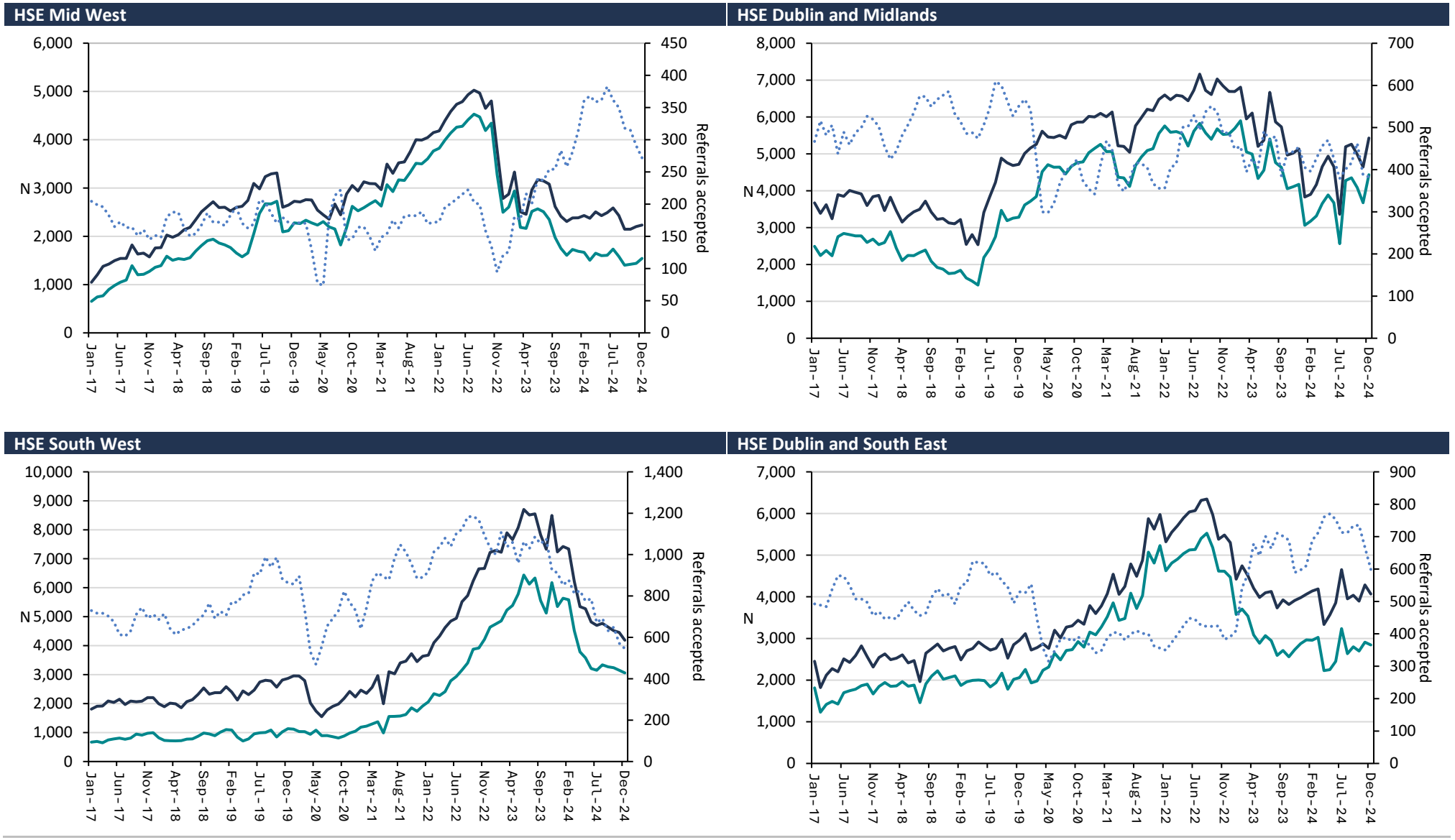


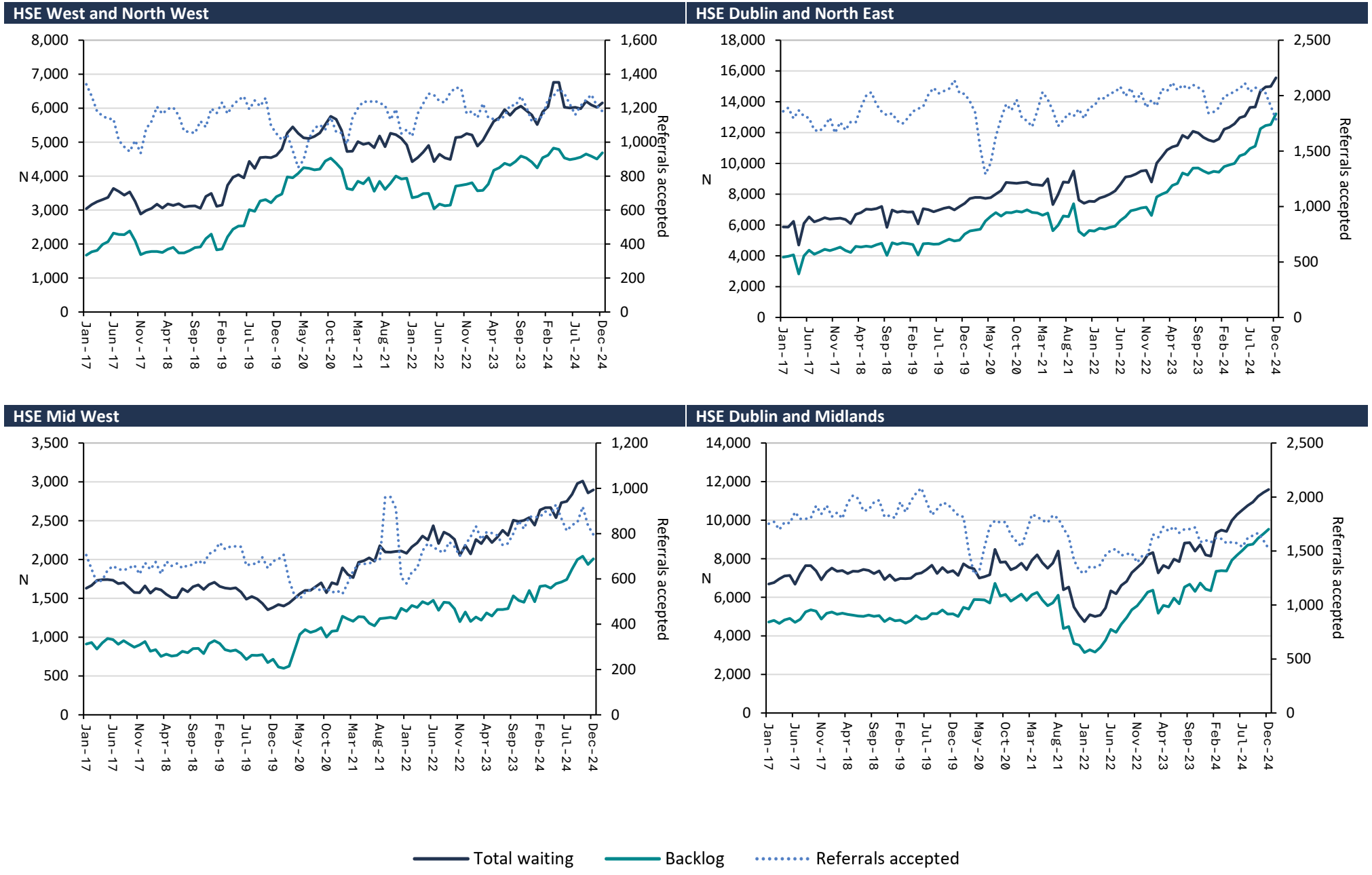
FIGURE A.1b Dietetics – regional waiting list metrics, 2017–2024





Source: HSE BIU Primary Care (2017–2024), authors' calculations.

FIGURE A.1c Occupational therapy – regional waiting list metrics, 2017–2024



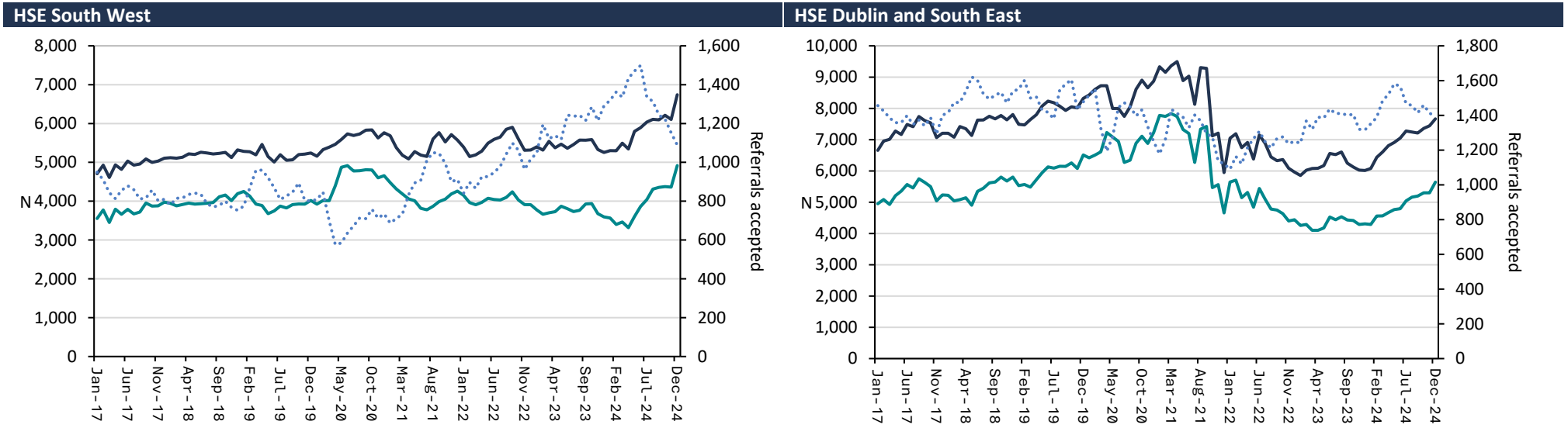
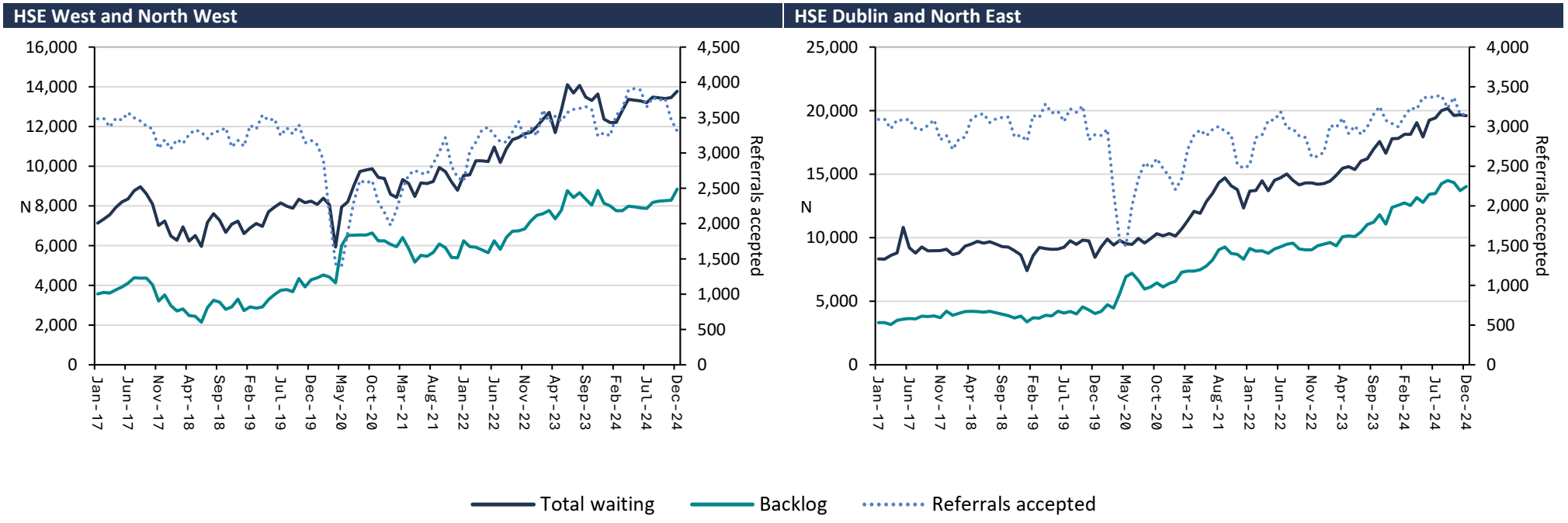
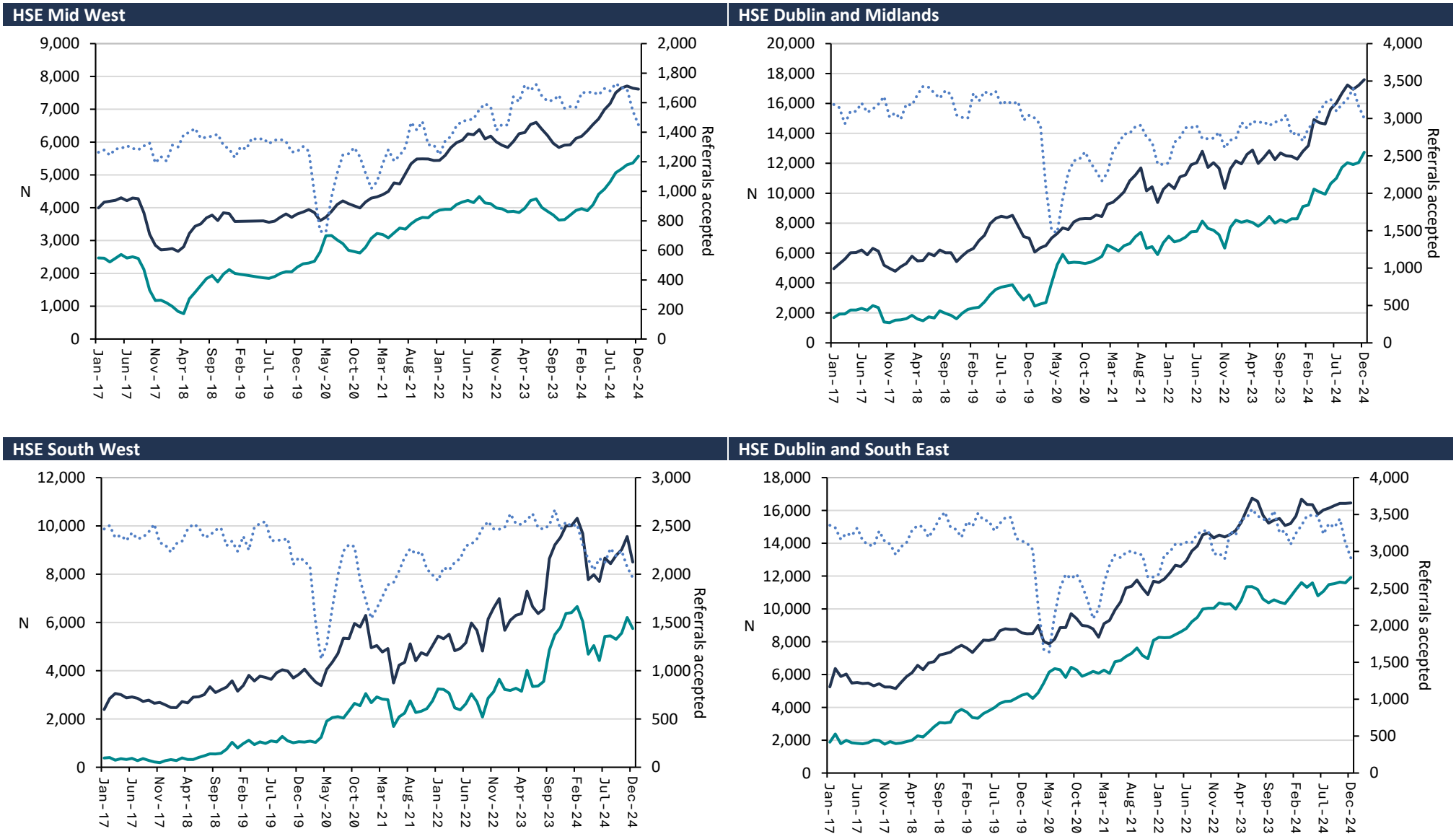


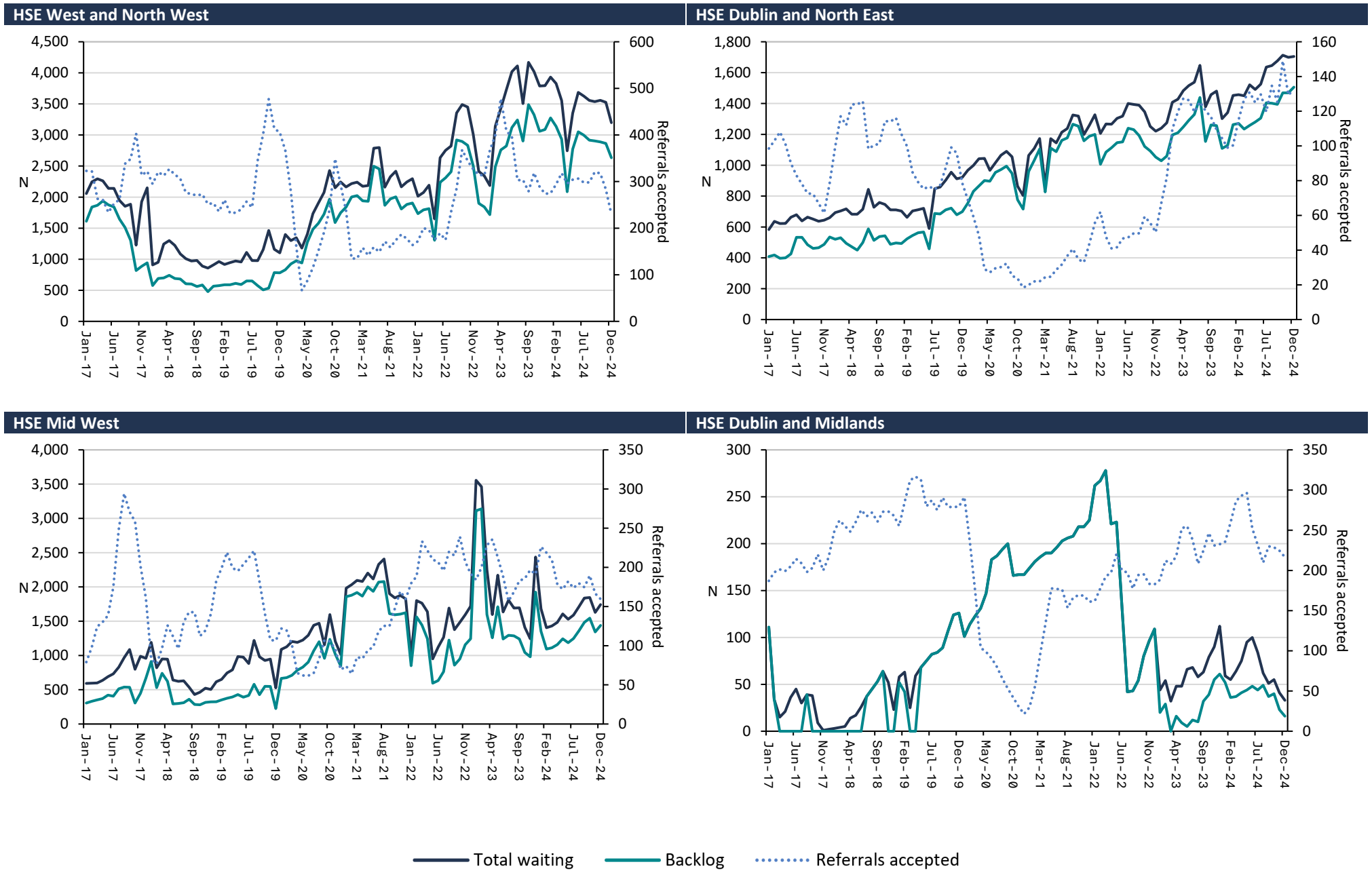
FIGURE A.1d Physiotherapy – regional waiting list metrics, 2017–2024





Source: HSE BIU Primary Care (2017–2024), authors' calculations.

FIGURE A.1e Podiatry – regional waiting list metrics, 2017–2024



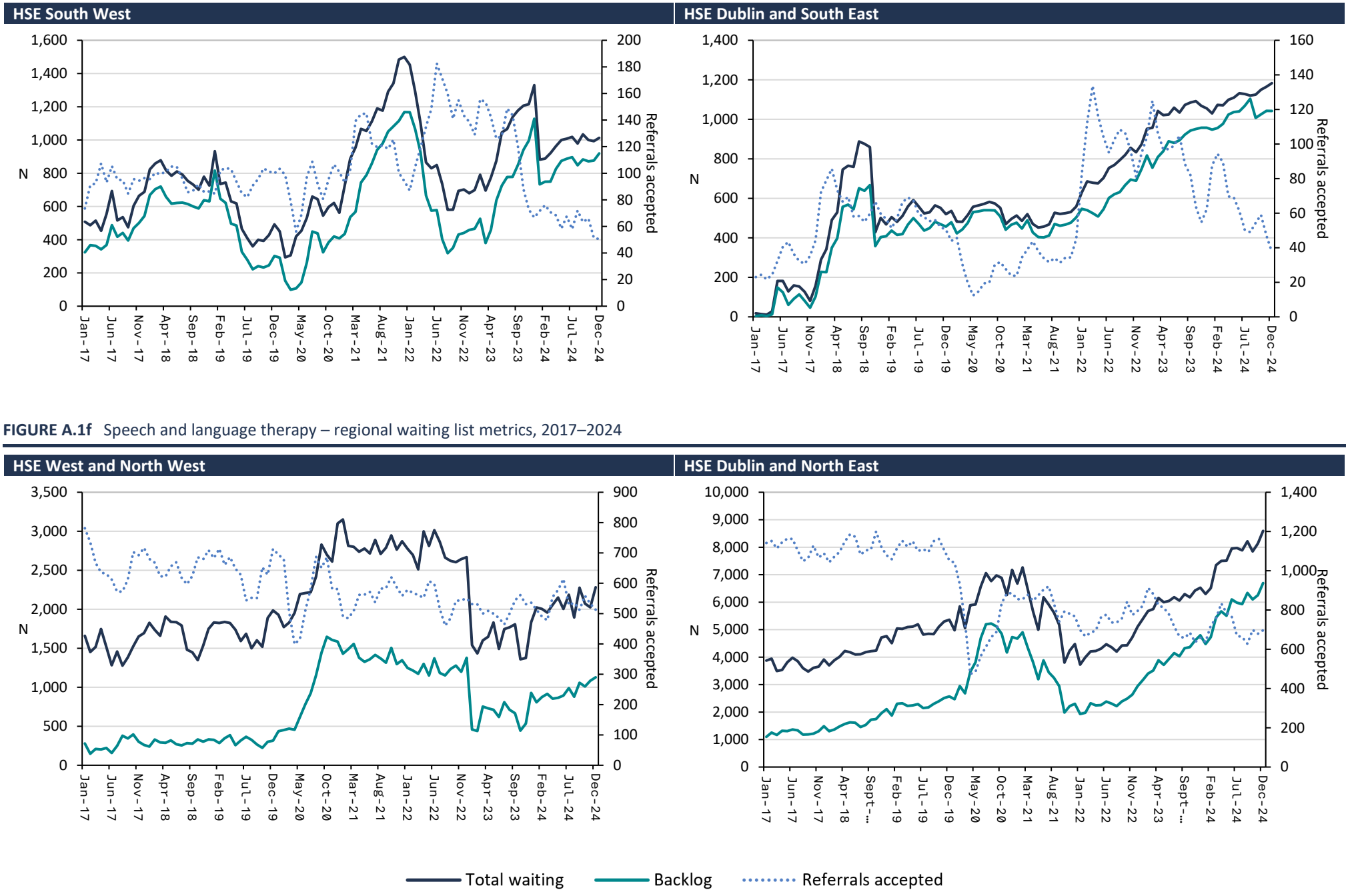
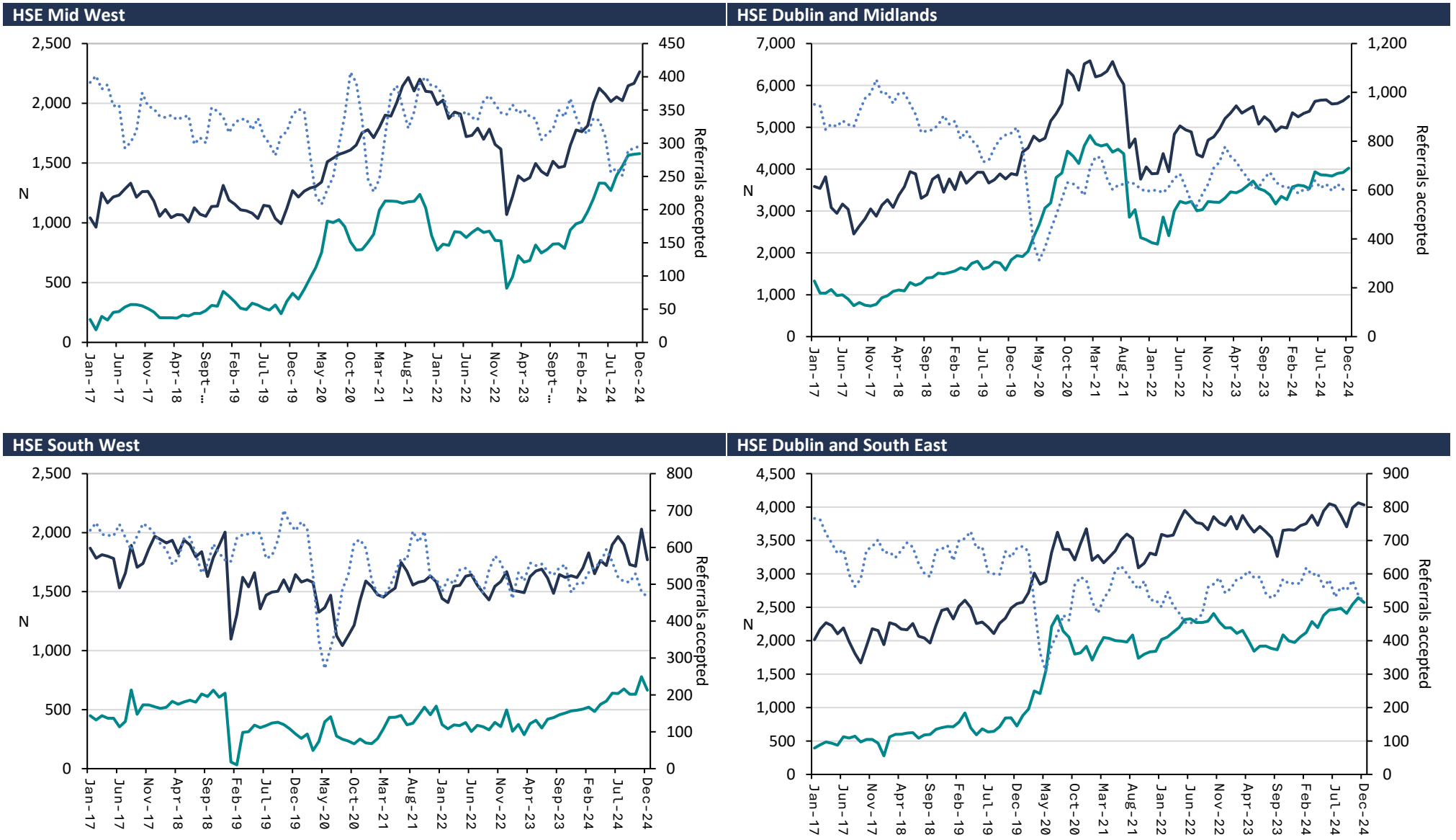


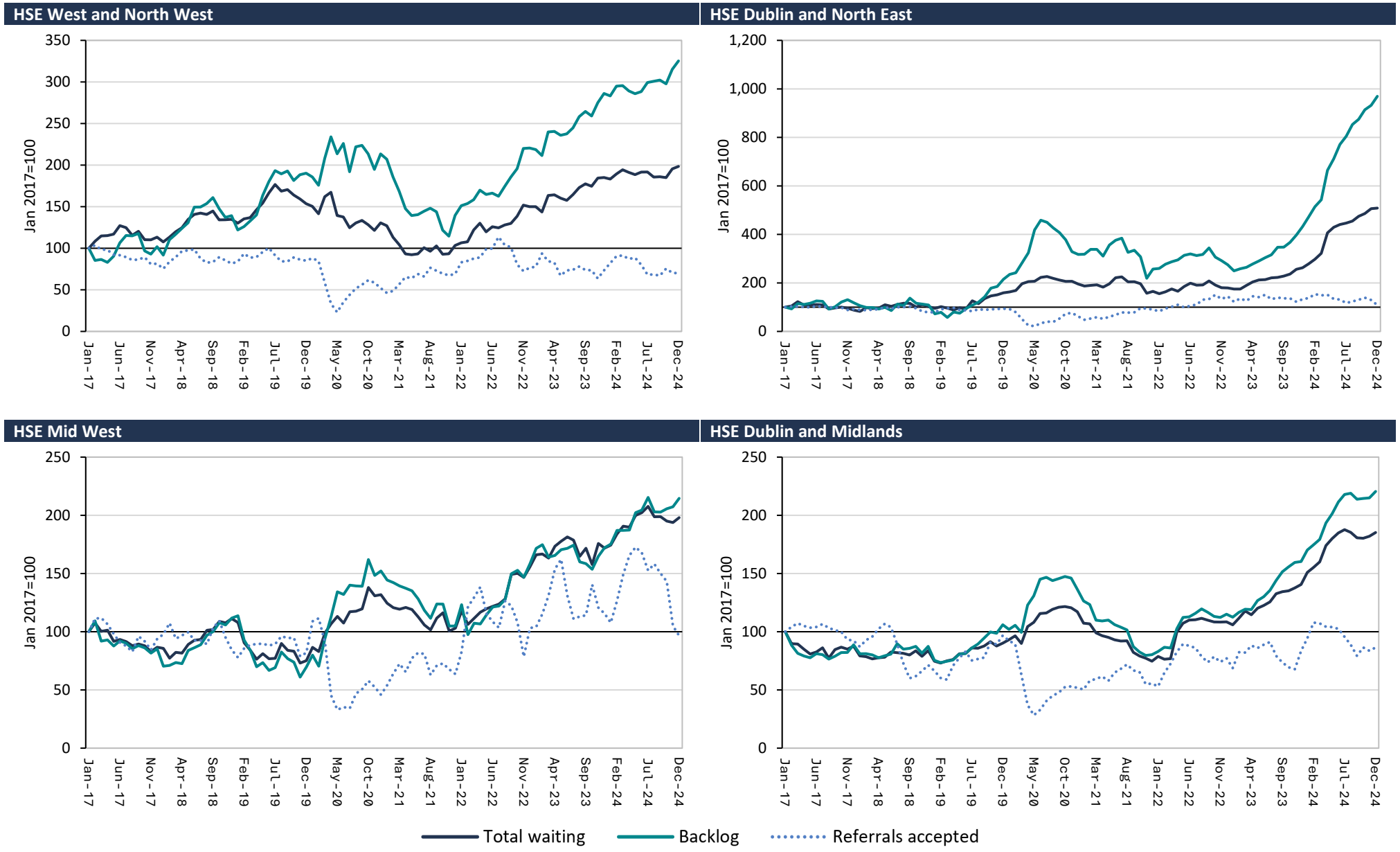
FIGURE A.1f Speech and language therapy – regional waiting list metrics, 2017–2024



Source: HSE BIU Primary Care (2017–2024), authors' calculations.

Regional waiting list growth index 2017=100, 2017–2024

FIGURE A.2a Audiology – regional waiting list growth index 2017–2024, 2017=100



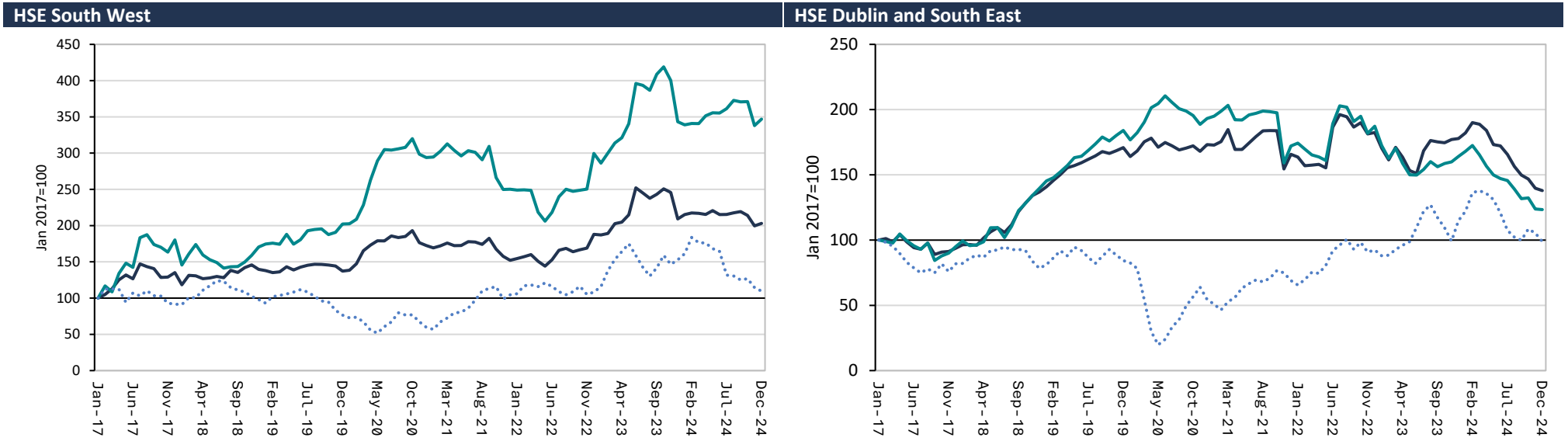
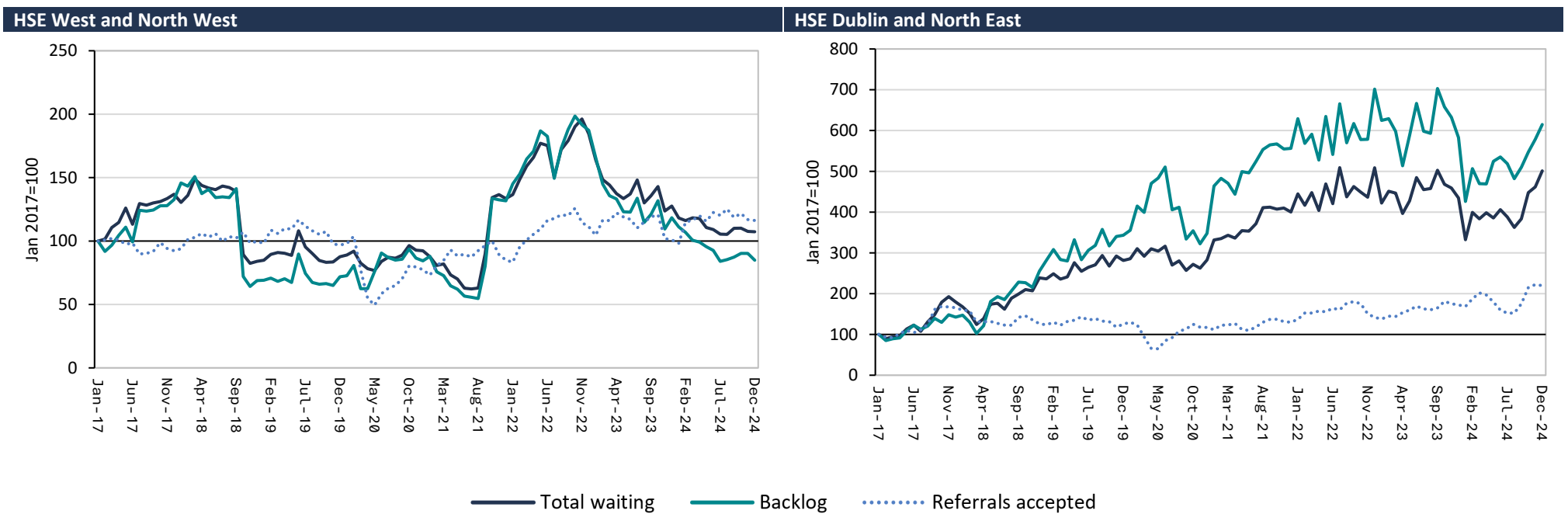
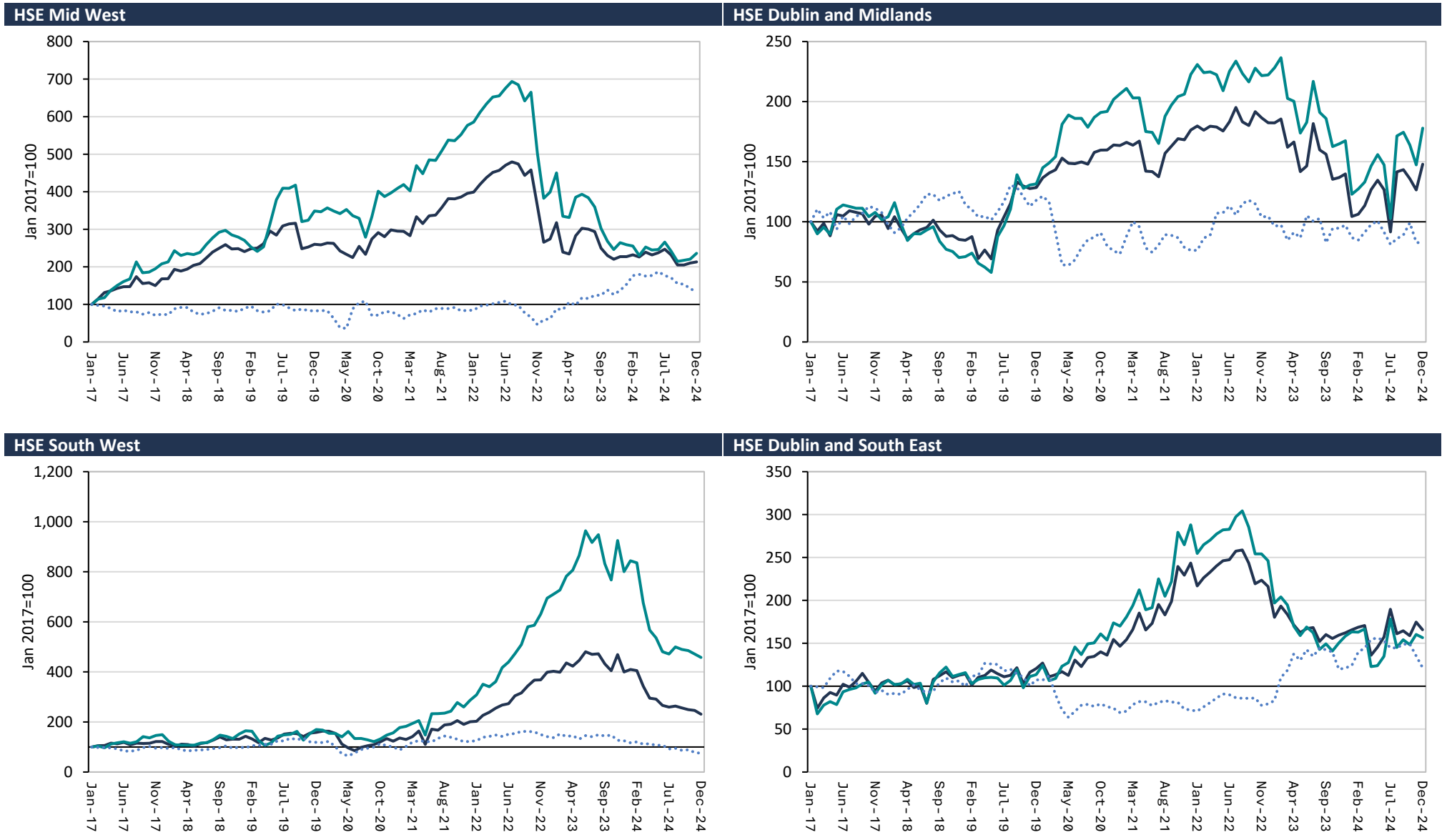


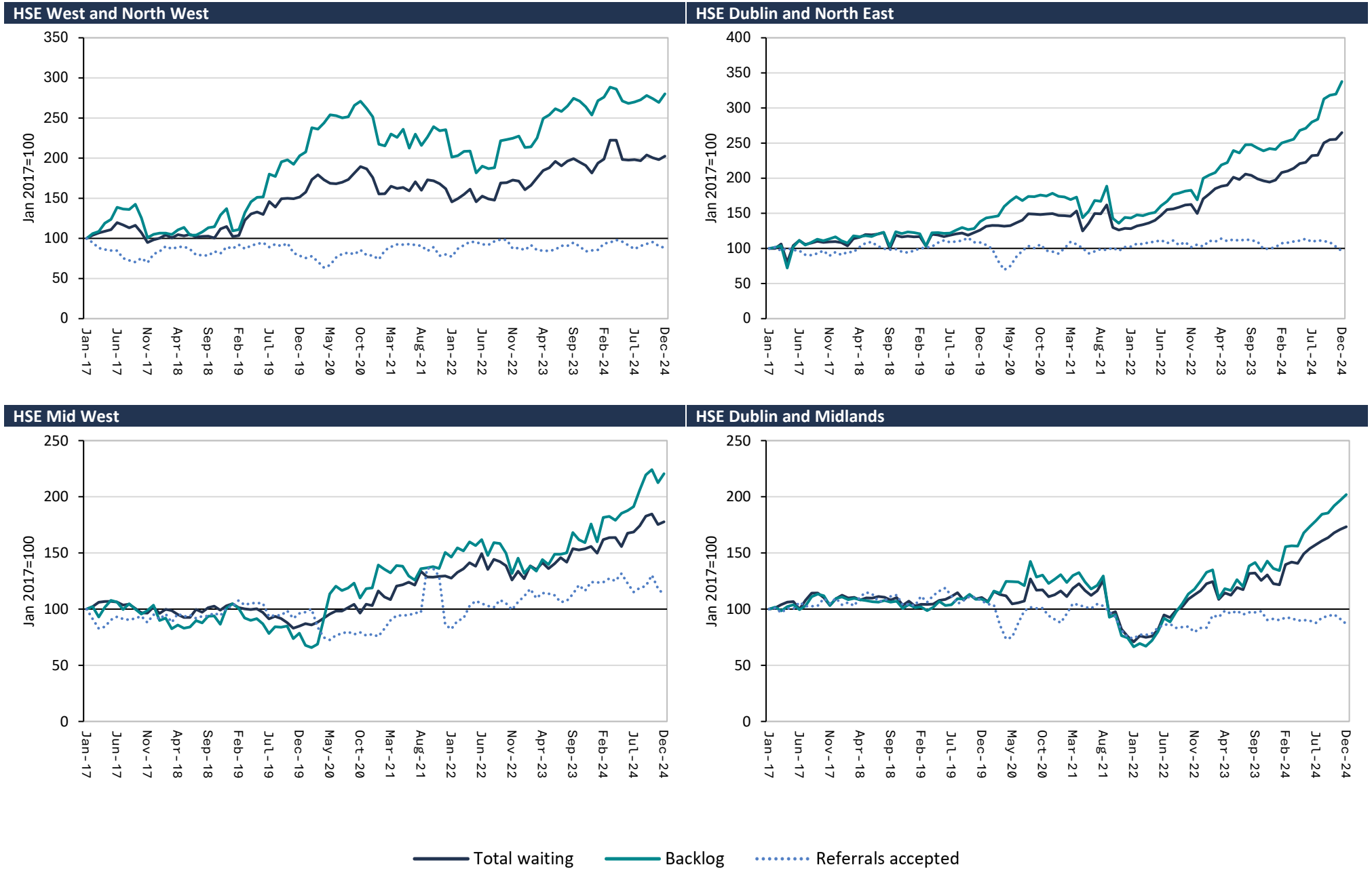
FIGURE A.2b Dietetics – regional waiting list growth index 2017–2024, 2017=100





Source: HSE BIU Primary Care (2017–2024), authors' calculations.

FIGURE A.2c Occupational therapy – regional waiting list growth index 2017–2024, 2017=100



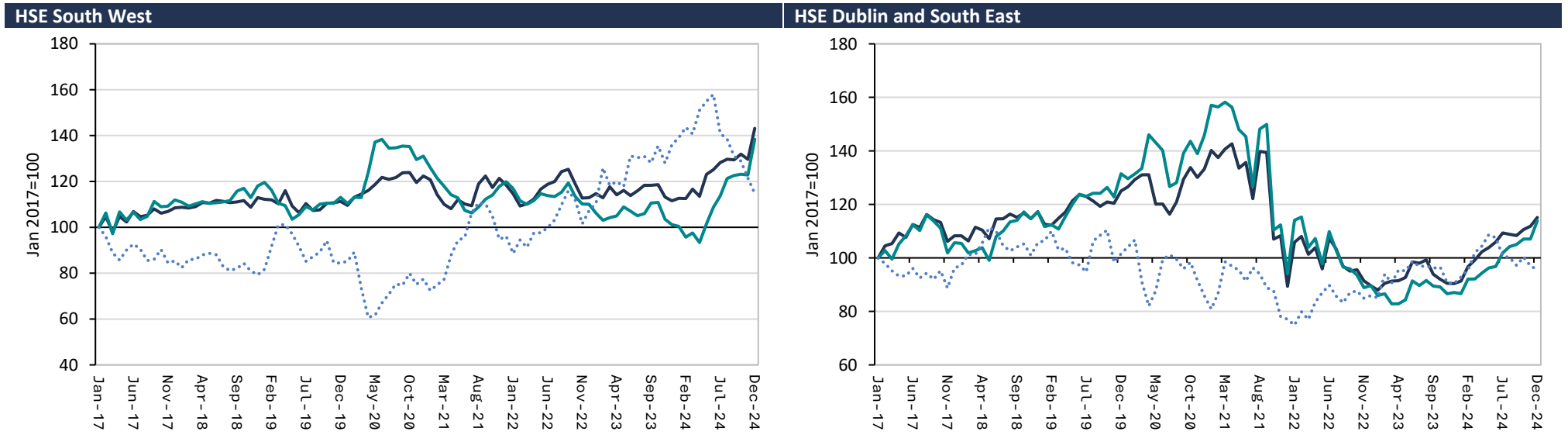
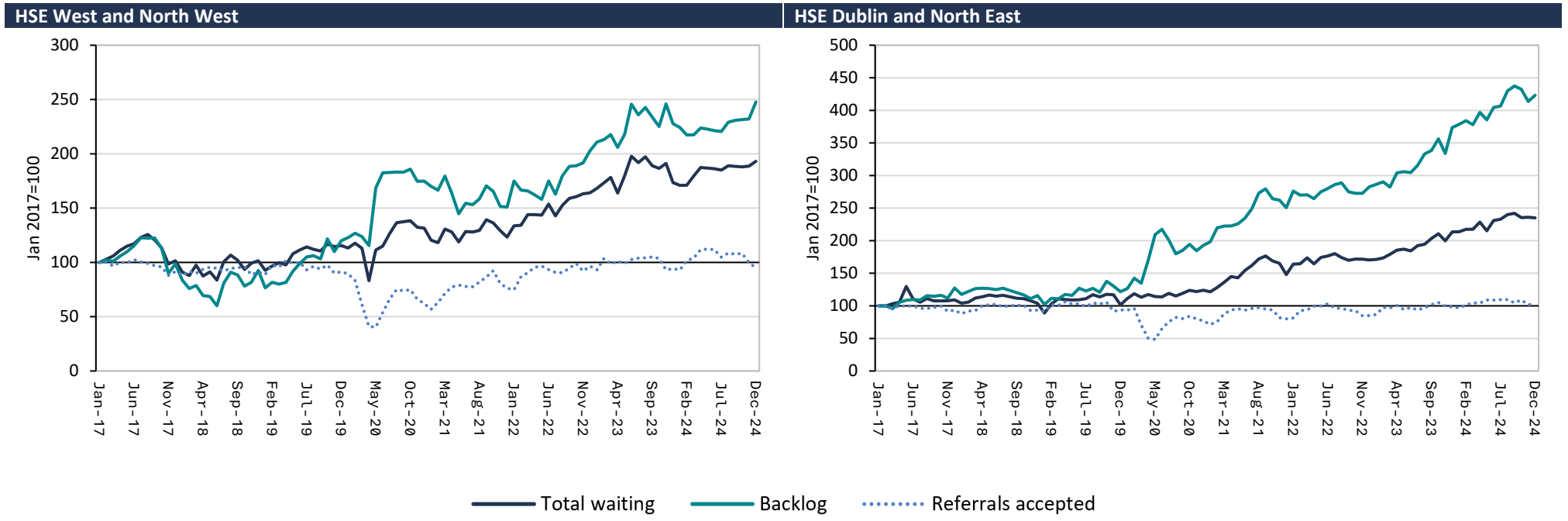
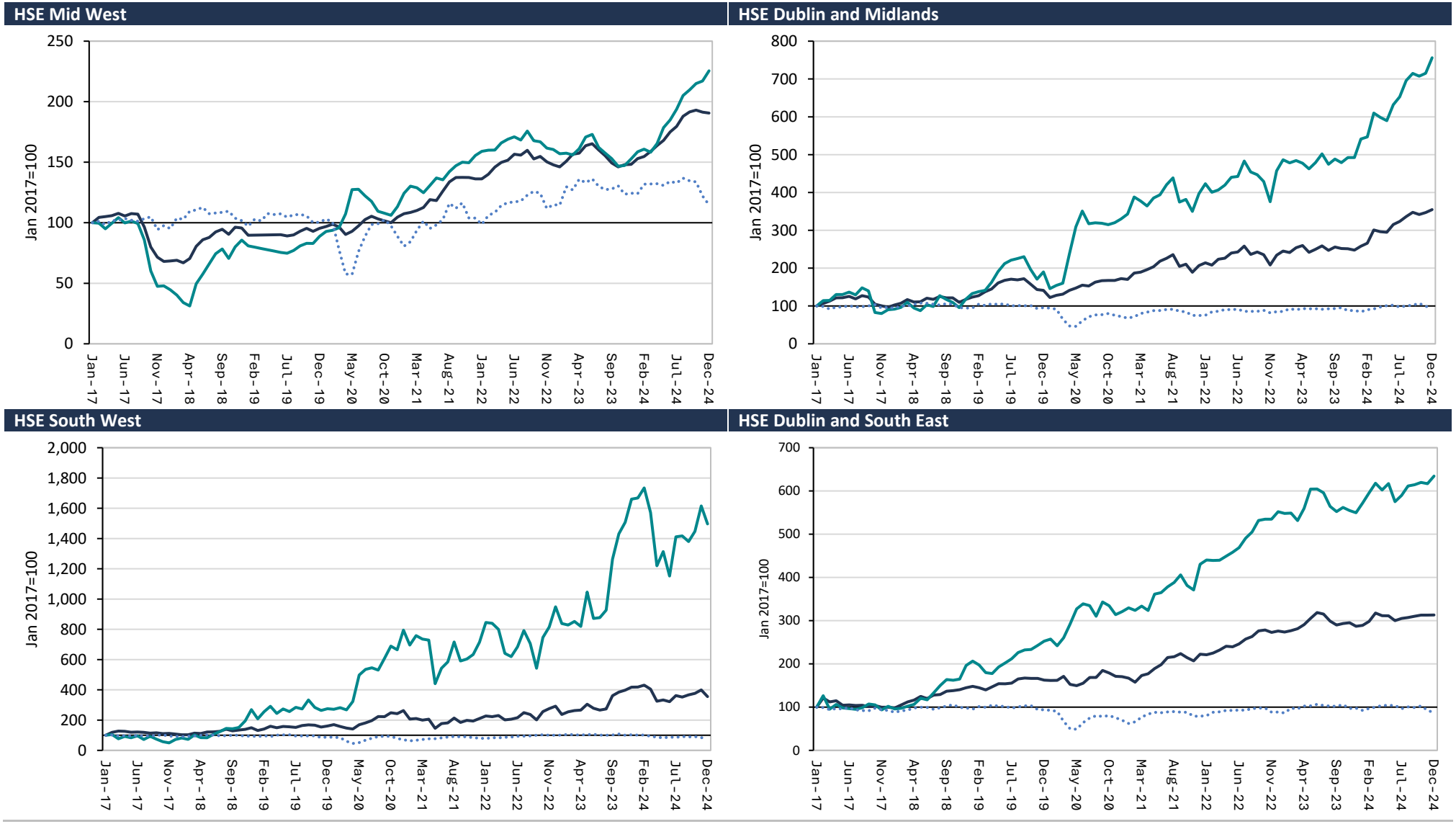


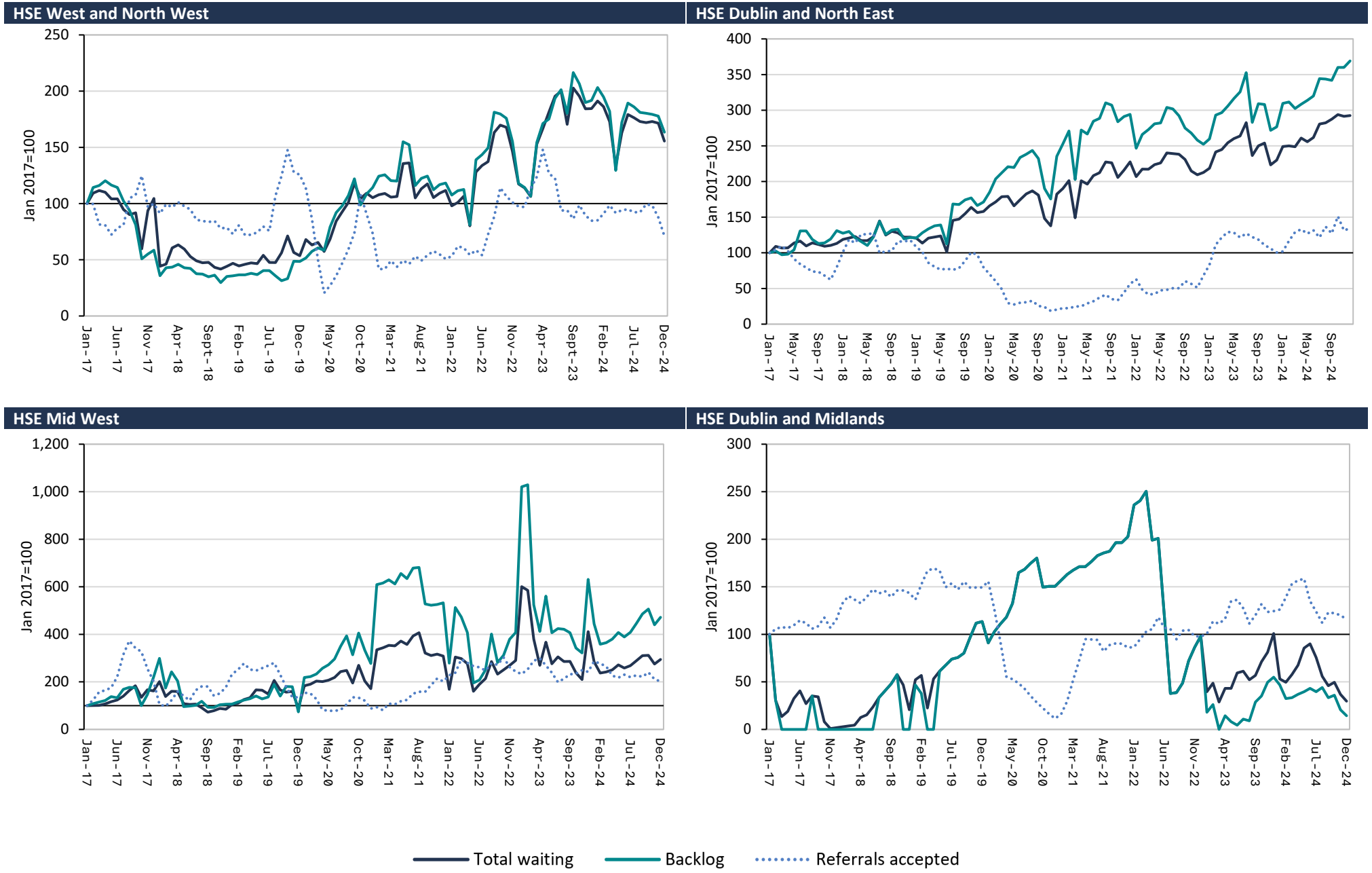
FIGURE A.2d Physiotherapy – regional waiting list growth index 2017–2024, 2017=100





Source: HSE BIU Primary Care (2017–2024), authors' calculations.

FIGURE A.2e Podiatry – regional waiting list growth index 2017–2024, 2017=100



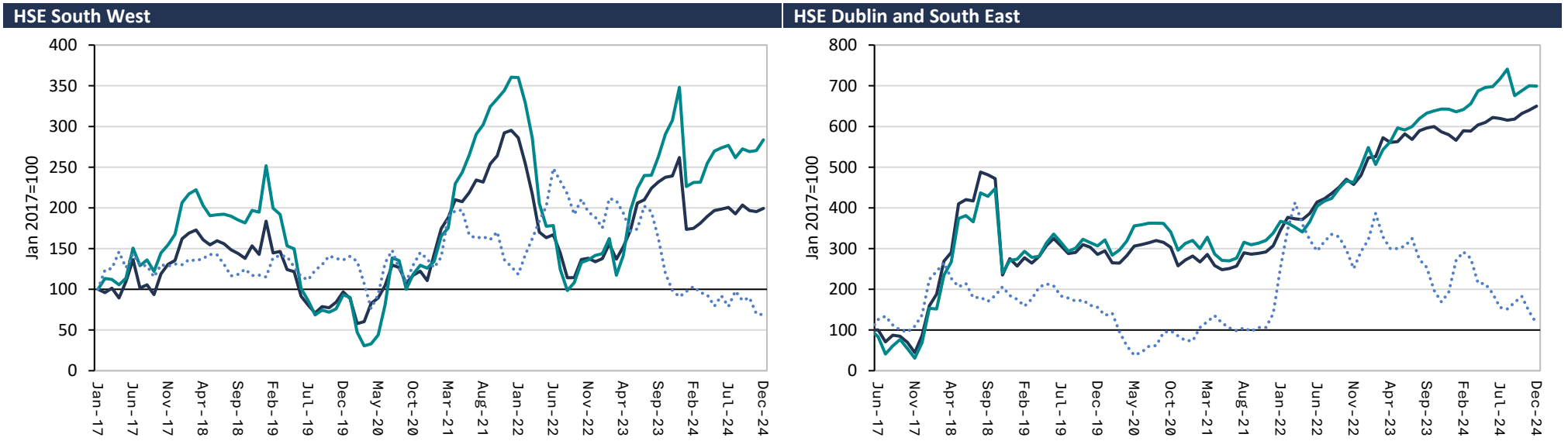
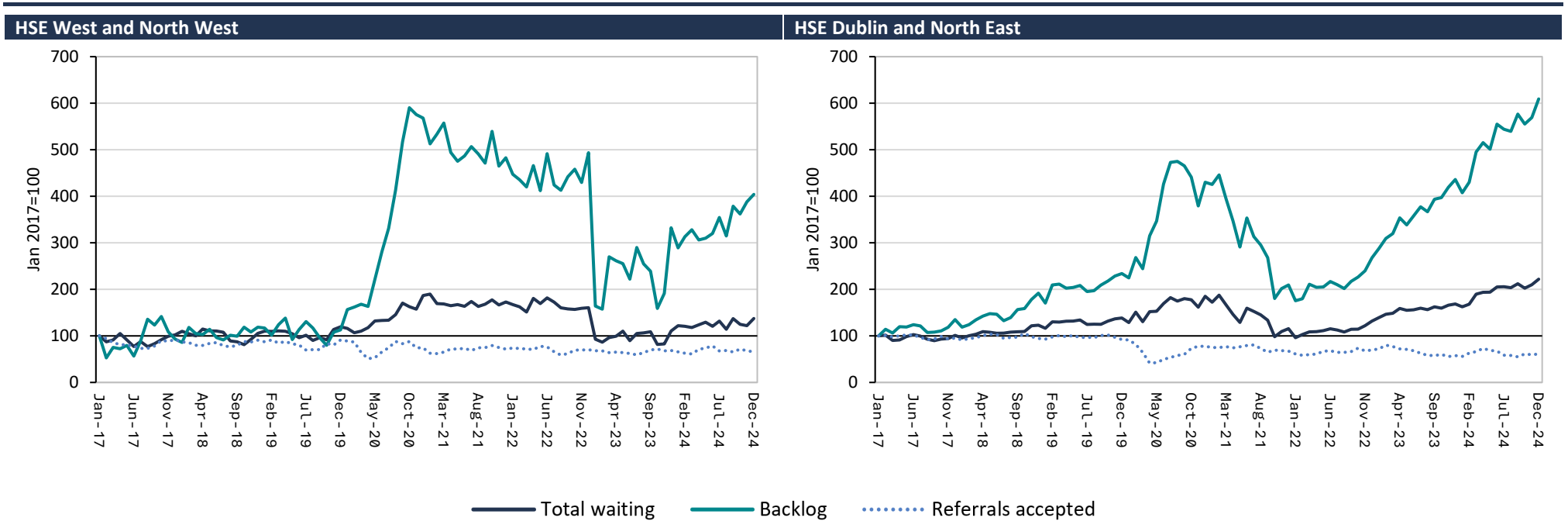
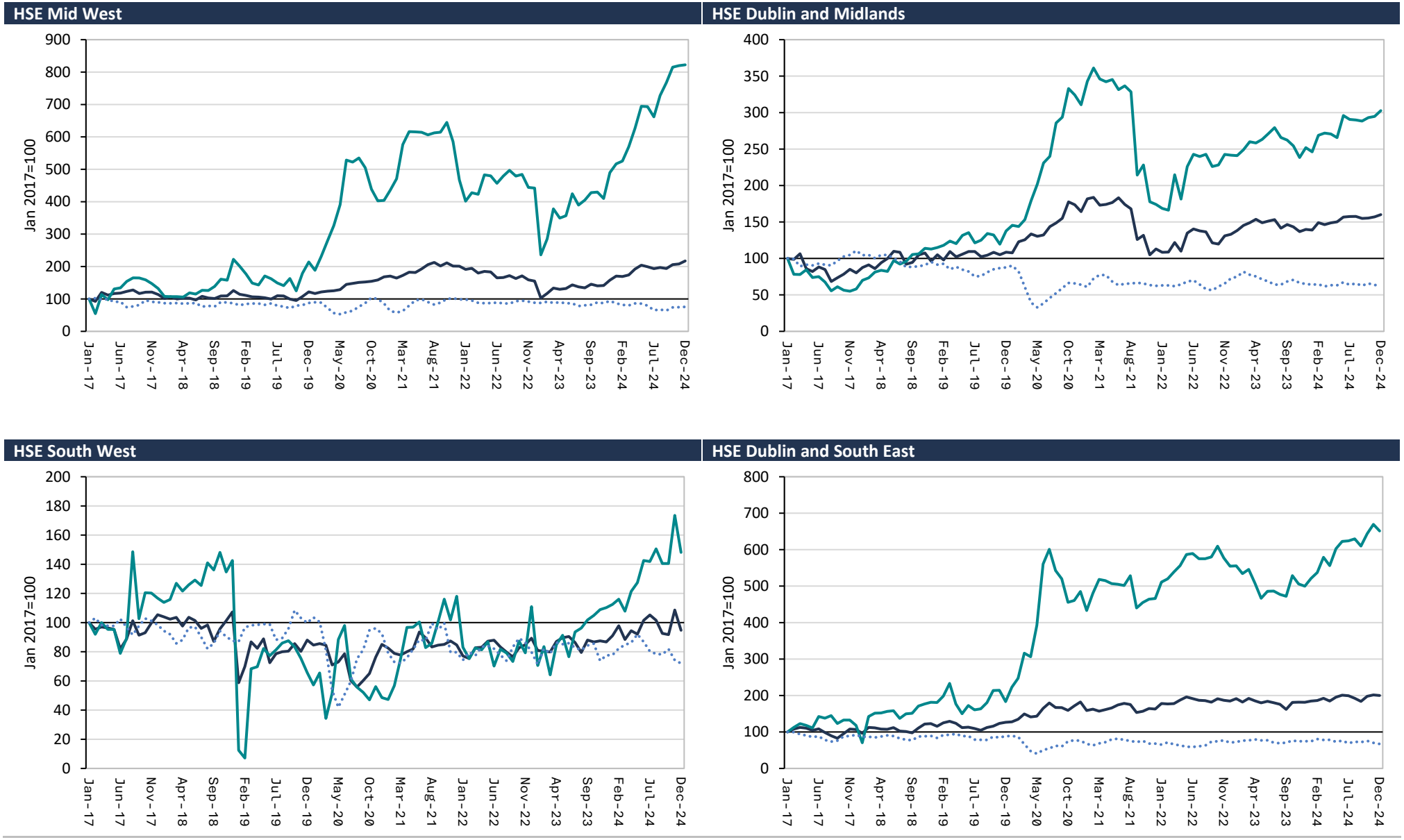


FIGURE A.2f Speech and language therapy – regional waiting list growth index 2017–2024, 2017=100





Source: HSE BIU Primary Care (2017–2024), authors' calculations.

APPENDIX B

Projected regional WTE requirements by professions and grades[44]

TABLE B.1 Audiology – WTE projections by scenario and HSE Health Region, 2022–2040

		2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
			Service demand			Workforce mix[b]		Service demand			Workforce mix	
		WTE[a]	Central	Low Pop	High Pop	GM	SM	Central	Low Pop	High Pop	GM	SM
DNE	Advanced practitioners	0	-	-	-	-	0.8	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	1.4	-	-	-	-	-
	Other	13	6.9	6.4	7.3	6.9	4.7	2.4	2.2	2.5	2.4	1.7
	Audiologists	13	6.9	6.4	7.3	6.9	6.9	2.4	2.2	2.5	2.4	2.4
	Audiology assistants	2	1.0	1.0	1.1	1.1	1.1	2.4	2.2	2.5	2.4	2.4
DML	Advanced practitioners	0	-	-	-	-	0.7	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	1.2	-	-	-	-	-
	Other	12	6.5	6.1	6.9	5.9	4.0	2.5	2.3	2.6	2.3	1.6
	Audiologists	12	6.5	6.1	6.9	5.9	5.9	2.5	2.3	2.6	2.3	2.3
	Audiology assistants	0.7	0.4	0.3	0.4	0.9	0.9	2.5	2.3	2.6	5.0	5.0
DSE	Advanced practitioners	0	-	-	-	-	0.5	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	0.9	-	-	-	-	-
	Other	8	4.4	4.2	4.6	4.4	3.0	2.4	2.3	2.5	2.4	1.7
	Audiologists	8	4.4	4.2	4.6	4.4	4.3	2.4	2.3	2.5	2.4	2.4
	Audiology assistants	3	1.5	1.5	1.6	1.5	1.5	2.4	2.3	2.5	2.4	2.4
SW	Advanced practitioners	0	-	-	-	-	0.6	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	1.0	-	-	-	-	-
	Other	10	4.3	4.0	4.6	4.3	2.8	2.1	2.0	2.2	2.1	1.4
	Audiologists	10	4.3	4.0	4.6	4.3	4.3	2.1	2.0	2.2	2.1	2.1
	Audiology assistants	2	0.9	0.8	1.0	0.9	0.9	2.1	2.0	2.2	2.1	2.1
MW	Advanced practitioners	0	-	-	-	-	0.3	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	0.5	-	-	-	-	-
	Other	5	2.5	2.3	2.6	2.5	1.7	2.3	2.2	2.5	2.3	1.7
	Audiologists	5	2.5	2.3	2.6	2.5	2.5	2.3	2.2	2.5	2.4	2.4
	Audiology assistants	1	0.5	0.5	0.5	0.5	0.5	2.3	2.2	2.5	2.3	2.3
WNW	Advanced practitioners	0	-	-	-	-	0.9	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	1.5	-	-	-	-	-
	Other	14	7.6	7.2	7.9	7.6	5.2	2.4	2.3	2.5	2.4	1.7
	Audiologists	14	7.6	7.2	7.9	7.6	7.6	2.4	2.3	2.5	2.4	2.4
	Audiology assistants	2	0.9	0.8	0.9	0.9	0.9	2.4	2.3	2.5	2.4	2.4

Notes: GM: grade-mix, SM: skill-mix. Figures may be subject to rounding.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b Where the grades of AP and CS did not exist in 2022, their introduction is modelled as part of the skill-mix scenario.
Source: See section 3.3 for an overview of data sources, authors' calculations.

[44] Where the projected additional WTE required are less than 10, an additional decimal place is presented to distinguish between scenarios. Where base-year WTE are less than 5, we do not present average annual growth requirements.

TABLE B.2 Dietetics – WTE projections by scenario and HSE Health Region, 2022–2040

		2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
			Service demand			Workforce mix[b]		Service demand			Workforce mix	
		WTE[a]	Central	Low Pop	High Pop	GM	SM	Central	Low Pop	High Pop	GM	SM
DNE	Advanced practitioners	0	-	-	-	-	2.3	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	4.1	-	-	-	-	-
	Other	43	18	17	20	15	8.9	2.0	1.8	2.1	1.7	1.1
	Dietitians	43	18	17	20	15	15	2.0	1.8	2.1	1.7	1.7
	Dietetics assistants	-	-	-	-	2.9	2.9	-	-	-	-	-
DML	Advanced practitioners	0	0.0	0.0	0.0	0.0	2.2	-	-	-	-	-
	Clinical specialists	1	0.4	0.4	0.5	0.4	2.8	2.0	1.8	2.1	2.0	-
	Other	39	16.3	15.0	17.7	13.8	9.3	2.0	1.8	2.1	1.7	1.2
	Dietitians	40	17	15	18	14	14	2.0	1.8	2.1	1.7	1.7
	Dietetics assistants	-	-	-	-	2.6	2.6	-	-	-	-	-
DSE	Advanced practitioners	0	-	-	-	-	2.3	-	-	-	-	-
	Clinical specialists	1	0.4	0.4	0.4	0.4	3.2	2.0	1.9	2.1	2.0	-
	Other	42	18	17	19	15	10	2.0	1.9	2.1	1.7	1.2
	Dietitians	43	19	18	20	16	16	2.0	1.9	2.1	1.8	1.8
	Dietetics assistants	-	-	-	-	2.8	2.8	-	-	-	-	-
SW	Advanced practitioners	0	-	-	-	-	1.3	-	-	-	-	-
	Clinical specialists	1	0.4	0.3	0.4	0.4	1.3	1.7	1.6	1.8	1.7	-
	Other	24	8.8	8.1	9.5	7.1	4.9	1.7	1.6	1.8	1.4	1.0
	Dietitians	26	9.2	8.4	9.9	7.5	7.5	1.7	1.6	1.8	1.4	1.4
	Dietetics assistants	-	-	-	-	1.7	1.7	-	-	-	-	-
MW	Advanced practitioners	0	-	-	-	-	1.0	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	1.7	-	-	-	-	-
	Other	18	7.1	6.7	7.5	6.0	3.3	1.9	1.8	2.0	1.6	0.9
	Dietitians	18	7.1	6.7	7.5	6.0	6.0	1.9	1.8	2.0	1.6	1.6
	Dietetics assistants	-	-	-	-	1.2	1.2	-	-	-	-	-
WNW	Advanced practitioners	0	-	-	-	-	2.3	-	-	-	-	-
	Clinical specialists	1	0.3	0.3	0.4	0.3	2.9	1.5	1.4	1.6	1.4	-
	Other	45	14	12	15	11	5.9	1.5	1.4	1.6	1.2	0.7
	Dietitians	46	14	13	15	11	11	1.5	1.4	1.6	1.2	1.2
	Dietetics assistants	-	-	-	-	2.7	2.7	-	-	-	-	-

Notes: GM: grade-mix, SM: skill-mix. Figures may be subject to rounding.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b Where the grades of AP and CS did not exist in 2022, their introduction is modelled as part of the skill-mix scenario.
Source: See section 3.3 for an overview of data sources, authors' calculations.

TABLE B.3 Occupational therapy – WTE projections by scenario and HSE Health Region, 2022–2040

		2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
			Service demand			Workforce mix[b]		Service demand			Workforce mix	
		WTE[a]	Central	Low Pop	High Pop	GM	SM	Central	Low Pop	High Pop	GM	SM
DNE	Advanced practitioners	0	-	-	-	-	8.2	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	14	-	-	-	-	-
	Other	135	80	76	84	69	47	2.6	2.5	2.7	2.3	1.7
	Occupational therapists	135	80	76	84	69	69	2.6	2.5	2.7	2.3	2.3
	Occupational therapy assistants	7	4.1	3.9	4.3	15	15	2.6	2.5	2.7	6.6	6.6
DML	Advanced practitioners	0	-	-	-	-	7.6	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	13	-	-	-	-	-
	Other	124	73	69	76	67	46	2.6	2.5	2.7	2.4	1.8
	Occupational therapists	124	73	69	76	67	67	2.6	2.5	2.7	2.4	2.4
	Occupational therapy assistants	9	5.4	5.1	5.6	11.1	11.1	2.6	2.5	2.7	4.5	4.5
DSE	Advanced practitioners	0	-	-	-	-	7.3	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	13	-	-	-	-	-
	Other	131	69	66	72	52	32	2.4	2.3	2.5	1.9	1.2
	Occupational therapists	131	69	66	72	52	52	2.4	2.3	2.5	1.9	1.9
	Occupational therapy assistants	1	0.5	0.5	0.5	18	18	2.4	2.3	2.5	18.2	18.2
SW	Advanced practitioners	0	-	-	-	-	5.4	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	9.4	-	-	-	-	-
	Other	101	46	43	48	33	18	2.1	2.0	2.2	1.6	0.9
	Occupational therapists	101	46	43	48	33	33	2.1	2.0	2.2	1.6	1.6
	Occupational therapy assistants	1	0.5	0.4	0.5	13.5	14	2.1	2.0	2.2	16.0	16.0
MW	Advanced practitioners	0	-	-	-	-	4.0	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	6.9	-	-	-	-	-
	Other	65	43	42	44	34	23	2.9	2.8	2.9	2.4	1.7
	Occupational therapists	65	43	42	44	34	34	2.9	2.8	2.9	2.4	2.4
	Occupational therapy assistants	1	0.7	0.6	0.7	9.4	9.4	2.9	2.8	2.9	14.0	14.0
WNW	Advanced practitioners	0	-	-	-	-	7.1	-	-	-	-	-
	Clinical specialists	1	0.5	0.4	0.5	0.5	11	2.0	1.9	2.1	1.9	-
	Other	130	54	51	57	45	27	2.0	1.9	2.1	1.7	1.1
	Occupational therapists	131	55	52	58	46	46	2.0	1.9	2.1	1.7	1.7
	Occupational therapy assistants	7	2.7	2.6	2.9	12	12	2.0	1.9	2.1	5.9	5.9

Notes: OT: occupational therapy, GM: grade-mix, SM: skill-mix. Figures may be subject to rounding.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b Where the grades of AP and CS did not exist in 2022, their introduction is modelled as part of the skill-mix scenario.
Source: See section 3.3 for an overview of data sources, authors' calculations.

TABLE B.4 Physiotherapy – WTE projections by scenario and HSE Health Region, 2022–2040

		2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
			Service demand			Workforce mix[b]		Service demand			Workforce mix	
		WTE[a]	Central	Low Pop	High Pop	GM	SM	Central	Low Pop	High Pop	GM	SM
DNE	Advanced practitioners	0	-	-	-	-	7.5	-	-	-	-	-
	Clinical specialists	2	1.1	1.0	1.2	1.1	11	2.2	2.0	2.3	2.2	-
	Other	131	62	57	66	52	35	2.2	2.0	2.3	1.9	1.3
	Physiotherapists	134	**63**	**58**	**68**	**53**	**53**	**2.2**	**2.0**	**2.3**	**1.9**	**1.9**
	Physiotherapy assistants	7	3.1	2.9	3.4	12.6	12.6	2.2	2.0	2.3	6.1	6.1
DML	Advanced practitioners	0	-	-	-	-	7.0	-	-	-	-	-
	Clinical specialists	5	2.6	2.4	2.7	2.6	7.1	2.3	2.2	2.4	2.3	5.0
	Other	116	58	55	62	51	40	2.3	2.2	2.4	2.0	1.6
	Physiotherapists	121	**61**	**57**	**65**	**54**	**54**	**2.3**	**2.2**	**2.4**	**2.1**	**2.1**
	Physiotherapy assistants	7	3.5	3.3	3.7	11	11	2.3	2.2	2.4	5.3	5.3
DSE	Advanced practitioners	0	-	-	-	-	7.2	-	-	-	-	-
	Clinical specialists	4	1.6	1.5	1.7	1.6	8.6	1.9	1.8	2.0	1.9	-
	Other	135	54	51	58	39	24	1.9	1.8	2.0	1.4	0.9
	Physiotherapists	139	**56**	**52**	**60**	**40**	**40**	**1.9**	**1.8**	**2.0**	**1.4**	**1.4**
	Physiotherapy assistants	2	0.7	0.7	0.8	16	16	1.9	1.8	2.0	13.7	13.7
SW	Advanced practitioners	0	-	-	-	-	4.9	-	-	-	-	-
	Clinical specialists	1	0.2	0.2	0.2	0.2	8.1	2.0	1.9	2.1	1.9	-
	Other	95	40	37	42	27	15	2.0	1.9	2.1	1.4	0.8
	Physiotherapists	95	**40**	**37**	**42**	**28**	**28**	**2.0**	**1.9**	**2.1**	**1.4**	**1.4**
	Physiotherapy assistants	1	0.4	0.4	0.4	13	13	2.0	1.9	2.1	15.7	15.7
MW	Advanced practitioners	0	-	-	-	-	3.8	-	-	-	-	-
	Clinical specialists	3	1.2	1.1	1.3	1.2	3.5	1.8	1.7	1.9	1.8	-
	Other	71	26	24	28	20	14	1.8	1.7	1.9	1.4	1.0
	Physiotherapists	74	**28**	**25**	**30**	**21**	**21**	**1.8**	**1.7**	**1.9**	**1.4**	**1.4**
	Physiotherapy assistants	2	0.7	0.7	0.8	7.4	7.4	1.8	1.7	1.9	9.0	9.0
WNW	Advanced practitioners	0	-	-	-	-	7.6	-	-	-	-	-
	Clinical specialists	3	1.0	0.9	1.1	1.0	10	1.6	1.5	1.7	1.6	-
	Other	140	46	42	50	45	28	1.6	1.5	1.7	1.6	1.0
	Physiotherapists	143	**47**	**43**	**51**	**46**	**46**	**1.6**	**1.5**	**1.7**	**1.6**	**1.6**
	Physiotherapy assistants	14	4.6	4.2	4.9	5.7	5.7	1.6	1.5	1.7	1.9	1.9

Notes: GM: grade-mix, SM: skill-mix. Figures may be subject to rounding.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b Where the grades of AP and CS did not exist in 2022, their introduction is modelled as part of the skill-mix scenario.
Source: See section 3.3 for an overview of data sources, authors' calculations.

TABLE B.5 Podiatry – WTE projections by scenario and HSE Health Region, 2022–2040

		2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
			Service demand			Workforce mix[b]		Service demand			Workforce mix	
		WTE[a]	Central	Low Pop	High Pop	GM	SM	Central	Low Pop	High Pop	GM	SM
DNE	Advanced practitioners	0	-	-	-	-	0.8	-	-	-	-	-
	Clinical specialists	2	1.5	1.5	1.5	1.5	1.5	3.4	3.4	3.5	3.4	-
	Other	9	7.7	7.5	7.9	6.9	6.1	3.4	3.4	3.5	3.1	2.9
	Podiatrists	11	**9.2**	**9.0**	**9.4**	**8.4**	**8.4**	**3.4**	**3.4**	**3.5**	**3.2**	**3.2**
	Podiatry assistants	-	-	-	-	0.8	0.8	-	-	-	-	-
DML	Advanced practitioners	0	-	-	-	-	0.6	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	1.0	-	-	-	-	-
	Other	8	6.5	6.3	6.7	5.8	4.3	3.4	3.3	3.5	3.1	2.4
	Podiatrists	8	**6.5**	**6.3**	**6.7**	**5.8**	**5.8**	**3.4**	**3.3**	**3.5**	**3.1**	**3.1**
	Podiatry assistants	0	-	-	-	0.7	0.7	-	-	-	-	-
DSE	Advanced practitioners	0	-	-	-	-	0.6	-	-	-	-	-
	Clinical specialists	2	1.6	1.6	1.7	1.6	1.6	3.2	3.1	3.2	3.2	-
	Other	6	4.5	4.4	4.6	3.9	3.4	3.2	3.1	3.2	2.9	2.5
	Podiatrists	8	**6.1**	**5.9**	**6.2**	**5.6**	**5.6**	**3.2**	**3.1**	**3.2**	**2.9**	**2.9**
	Podiatry assistants	0	-	-	-	0.5	0.5	-	-	-	-	-
SW	Advanced practitioners	0	-	-	-	-	1.0	-	-	-	-	-
	Clinical specialists	1	0.8	0.8	0.8	0.8	0.8	3.3	3.2	3.3	3.3	-
	Other	14	11.2	11.0	11.5	1-	8.9	3.3	3.2	3.3	3.0	2.7
	Podiatrists	15	**12.0**	**11.8**	**12.3**	**10.8**	**10.8**	**3.3**	**3.2**	**3.3**	**3.0**	**3.0**
	Podiatry assistants	0	-	-	-	1.3	1.3	-	-	-	-	-
MW	Advanced practitioners	0	-	-	-	-	0.5	-	-	-	-	-
	Clinical specialists	1	0.6	0.6	0.6	0.6	0.6	3.1	3.1	3.2	3.1	-
	Other	6	4.8	4.7	4.9	4.2	3.7	3.1	3.1	3.2	2.8	2.6
	Podiatrists	7	**5.4**	**5.3**	**5.6**	**4.9**	**4.9**	**3.1**	**3.1**	**3.2**	**2.9**	**2.9**
	Podiatry assistants	0	-	-	-	0.6	0.6	-	-	-	-	-
WNW	Advanced practitioners	0	-	-	-	-	2.3	-	-	-	-	-
	Clinical specialists	4	3.0	2.9	3.1	3.0	3.0	3.0	2.9	3.0	3.0	-
	Other	32	22	22	23	19	17.1	3.0	2.9	3.0	2.7	2.4
	Podiatrists	36	**25**	**25**	**26**	**22**	**22.5**	**3.0**	**2.9**	**3.0**	**2.7**	**2.7**
	Podiatry assistants	0	-	-	-	2.7	2.7	-	-	-	-	-

Notes: GM: grade-mix, SM: skill-mix. Figures may be subject to rounding.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b Where the grades of AP and CS did not exist in 2022, their introduction is modelled as part of the skill-mix scenario.
Source: See section 3.3 for an overview of data sources, authors' calculations.

TABLE B.6 Speech and language therapy – WTE projections by scenario and HSE Health Region, 2022–2040

		2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
			Service demand			Workforce mix[b]		Service demand			Workforce mix	
		WTE[a]	Central	Low pop	High pop	GM	SM	Central	Low pop	High pop	GM	SM
DNE	Advanced practitioners	0	-	-	-	-	6.8	-	-	-	-	-
	Clinical specialists	1	0.5	0.5	0.6	0.5	10	1.7	1.5	1.9	1.7	-
	Other	135	48	43	53	33	16	1.7	1.5	1.9	1.2	0.6
	Speech and language therapists	136	48	43	54	33	33	1.7	1.5	1.9	1.2	1.2
	Speech and language therapy assistants	2	0.7	0.6	0.8	16	16	1.7	1.5	1.9	12.9	12.9
DML	Advanced practitioners	0	-	-	-	-	4.9	-	-	-	-	-
	Clinical specialists	0	-	-	-	-	8.6	-	-	-	-	-
	Other	102	33.9	29.8	38.0	21.4	7.9	1.6	1.4	1.8	1.1	0.4
	Speech and language therapists	102	34	30	38	21	21	1.6	1.4	1.8	1.1	1.1
	Speech and language therapy assistants	0	-	-	-	-	12	-	-	-	-	-
DSE	Advanced practitioners	0	-	-	-	-	5.8	-	-	-	-	-
	Clinical specialists	1	0.4	0.4	0.5	0.4	8.9	1.7	1.6	1.8	1.7	-
	Other	116	41	38	44	27	12	1.7	1.6	1.8	1.2	0.6
	Speech and language therapists	118	41	38	45	27	27	1.7	1.6	1.8	1.2	1.2
	Speech and language therapy assistants	0	-	-	-	-	14	-	-	-	-	-
SW	Advanced practitioners	0	-	-	-	-	3.8	-	-	-	-	-
	Clinical specialists	1	0.2	0.2	0.3	0.2	5.8	1.3	1.1	1.5	1.3	-
	Other	83	21	18	25	11	1.6	1.3	1.1	1.5	0.7	0.1
	Speech and language therapists	84	22	19	25	11	11	1.3	1.1	1.5	0.7	0.7
	Speech and language therapy assistants	0	-	-	-	-	10	-	-	-	-	-
MW	Advanced practitioners	0	-	-	-	-	3.0	-	-	-	-	-
	Clinical specialists	1	0.2	0.2	0.3	0.2	4.4	1.5	1.3	1.6	1.4	-
	Other	61	18	16	20	13	5.6	1.5	1.3	1.6	1.1	0.5
	Speech and language therapists	62	18	16	20	13	13	1.5	1.3	1.6	1.1	1.1
	Speech and language therapy assistants	2	0.5	0.5	0.6	5.9	5.9	1.5	1.3	1.6	8.3	8.3
WNW	Advanced practitioners	0	-	-	-	-	5.1	-	-	-	-	-
	Clinical specialists	1	0.2	0.2	0.2	0.2	7.8	1.0	0.8	1.2	0.9	-
	Other	114	22	18	26	11	-1.4	1.0	0.8	1.2	0.5	-0.1
	Speech and language therapists	115	22	18	26	11	11	1.0	0.8	1.2	0.5	0.5
	Speech and language therapy assistants	2	0.4	0.3	0.5	11	11	1.0	0.8	1.2	11.1	11.1

Notes: SLT: speech and language therapy/ist, GM: grade-mix, SM: skill-mix. Figures may be subject to rounding.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
b Where the grades of AP and CS did not exist in 2022, their introduction is modelled as part of the skill-mix scenario.
Source: See section 3.3 for an overview of data sources, authors' calculations.

TABLE B.7 Public health and community nursing – WTE projections by scenario and HSE Health Region, 2022–2040

		2022	Projected additional WTE – 2040					Average annual growth 2022–2040 (%)				
			Service demand			Workforce mix[b]		Service demand			Workforce mix	
		WTE[a]	Central	Low pop	High pop	GM	SM	Central	Low pop	High pop	GM	SM
DNE	Public health nurses	382	243	229	256	243	202	2.8	2.6	2.9	2.8	2.4
	Registered general nurses	180	146	142	151	146	125	3.4	3.3	3.4	3.4	3.0
	Advanced practitioners	6.9	4.4	4.1	4.6	4.4	39	2.8	2.6	2.9	2.8	11.2
	Clinical specialists	27	17	16	18	17	54	2.8	2.6	2.9	2.8	6.4
	Nurses other[c]	93	59	56	62	59	49	2.8	2.6	2.9	2.8	2.4
	Public health and community nurses	**688**	**469**	**447**	**491**	**469**	**469**	**2.9**	**2.8**	**3.0**	**2.9**	**2.9**
	Health care assistants	59	51	50	53	51	51	3.5	3.5	3.6	3.5	3.5
DML	Public health nurses	317	232	222	242	232	197	3.1	3.0	3.2	3.1	2.7
	Registered general nurses	122	109	106	111	108	93	3.6	3.5	3.7	3.6	3.2
	Advanced practitioners	8.4	6.1	5.9	6.4	6.1	30	3.1	3.0	3.2	3.1	8.9
	Clinical specialists	20	14	14	15	14	48	3.1	3.0	3.2	3.1	7.2
	Nurses other[c]	83	61	58	63	61	51	3.1	3.0	3.2	3.1	2.7
	Public health and community nurses	**549**	**421**	**405**	**438**	**420**	**420**	**3.2**	**3.1**	**3.3**	**3.2**	**3.2**
	Health care assistants	20	19	19	20	20	20	3.8	3.7	3.8	3.9	3.9
DSE	Public health nurses	291	199	192	206	199	160	2.9	2.9	3.0	2.9	2.5
	Registered general nurses	140	116	114	118	116	95	3.4	3.3	3.5	3.4	2.9
	Advanced practitioners	2.8	1.9	1.8	2.0	1.9	33	2.9	2.9	3.0	2.9	15.3
	Clinical specialists	14	10	9	10	10	48	2.9	2.9	3.0	2.9	8.5
	Nurses other[c]	70	48	46	50	48	38	2.9	2.9	3.0	2.9	2.5
	Public health and community nurses	**519**	**374**	**363**	**386**	**374**	**374**	**3.1**	**3.0**	**3.1**	**3.1**	**3.1**
	Health care assistants	24	21	21	21	21	21	3.6	3.5	3.6	3.6	3.6
SW	Public health nurses	221	152	146	158	152	116	3.0	2.9	3.0	3.0	2.4
	Registered general nurses	166	135	132	138	119	92	3.4	3.3	3.4	3.0	2.5
	Advanced practitioners	0	0	0	0	0	30	-	-	-	-	-
	Clinical specialists	7.1	4.9	4.7	5.0	4.9	46	3.0	2.9	3.0	3.0	11.8
	Nurses other[c]	50	34	33	35	34	26	3.0	2.9	3.0	3.0	2.4
	Public health and community nurses	**443**	**326**	**316**	**336**	**310**	**310**	**3.1**	**3.0**	**3.2**	**3.0**	**3.0**
	Health care assistants	17	16	15	16	32	32	3.5	3.5	3.6	5.8	5.8
MW	Public health nurses	124	85	81	88	85	67	2.9	2.8	3.0	2.9	2.4
	Registered general nurses	74	59	58	60	59	48	3.3	3.3	3.4	3.3	2.8
	Advanced practitioners	1.3	0.9	0.8	0.9	0.9	15	2.9	2.8	3.0	2.9	15.1
	Clinical specialists	5.6	3.9	3.7	4.0	3.9	22	2.9	2.8	3.0	2.9	9.3
	Nurses other[c]	27	19	18	19	19	15	2.9	2.8	3.0	2.9	2.4
	Public health and community nurses	**231**	**167**	**161**	**173**	**167**	**167**	**3.1**	**3.0**	**3.1**	**3.1**	**3.1**
	Health care assistants	13	11	11	11	11	11	3.5	3.4	3.5	3.5	3.5
WNW	Public health nurses	295	193	186	199	193	170	2.8	2.8	2.9	2.8	2.6
	Registered general nurses	172	130	127	132	130	116	3.2	3.1	3.2	3.2	2.9
	Advanced practitioners	9.8	6.4	6.2	6.7	6.4	29	2.8	2.8	2.9	2.8	7.9
	Clinical specialists	30	19	19	20	19	38	2.8	2.8	2.9	2.8	4.7
	Nurses other[c]	72	47	46	49	47	42	2.8	2.8	2.9	2.8	2.6
	Public health and community nurses	**579**	**395**	**384**	**407**	**395**	**395**	**2.9**	**2.9**	**3.0**	**2.9**	**2.9**
	Health care assistants	59	47	46	48	47	47	3.3	3.2	3.3	3.3	3.3

Notes: GM: grade-mix, SM: skill-mix. Figures may be subject to rounding.

a 2022 WTE adjusted to account for the contribution of overtime and agency.

b Where the grades of AP and CS did not exist in 2022, their introduction is modelled as part of the skill-mix scenario.

c Predominantly managerial grades but also includes student nurses.

Source: See section 3.3 for an overview of data sources, authors' calculations.

APPENDIX C

Decomposition of growth by projection scenario

TABLE C.1 Audiologists – WTE decomposition of growth by scenario and HSE Health Region

	Central scenario		Central scenario total growth	Workforce mix	Workforce mix scenario total growth
	Population growth	Population age structure		GM	
	%	%	%	%	%
DNE	19.5	32.8	52.4	0.0	52.4
DML	20.5	34.3	54.8	-3.3	49.9
DSE	16.9	36.5	53.4	0.0	53.4
SW	17.2	27.8	45.0	0.0	45.0
MW	15.3	36.6	51.9	0.0	51.9
WNW	14.3	39.1	53.4	0.0	53.4
National	**17.5**	**34.5**	**52.0**	**-0.6**	**51.1**

TABLE C.2 Dietitians – WTE decomposition of growth by scenario and HSE Health Region

	Central scenario		Central scenario total growth	Workforce mix	Workforce mix scenario total growth
	Population growth	Population age structure		GM	
	%	%	%	%	%
DNE	19.5	22.8	42.3	-4.9	35.7
DML	20.5	21.6	42.0	-4.7	35.6
DSE	16.9	26.4	43.4	-4.9	36.7
SW	17.2	18.8	36.0	-5.0	29.4
MW	15.3	24.1	39.4	-4.8	33.0
WNW	14.3	15.8	30.1	-4.8	24.2
National	**17.4**	**21.4**	**38.9**	**-4.8**	**32.5**

TABLE C.3 Occupational therapists – WTE decomposition of growth by scenario and HSE Health Region

	Central scenario		Central scenario total growth	Workforce mix	Workforce mix scenario total growth
	Population growth	Population age structure		GM	
	%	%	%	%	%
DNE	19.5	39.6	59.1	-5.3	51.1
DML	20.5	38.3	58.7	-3.0	54.1
DSE	16.9	36.1	53.0	-9.6	39.6
SW	17.2	27.9	45.1	-9.8	32.2
MW	15.3	51.3	66.6	-8.9	53.0
WNW	14.3	27.6	41.9	-5.2	34.9
National	**17.5**	**35.8**	**53.2**	**-6.6**	**43.8**

TABLE C.4 Physiotherapists – WTE decomposition of growth by scenario and HSE Health Region

	Central scenario		Central scenario total growth	Workforce mix	Workforce mix scenario total growth
	Population growth	Population age structure		GM	
	%	%	%	%	%
DNE	19.5	27.5	47.1	-5.1	39.9
DML	20.5	29.7	50.2	-4.1	44.3
DSE	16.9	23.3	40.3	-8.8	28.9
SW	17.2	24.7	41.8	-9.9	29.0
MW	15.3	22.2	37.4	-7.1	28.4
WNW	14.3	18.5	32.8	-0.6	32.0
National	**17.4**	**24.3**	**41.7**	**-5.5**	**34.2**

TABLE C.5 Podiatrists – WTE decomposition of growth by scenario and HSE Health Region

	Central scenario		Central scenario total growth	Workforce mix	Workforce mix scenario total growth
	Population growth	Population age structure		GM	
	%	%	%	%	%
DNE	19.5	64.4	84.0	-4.4	76.3
DML	20.5	61.3	81.8	-5.3	72.7
DSE	16.9	58.3	75.2	-3.8	68.8
SW	17.2	61.8	79.0	-4.9	70.6
MW	15.3	58.4	73.7	-4.6	66.0
WNW	14.3	55.6	69.9	-4.6	62.4
National	**16.4**	**58.9**	**75.3**	**-4.6**	**67.5**

TABLE C.6 Speech and language therapists – WTE decomposition of growth by scenario and HSE Health Region

	Central scenario		Central scenario total growth	Workforce mix	Workforce mix scenario total growth
	Population growth	Population age structure		GM	
	%	%	%	%	%
DNE	19.5	16.0	35.6	-9.0	24.4
DML	20.5	12.9	33.4	-10.1	21.1
DSE	16.9	18.3	35.2	-9.9	23.0
SW	17.2	8.7	25.8	-11.0	13.4
MW	15.3	14.4	29.6	-7.2	21.0
WNW	14.3	5.0	19.3	-8.5	9.9
National	**17.5**	**12.7**	**30.2**	**-9.4**	**19.0**

TABLE C.7 Public health and community nurses – WTE decomposition of growth by scenario and HSE Health Region

	Central scenario		Central scenario total growth	Workforce mix	Workforce mix scenario total growth
	Population growth	Population age structure		GM	
	%	%	%	%	%
DNE	19.5	48.6	68.2	0.0	68.2
DML	20.5	56.2	76.7	-0.1	76.5
DSE	16.9	55.2	72.2	0.0	72.1
SW	17.2	56.4	73.6	-2.2	69.9
MW	15.3	56.8	72.1	0.0	72.1
WNW	14.3	54.0	68.3	0.0	68.3
National	**17.6**	**54.0**	**71.5**	**-0.3**	**70.9**

APPENDIX D

Age aggregation

Table D.1 illustrates the impact of age aggregation on WTE projections. Using the example of audiology, we see that by having additional age disaggregation in our data which increases the number of age categories in the 65+ category from one to five (65–69, 70–74, 75–79, 80–84, 85+), it increases projected additional requirements for audiologist WTE from 22 to 32. See Wren et al. (2017) for further discussion.

TABLE D.1 Audiologists – impact of age aggregation on WTE projections by HSE Health Region

	2022[a]	Additional requirements 2040 | SD central			
		No 65+ disaggregation		65+ disaggregated	
	WTE	WTE	Average annual growth %	WTE	Average annual growth %
DNE	13	5.1	1.8	6.9	2.4
DML	12	4.8	1.9	6.5	2.5
DSE	8	3.0	1.8	4.4	2.4
SW	10	2.8	1.5	4.3	2.1
MW	5	1.4	1.5	2.5	2.3
WNW	14	4.4	1.5	7.6	2.4
National	**62**	**22**	**1.7**	**32**	**2.4**

Notes: Figures may be subject to rounding.
a 2022 WTE adjusted to account for the contribution of overtime and agency.
Source: See section 3.3 for an overview of data sources, authors' calculations.

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