NATIONAL DOCTORS TRAINING & PLANNING

Obstetrics and Gynaecology Medical Workforce in Ireland 2025-2040

An expert stakeholder informed review

HSE
National Doctors Training & Planning

National Women & Infants Health Programme

INSTITUTE OF OBSTETRICIANS & GYNAECOLOGISTS
ROYAL COLLEGE OF PHYSICIANS OF IRELAND

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Foreword: National Doctors Training & Planning

I am delighted to introduce this review of the medical workforce in Obstetrics & Gynaecology (O&G) in Ireland. This report is the result of extensive collaboration between NDTP and several stakeholders within the Irish health system who are central to the delivery of women's health services. Many thanks to all stakeholders and contributors.

This report sets out recommended numbers of trainees who should commence specialty training in O&G in the coming years to ensure a consultant workforce with the appropriate skill mix and geographic distribution to serve the future population needs in Ireland. These recommendations reflect anticipated demographic ageing, population growth, and service developments; while also recognising the existing challenges within O&G, including high work intensity and workforce retention. It is the goal of NDTP that the future supply of consultants should be sustainable through the domestic training pipeline as much as is possible.

The medical workforce in O&G is currently under pressure to meet demand for services, and this demand is projected to increase in the coming years. Demand in Obstetrics services will primarily be driven by safe staffing needs in maternity units, while demand in Gynaecology will be driven by an ageing population and increased service utilisation. The estimates in this review suggest that by 2040 Gynaecology will account for approximately two-thirds of the total workload in the specialty.

To meet this demand, this report recommends a gradual expansion of specialist training capacity. Higher Specialist Training intake should build from 18 to 24 by 2030, supported by targeted improvements in trainee retention and progression at BST level. In the short term, approximately 16 additional consultants will need to be recruited from outside the domestic pipeline to maintain service delivery while training outputs increase. A central strategy will be the conversion of non-training NCHD posts into structured training pathways, addressing current service gaps while building a more resilient training pipeline and appropriately skilled workforce.

It must be acknowledged that this scale of expansion in both the consultant and trainee workforces outlined herein is ambitious and will need to be implemented carefully, acknowledging ongoing factors such as high workload intensity, litigation concerns, long duration of the training scheme, and ensuring sufficient clinical exposure to develop comprehensive clinical competence.

This training and recruitment roadmap aims to align Ireland's O&G consultant workforce with international peers by 2040, both in scale and distribution. Continuous monitoring of workforce data and regular review of demand estimates will be essential to ensure services remain fit for purpose and responsive to the needs of women and families. In doing so, Ireland can secure a strong, sustainable O&G workforce, capable of delivering high-quality care across the decades ahead.

Prof. Anthony O'Regan

Medical Director, National Doctors Training and Planning

Foreword: National Women & Infants Health Programme

The National Women and Infants Health Programme was established to implement the maternity strategy. It also has taken a strategic direction with regard to improvements in Gynaecology Models of Care and new initiatives. NWIHP was pleased to collaborate with the NDTP and the IOG on this comprehensive report on future workforce planning.

Ireland has seen demographic changes over the last decade with population shifts, changes in fertility rates and, for multifactorial reasons, changes in the caesarean section rate. The Maternity Strategy 2016 established three pathways of care for women: supported, assisted and specialised. Since the strategy was begun, the birth rate has dropped significantly. Ireland is fortunate to have an excellent nursing and midwifery training but increasingly competes in a global market.

In contrast gynaecology need has increased exponentially and while some initiatives have been successful with regard to this demand it has to be acknowledged that more is required with a 90% increase in demand from 2010 to 2024. Establishment of specialised pathways in Ambulatory gynaecology, termination of pregnancy, menopause, fertility and more recently endometriosis attests to the unmet need that existed. Providing easily accessible quality gynaecology services nationwide is a key goal for NWHIP.

Workforce planning for the future needs to factor in an increased life expectancy and increased expectation of living well for longer. Our maternity workforce will need to deal with increasing complexity and more operative deliveries.

We have moved away from a narrow physician/patient model to an agile and responsive multidisciplinary team model that emphasises right care at the right time. NWIHP are confident that the RCPI will continue to train doctors committed to women's health. It is hoped that future post configuration will allow for maximum retention of these highly skilled people across a range of special interest areas. To do so will require continued collaboration between stakeholders and a nurturing of the interdisciplinary relationships that are central to excellent patient care.

Dr. Cliona Murphy

National Clinical Director, NWIHP

Foreword: Institute of Obstetrics & Gynaecology, Royal College of Physicians Ireland

Obstetrics and Gynaecology is a unique specialty in that is incorporates two differing specialties, each with very different skill sets and demands. Training in Ireland remains unchanged, and longer in duration than anywhere else in the world, as our sole curriculum demands high levels of obstetric and surgical skills. The European Working Time Directive has led to a significant reduction in overall time spent in training, and gaining competency in complex obstetrics and major gynaecological surgery is increasingly difficult. This leads trainees to seek post CSCST fellowships, which further prolongs training at both personal and professional cost, as well as delaying the filling of consultant posts.

This important work reflects anticipated rapid shifts in demographic and epidemiological profile of the population of Ireland, which must be considered alongside the needs and expectations of a changing workforce that is now disproportionately female. Internationally, falling rates of recruitment and retention in O&G, which is traditionally considered the most lifestyle unfriendly specialty, has become a serious concern, with widening service provision gaps an issue already, and expected to worsen over time. The ambitious training and recruitment recommendations in this report outline the measures required to bring the Irish O&G workforce, in its current configuration, up to the level required to match estimate future service demands.

Highlighting these issues gives us an opportunity to examine and shape how we build and provide services appropriate to our population needs. Exploration and reform of the curriculum and CSCST pathway may provide solutions, but must be agreed and approved by the Irish Medical Council to ensure standards are protected. Governance and oversight are central to this discussion, and we welcome this collaboration, and working with the IMC, NDTP, NWIHP, and the Department of Health to provide an appropriate skilled workforce for women and girls in Ireland.

Dr. Suzanne O'Sullivan

Chair, IOG, RCPI

Executive Summary

Aims

The principal aim of this report is to recommend the annual intake into specialist postgraduate medical training for Obstetrics and Gynaecology (O&G) in Ireland. Achieving this will ensure an appropriately equipped and sustainable medical workforce which can meet the evolving healthcare needs of the population for the coming 15 years. This requires projections of future consultant demand, accounting for population growth, demographic ageing, epidemiological change, clinical service developments, and healthcare reform. To this end, an extensive review of service utilisation and workforce data was conducted as a collaboration between HSE National Doctors Training & Planning (NDTP) and expert specialty stakeholders in the National Women and Infants Health Programme (NWIHP) and the Institute of Obstetricians & Gynaecologists in the Royal College of Physicians of Ireland (IOG, RCPI). [1-3]

This review encompasses the period 2025-2040 and considers major planned and ongoing service redevelopments and reforms across O&G and the wider healthcare system in Ireland. The analysis and projections in this document are intended to complement ongoing work by stakeholders within O&G and to support future service design and workforce planning within the specialty.

This report is, by necessity, a dynamic document, which will require regular review and refinement of demand estimates and recommendations to ensure that they are aligned with ever-evolving service demands, delivery models, and challenges. O&G faces significant challenges including retention of trainees, high work intensity, onerous work/life balances, and litigation concerns.

Baseline Workforce

As of December 2024, there were 222 Consultants in O&G working in HSE-funded services in Ireland, representing 206.3 Whole Time Equivalents (WTE). WTE is the preferred means of quantifying workforce, as this accurately captures the capacity and location of the workforce to deliver care across all clinical sites. In addition to HSE-funded consultants, 22 consultants (17.5 WTE) were found to be working exclusively in the private sector. The distribution of consultants in O&G working in HSE-funded clinical sites is presented in Table 1, summarised by the HSE Health Region and clinical site type.

Table 1: Distribution of consultants in O&G in HSE-funded services by Health Region and hospital model as of December 2024. [4, 5]

Health Region	Model 4	Model 3	Model 2	Specialist Maternity	Specialist Oncology/ Radiotherapy	Specialist Paediatric	Academic	Total
Dublin & Northeast	4.8	16.9	0.9	22.7		0.7		**46.1**
Dublin & Midlands	6.7	10.2		21	0.1		6.3	**44.3**
Dublin & Southeast	7.8	15.9	1.6	13				**38.3**
South-Southwest	0.1	5.2	0.5	21.9			2.1	**29.9**
Midwest	7.9		1	3.6			0.5	**12.9**
West-Northwest	10.5	22.8					1.5	**34.8**
Total	**37.8**	**71**	**4**	**82.2**	**0.1**	**0.7**	**10.4**	**206.3**

Future Demand

Demand estimates (both current unmet demand and projected future demand) were calculated separately for obstetrics and gynaecology, reflecting the differing drivers of service demand across the specialty workload. Unmet demand captures factors such as workforce shortages, onerous rostering, attendance data, waiting lists and referrals, and supporting ongoing service reconfiguration. Future demand captures epidemiological change, demographic ageing, population growth, increasing maternal age, and declining birth rates.

By 2040, the total consultant demand across public and private healthcare settings is projected to reach 346 WTE; a substantial increase on the current public and private workforce of 223.8 WTE. Demand in obstetrics is largely driven by safe staffing levels in smaller Maternity Units in remote geographic locations, while demand in gynaecology is driven by overall population growth and demographic ageing. Notably, of the total demand across O&G in 2040, 65% will be driven by workload in gynaecology, compared to 54% in 2023. This shift reflects the impact of broader demographic trends and highlights potential issues with the current expectation that consultants in O&G divide their time equally between obstetrics and gynaecology.

These projections incorporate the anticipated impact of new and ongoing service developments in women's health in Ireland, aimed at reducing waiting list times and volumes, optimising care pathways, and introducing new specialist clinical services. These service reforms have already delivered measurable benefits, andstakeholders indicate that it is crucial to continue these developments to ensure that clinical services in O&G are appropriately resourced and configured to serve the future needs of the population.

Key Recommendations

This report's key recommendation is to expand specialty training in O&G by 2030:

- Higher Specialist Training (HST): Increase annual intake from 18 to 24.
- Basic Specialty Training (BST): address the causes of attrition and improve retention of trainees at mid-programme and post-BST stages.

In the medium term, it will be necessary to recruit approx. 16 consultants from outside of the current domestic training pipeline to address anticipated retirements and facilitate workforce expansion while the training pipeline output is increased.

A key strategy to support increased training numbers is the conversion of Non-Consultant Hospital Doctor (NCHD) posts in non-training roles to structured training pathways. There are currently over 200 non-training NCHDs (Non-Training Scheme Doctors, NTSDs) working in O&G nationally. A large cohort of NTSDs is typically indicative of service gaps and unmet demand, which will be addressed through expanding the consultant and trainee workforces.

Furthermore, O&G suffers from attrition among trainees, particularly at mid-programme and post-BST stages. This is driven by many factors such as poor work-life balance and litigation fears and remains a key challenge for O&G in the coming years.

The roadmap outlined in this report will see the consultant workforce in O&G reach recommended levels in 2040, bringing it in line with international peers in terms of consultants per capita. The proposed growth profile of the consultant workforce across the HSE Health Regions is illustrated in Figure 1, below. Continuous monitoring of workforce data and revised demand estimates will be essential over the coming years to ensure that the O&G consultant workforce is aligned with clinical services and the needs of the population.

> The future workforce recommendations outlined in NDTP specialty review reports, for both trainees and consultants, are stakeholder informed. The implementation of these recommendations lies outside the remit of NDTP and will be dependent on funding, available posts, training capacity and available candidates.

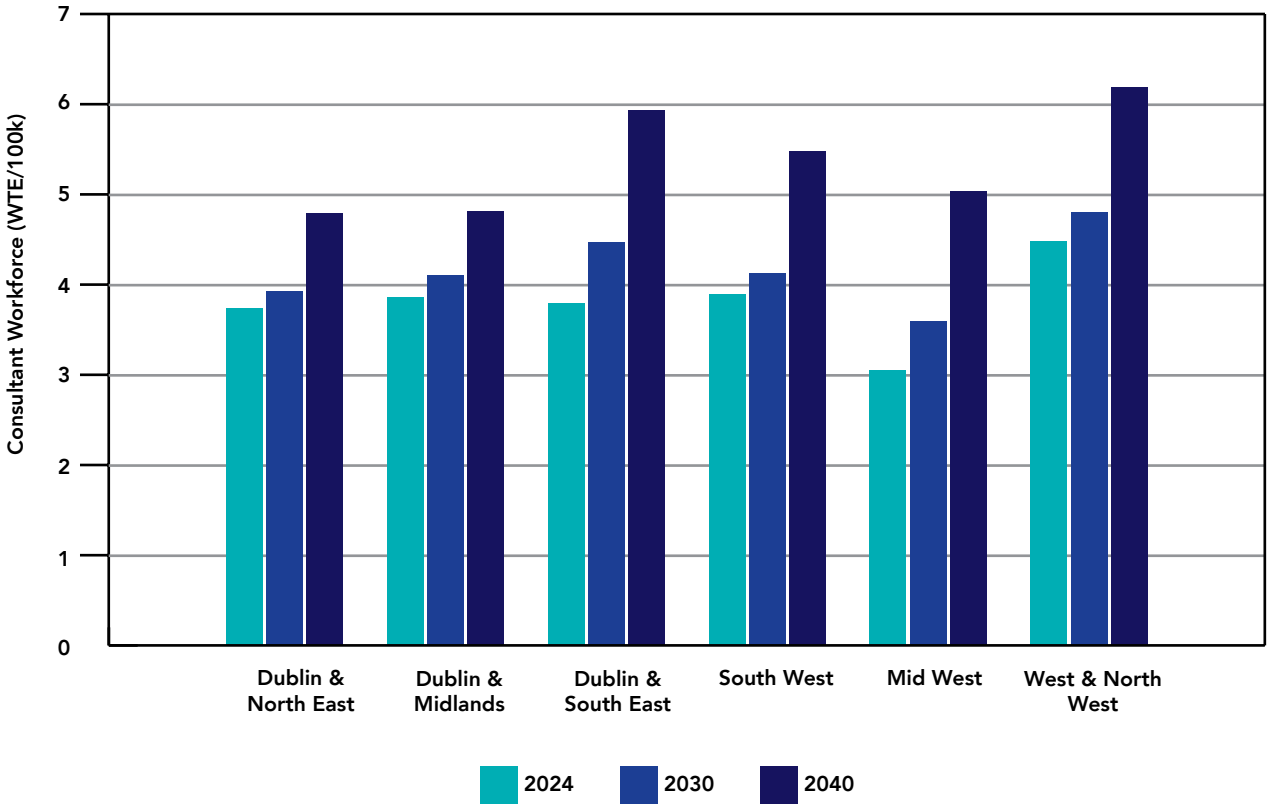

Figure 1: Growth profile of consultant workforce (in WTE/100k population) across the HSE Health Regions arising from recommendations in this report.

Introduction

This report is a collaboration between HSE National Doctors Training & Planning (NDTP), the National Women and Infants Health Programme (NWIHP), and the Institute of Obstetricians & Gynaecologists at the Royal College of Physicians of Ireland (IOG, RCPI). [1-3] Within its medical workforce planning remit, NDTP is responsible for estimating and recommending the number of postgraduate trainees required annually for every medical specialty. To this end, NDTP works with specialty stakeholders including national clinical programmes and postgraduate training bodies to estimate the demand for consultants across the Irish healthcare system, both public and private.

These demand estimates and recommendations inform the commissioning by NDTP of postgraduate medical training programmes, ensuring that the training content and delivery is responsive to the changing needs of the Irish healthcare systems, and supporting the retention of doctors upon completion of their training. In recent years, NDTP workforce planning reports have informed and influenced consultant recruitment and retention initiatives across the public health service.

The primary objective of this report is to provide expert-informed demand projections for consultants in Obstetrics & Gynaecology (O&G) and to use these projections to recommend annual specialty training intake numbers through to 2040. Additionally, the report sets out an annual regional roadmap for consultant recruitment which is aligned with the planned development for O&G services in Ireland.

Workforce planning is an inexact science and estimated requirements for demand and supply are based on the best available data, expert opinion, and healthcare policy at the time of analysis. Where comprehensive data is not readily available, assumptions have been made and clearly outlined. For example, the data which is available for the private sector lacks considerable detail, when compared to that which is available for HSE-funded services. Furthermore, any future significant reconfiguration of healthcare services, such as the introduction of new Models of Care (MoC) or major structural reforms, will necessitate a revision of workforce plans to ensure alignment with emerging service delivery requirements.

Methodology

The approach taken in this workforce review is broadly based on the methodological framework "NDTP Health Workforce Planning: A stepwise Approach". [6] This forms the basis for all NDTP workforce plans across all specialties. However, as all specialties are unique in delivery of service and quantification of demand, this framework is adjusted accordingly.

A multi-method approach to workforce planning was used to include the following:

- A review of the services of O&G in Ireland.
- A quantitative review of the Irish O&G workforce across public and private sectors to establish the baseline current workforce and related demographic variables.
- A review of policy documents to ensure the workforce plan is aligned with policy and strategy for the specialty.
- Stakeholder consultation to establish expert-informed baseline assumptions and scenarios to be used in modelling exercises.
- Quantitative simulation modelling of supply and demand statistics to establish the recommended annual increase in the supply of the consultant and trainee workforce numbers to meet the demand for consultants by 2040.

The complete process flow is shown in Figure 2 below.

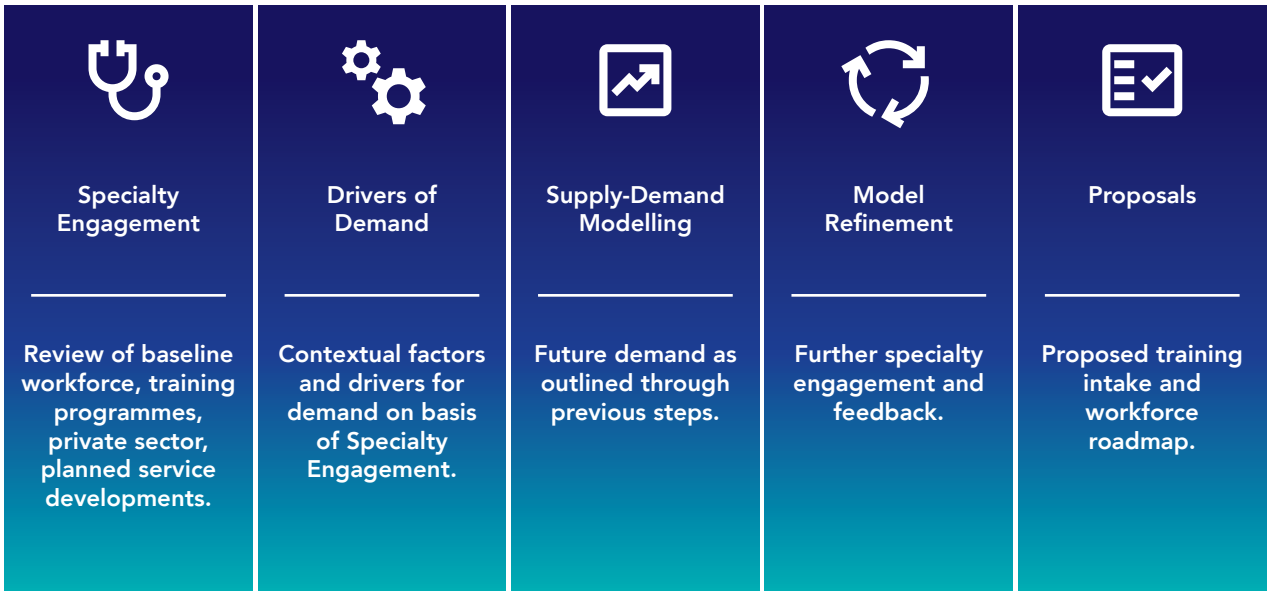

Figure 2: Process of engagement between NDTP and specialty stakeholders.

2.1 Data Sources & Limitations

A wide range of data sources were accessed to build a comprehensive understanding of the current status of O&G in Ireland and to underpin projections of future demand.

- Doctors Integrated Management E-system (DIME) was the principal source of information regarding the medical workforce in HSE-funded services in Ireland. This database has underpinned a number of previous NDTP research projects addressing other specialty-specific reviews, annual workforce reports, and recruitment and retention patterns. [4]

- Irish Medical Council (IMC). [7] The IMC's Annual Retention Application Form (ARAF) captures information on registration of specialist doctors such as where they obtained their primary medical degree, as well as high level data on the private sector.

- Hospital In-Patient Enquiry (HIPE) is a system which records all hospital attendances (inpatient and daycase) in all acute hospital settings in great detail. [8] HIPE is managed by the HSE's Healthcare Pricing Office (HPO). HIPE data for 2023 was accessed using the National Quality Assurance & Improvement System (NQAIS) to establish baseline demographics and medical complexity of hospital attendances across services in O&G.

- The HSE's Business Intelligence Unit (BIU) compiles data and reports on outpatient attendances and referrals for services. [9] These were used to establish historical trends and baseline demand for O&G services.

- The National Treatment Purchasing Fund (NTPF) collects and reports on waiting list data for HSE-funded services in acute hospitals.

- The National Perinatal Reporting System (NPRS) compiles national statistics on perinatal events as recorded across all Maternity Units (MUs) in the HSE and by self-employed midwives. [10] NPRS is managed by the HPO. NPRS data for 2023 was analysed to establish baseline and projected patterns in maternity services.

- The Maternal & Newborn Clinical Management System (MN-CMS) is an electronic health record system developed to record information for all women and babies across O&G services. [11] This system was first introduced in Cork University Maternity Hospital (CUMH) in 2016 and has since been extended to more of the MUs around the country. MN-CMS data for 2021 and 2022 was analysed in collaboration with the research team in the National Perinatal Epidemiology Centre in University College Cork (NPEC, UCC). [12] This was used to establish baseline and projected patterns in maternity services.

- The National Cancer Registry of Ireland (NCRI) collects and analyses data on all cancer cases which occur in Ireland, with periodic publications reporting on trends and patterns. [13] Projected age-standardised incidences of cervical, uterine, and ovarian cancers over the period 2015-2045 were analysed to determine future trends of gynaecological cancers. [14]

- The Central Statistics Office (CSO) collects and reports on a vast range of national statistics in Ireland. CSO publications and datasets underpinned all projections around population and demographic changes in this report.

The accuracy of DIME is dependent on clinical sites regularly updating details of their medical workforce. As this is a live system where data can be updated retrospectively, variances can exist between publicly available figures depending on the date for which the workforce report is run and the date in which it was accessed. HSE consultant as of 31st December 2024 and Non-Consultant Hospital Doctor (NCHD) data as of 31st October 2024 were used as baseline workforce data in this report. Training NCHD data is for the training year July 2024-July 2025. All consultant and NCHD data from DIME has been subject to data validation exercises. Private sector data (IMC ARAF) is dated to April 2023. Although this is not as recent as the data available for the publicly funded workforce, this is the most up-to-date private sector data available to NDTP at the time of preparing this report.

2.2 Modelling

The statistical modelling used in this review simulates the supply of doctors into the health system on the basis of inputs such as WTE working rates, training intake, retirement age, attrition rates, and gender profiles over the period 2025-2040. Due to the long timeframe between an individual entering training and taking up a consultant post, increases in the training intake will only impact on consultant numbers in the later years of the model. The modelling approach used here is an extended version of a statistical simulation model developed by FÁS Expert Group on Future Skills Needs, with distinct modules for supply and demand. [15] Although the principal aim of this workforce review is to estimate consultant demand in publicly funded posts, entire population needs must be considered, so the total public plus private workforce is considered in this supply model.

2.2.1 Supply Modelling

The supply modelling module uses a stock-flow analysis of individuals progressing through the specialist training schemes and taking up consultant posts. Entrants into and exits from the training and consultant cohorts are modelled on an annual basis according to assumptions on gender profile and age, Less Than Full Time (LTFT) working patterns, attrition, and recruitment. The supply model for trainees in O&G begins at the point of entry into the Higher Specialist Training (HST) programme. As discussed in following sections, some individuals either do not compete Basic Specialty Training (BST), or transfer to other HST programmes, and may take "gap years" between completing BST and enrolling in HST. These issues are not explicitly modelled for. In general, year-to-year variations in mid-programme attrition or gap year duration is assumed to average out over the projection period.

O&G has one of the highest retention rates across all Irish specialty medical training programmes upon achieving Certificate of Satisfactory Completion of Specialty Training (CSCST), with a retention rate of 89% in 2024. [16] The expansion of O&G consultant posts should further drive retention of CSCST graduates. As such, the post-CSCST attrition rate was assumed to decrease to 9% over the course of the projections. Whole Time Equivalent (WTE) rates are assumed to reduce to reflect changing working patterns and anticipated future demand for LTFT working practices.

Table 2: Assumptions underpinning statistical modelling of consultant supply to 2040.

Variable	Baseline Assumption
Baseline workforce (WTE)	223.8
Post-CSCST attrition rate	11% initially, reducing to 9%
Age of retirement	62 (average)
Non-retirement exits annually	0.5% (male) 0.8% (female)
Years between CSCST and consultant post	2
WTE rate (flexible/LTFT working assumptions)	93% initially, reducing to 89%
Private sector assumptions	Private sector comprises 7% of total public + private workforce
Gender balance trainee & consultant recruitment	30:70% - male/female

NDTP analysis indicates that the exit rate of consultants from the public sectors increases with age, with an average age of retirement of approx. 62. [16] These patterns underpin projected age-based retirements of O&G consultants. To model this, a micro-simulation was used to project a possible retirement year for each consultant based on exit rate probabilities. These projections were repeated a number of times and the outcomes averages to generate an annual profile of projected retirements from the O&G workforce.

New entrants to the training programme and consultants hired from outside of the Irish training programme are assumed to follow the gender split of 30% male, 70% female. Trainee attrition at mid-programme and post-BST stages are not explicitly modelled for here, as the quantitative supply modelling begins at the point of entry to HST.

2.2.2 Demand Modelling

Estimating future consultant demand is a complex exercise which involves engagement with specialty stakeholders across the relevant national clinical programmes and the IOG. Demand estimates must also account for service development as outlined in the National Maternity Strategy, Women's Health Action Plans, and clinical MoCs, and broader ongoing reorganization of the HSE such as implementation of Sláintecare, maternity networks, National Trauma Networks, elective hospitals, and the HSE Health Regions. [17-30] Underpinning all of the above contextual factors in estimating demand are drivers for change which determine the volume, nature, and complexity of clinical workload. Given the complexity of these drivers of change and their influences in projecting future demand, these are addressed in detail in the following sections of this report.

3. Overview of Obstetrics & Gynaecology Services in Ireland

O&G is a combined medical discipline which provides medical and surgical care to women, focusing on the reproductive system, encompassing both pregnancy care and general reproductive health. Obstetrics primarily deals with the care of women during pregnancy, childbirth, and the immediate postpartum period. It includes the management of complications related to pregnancy and delivery. Gynaecology involves the diagnosis, treatment, and prevention of diseases related to the female reproductive organs outside of pregnancy. While obstetrics is centred on maternal and foetal health during the childbearing process, gynaecology addresses a broader range of women's health issues throughout their lives.

Consultants in O&G in publicly funded posts in Ireland contractually split their time evenly between clinical commitments to both obstetrics and gynaecology, although specific working practices may vary from consultant to consultant. Many of the available O&G services fall under the auspices of the NWIHP, which was established in 2017 to lead the management, organisation, and delivery of maternity, gynaecology, and neonatal services in Ireland. [2] Other areas of O&G, such as Gynae-Oncology and CervicalCheck, are managed by other national programmes such as the National Cancer Control Programme (NCCP) and National Screening Service (NSS), respectively. [28, 31, 32]

Services across O&G are currently undergoing significant restructuring and expansion as a result of the Women's Health Taskforce 2020-2021, with a resulting series of Action Plans outlining a roadmap for continued progress in women's health services. [21, 26, 33, 34] This ambitious programme seeks to continue investing in the infrastructure and services related to women's health in the coming years, expanding the scope and scale of existing services and introducing new services in the medium term. As such, it will be necessary to periodically review the staffing requirements across women's health services, including the medical workforce, to ensure that care pathways are appropriately designed and implemented for maximising patient outcomes.

3.1 Obstetrics

3.1.1 National Maternity Strategy

Maternity services in Ireland are mapped out in the National Maternity Strategy, which was published in 2016. [17] The NWIHP was first established in 2017 on foot of recommendations in this document. The MoC contained within the National Maternity Strategy outlines three care pathways with different demands on the healthcare system for each:

- **Supported Care:** Normal risk mothers and babies. Care delivered by midwives in a Multidisciplinary Team (MDT) environment.

- **Assisted Care:** Medium risk mothers and babies and normal risk mothers who choose obstetric care. Obstetrician led care, delivered by obstetricians and midwives as part of an MDT.

- **Specialised Care:** High-risk mothers and babies. Obstetrician led care, delivered by obstetricians and midwives as part of an MDT.

The demand for consultant obstetricians is heavily influenced by the overall risk profile of pregnancies in Ireland. For a given number of births, a greater proportion of high-risk pregnancies would increase the requirement for consultant obstetricians compared to more low-risk pregnancies.

3.1.2 Maternity Units

There are currently 19 active MUs across Ireland which are listed in Table 3 below, with the corresponding number of births recorded for 2023. [35]

Table 3: Total number of births across Irish Maternity Units in 2023. [35]

Maternity Unit	Total births
Rotunda Hospital	8,442
Coombe Maternity Hospital	6,974
National Maternity Hospital	6,877
Cork University Maternity Hospital	6,446
University Maternity Hospital, Limerick	3,935
Our Lady of Lourdes Hospital, Drogheda	2,770
Galway University Hospital	2,609
Midland Hospital Mullingar	1,804
Waterford University Hospital	1,652
Wexford General Hospital	1,588
Letterkenny University Hospital	1,576
Midland Regional Hospital Portlaoise	1,401
Portiuncula University Hospital	1,368
Mayo University Hospital	1,368
St Luke's Hospital, Kilkenny	1,336
Cavan General Hospital	1,263
Sligo University Hospital	1,211
University Hospital Kerry	1,137
Tipperary University Hospital	727
All hospitals	**54,484**

The difference in scale of Irish MUs results in varied risk profile and attendance demographics. The Irish Maternity Indicator System (IMIS), managed by the NWIHP, records data on key clinical indicators across all Irish MUs, allowing for local and national analysis of trends in outcomes, delivery methods, complications, etc. The 2023 IMIS report shows that larger MUs (>5,000 births in 2023) have statistically significantly higher rates of complex cases, emergencies, critical care admissions, first time pregnancies (nulliparas), and induction of labour than smaller MUs (<2,000 annual births). [35] The inverse is true in smaller MUs, in which complex cases are transferred out to larger MUs and there is a disproportionate prevalence of mothers experiencing their second pregnancy or more (multiparas). Medium-sized MUs (2,000-5,000 annual births) sit at an inflection point in these trends and do not display statistically anomalous patterns across these KPIs. In future, overall increased complexity in maternity care might see a greater proportion of national births take place in larger MUs, resulting in even fewer births in smaller MUs.

3.2 Gynaecology

Gynaecology services are delivered in 36 acute hospitals around the country and encompass the following 4 main categories:

- Gynaecological oncology
- Urogynaecology and pelvic floor dysfunction
- Assisted fertility and human reproduction
- General gynaecology

The latter category primarily involves benign services and represents the vast majority of gynaecology referrals and clinical workload. Approx. 70% of all acute hospital patient attendances for gynaecology in 2023 were coded as urogenital, with a further 17% of cases being either cancer or pregnancy-related gynaecology. [8]

As discussed below in Section 5.2, the demand for gynaecology services has experienced a substantial increase in growth in recent years, leading to the development of several dedicated outpatient gynaecology clinics to address specific clinical areas which contribute to the increasing demand. The established services are under the auspices of different HSE agencies as follows:

- Ambulatory Gynaecology - NWIHP
- Complex Menopause - NWIHP
- Endometriosis - NWIHP
- Fertility - NWIHP
- Termination - NWIHP
- Sexual Assault Treatment Units (SATU) - NWIHP
- CervicalCheck/colposcopy – CervicalCheck/NSS
- Gynae-oncology – NCCP

3.2.1 Ambulatory Gynaecology

Ambulatory Clinics are facilities which provide treatment to patients without the need for hospitalisation and is predominantly concerned with general gynaecological services. A dedicated MoC for Ambulatory Gynaecology was published in 2020 and outlines alternative patient pathways which offer more streamlined and cost-effective services than traditional established referral routes via one-stop "see and treat" clinics. [27] The ambition is that approx. 70% of gynaecology referrals can ultimately be treated in such settings.

Staffing in Ambulatory Clinics is based on an MDT of various Healthcare Professionals (HCPs) such as Advanced Nurse Practitioners (ANPs), physiotherapists, nurses, etc, with consultant gynaecologists in leadership/director roles. Level 1 Ambulatory clinics, operating fulltime, require 1.5 WTE consultant gynaecologists and are estimated to be able to treat in excess 3,300

patients each year, under the current operating model. Level 2 clinics, operating 2-4 days per week, require 1 WTE consultant gynaecologist and can treat approx. 2,000 patients per year. The ambition is that referrals for routine appointments will have wait times of less than 6 months, while urgent appointments will have a wait time of less than 6 weeks. Detailed waiting times specific to Ambulatory Clinics were not available at the time of completing this report. Such data will be analysed periodically by the NWIHP as it becomes available as part of ongoing management of this service.

3.2.2 Complex Menopause

Complex Menopause clinics first opened in 2021 aimed at treating more complex symptoms than would be treated by a (GP). [29] There are now 6 such services in operation around the country covering all Health Regions. Each clinical service has a demand for 0.5 WTE consultant gynaecologist.

3.2.3 Endometriosis

Dedicated endometriosis clinics have recently been established encompassing 2 supra-regional and 5 regional clinics. [30] The supra-regional services each require 2.5 WTE consultant gynaecologists, while the regional clinics each require 1.5 WTE.

3.2.4 Fertility

A publicly funded Assisted Human Reproduction programme was launched by the Department of Health in July 2023, with the programme and MoC developed by the NWIHP. [24, 36] Currently there are 6 regional fertility hubs with a demand for consultant gynaecologist between 1-2 WTE, depending on the scale of each hub. Demand for consultant gynaecologists in this service will need to be reviewed periodically over the next 10 years, as the scope of this service and treatments offered are expected to expand in the coming years, in line with Department of Health ambitions.

3.2.5 Termination of Pregnancy

Since the introduction of the Health (Regulation of Termination of Pregnancy) Act 2018, termination of pregnancy services are now offered in all 19 MUs as of the end of 2024. [37] Consultant demand is varied depending on the scale of activity in each MU.

3.2.6 Sexual Assault Treatment Units

There are currently 6 SATUs under the auspices of the NWIHP. Each SATU is staffed by an MDT consisting of nurses and ANPs with NCHDs providing on-call cover. NCHDs may work in specialties such as O&G, GP, or public health. Each SATU has a requirement for 0.25 WTE consultants in O&G who acts as medical director, with a further requirement of 0.5 WTE for a national director role. Other sexual assault services operate outside of NWIHP governance but differ in their staffing requirements and are funded through different budgetary streams. Geographic distribution of SATUs does not necessarily follow HSE Health Region boundaries but rather aims to ensure services are provided across the country as the recommendation is that no-one should be more than 3 hours' drive from a SATU.

Depending on methods used, attendances to SATUs are expected to increase by up to 10% annually in the coming years. The recommendation of the Istanbul Convention is for one rape crisis centre and sexual assault response service per 200k population, a figure of which Ireland currently falls short of. [38, 39] Accordingly, it will be necessary to periodically review SATU services to

ensure appropriate staffing levels in a geographically dispersed manner to serve the population. In this case, it is possible that increased staffing will principally be met through nursing and NCHD staff rather than consultant gynaecologists.

3.2.7 CervicalCheck/Colposcopy

The CervicalCheck programme is a population level screening programme aimed at identifying the Human Papillomavirus (HPV), which causes 90% of cervical cancers. First introduced in 2008, this programme has expanded in scope and scale since then and cervical cancer trends are observed to be dropping in Ireland. [28] The first point of contact for patients with this care pathway is during the screening process. This stage of the programme is staffed by an MDT encompassing nursing and medical staff, including doctors working in specialties such as pathology (gynaecological cytology). Any patients showing cellular abnormalities at this stage are referred to colposcopy for further examination, where biopsies may be taken for further testing. The CervicalCheck programme demonstrates high-scoring KPIs around population coverage and patients being seen within a timely manner. Over 2020-2022, 73% of the eligible population were screened, with coverage above 80% in certain age bands. Screening results are typically communicated within 6 weeks for 90% of patients. 70% of women with non-urgent referrals were offered an appointment within 8 weeks of referral, while 100% of women with suspected cancer were seen within 2 weeks. [40] Over 50k patients attended colposcopy clinics annually across 2020-2022, with the total attendances and number of biopsies performed increasing in recent years.

Colposcopy clinics are located in 15 hospital outpatient departments around the country with standardised care across all sites ensured by appropriate staffing, facilities, and governance. The MDT delivering the care pathway for colposcopy consists of consultant gynaecologists, nurses and clinical nurse specialists, and healthcare assistants. Internal workforce planning undertaken by CervicalCheck indicates that all units require 2 HC consultant gynaecologists, with the exact WTE depending on the scale of each unit. The number of other HCPs and administrative staff is determined by the number of expected referrals per year. As with other services, staffing requirements for colposcopy clinics will be periodically reviewed by CervicalCheck to ensure services keep abreast of population demands.

3.2.8 Gynae-Oncology

Gynae-Oncology services are offered across acute hospitals in Ireland and generally have overlap with other oncology-related services and medical specialties. Each Health Region has a model 4 hospital designated as a Cancer Centre which offers Gynae-Oncology services, with each being accredited for and offering varied scope and complexity of services. [31, 41] All consultants in Ireland practicing in the field of Gynae-Oncology are fully subspecialty trained and certified and work within an MDT. [42] Additionally, Gynae-Oncology services are offered by a mixture of consultants with and without an Special Interest (SI) in Gynae-Oncology, depending on the clinical site and the stage of the disease or specifics of treatment in question.

There is an ambition within Gynae-Oncology services that all oncology surgeries for advanced or complex cancers will be performed within Cancer Centres (designated model 4 acute hospitals), with the most complex cases in supra-regional centres. Early-stage cervical cancer treatment has some overlap with colposcopy services. Work is currently on-going in centralising Gynae-Oncology treatments and co-ordinating with the NWIHP and NSS. As such, workforce requirements for Gynae-Oncology workload are encompassed within overall gynaecology demand in the sections which follow but should be reviewed in the coming years in line with service developments and restructuring of care pathways.

3.3 Obstetrics & Gynaecology Specialist Training Programme

Specialty training in O&G is delivered by the IOG in RCPI and can be started upon completion of Intern year. The initial stage is a three-year BST course, after which candidates are eligible to complete the five-year HST programme. The final two years of HST may include SI training in certain modules, including gynaecology, maternal/foetal medicine, urogynaecology, or labour ward, among others. Upon completion of HST, trainees are awarded the CSCST. This allows for registration on the Specialist Register of the IMC and means candidates are eligible to apply for consultant posts in O&G.

Internal analysis by the IOG has indicated that trainees typically take 10 or more years to complete the entire 8 curriculum years across BST and HST through a combination of time out of programme, not progressing immediately from BST to HST, or spending some time in LTFT work. Many individuals will spend time in overseas or domestic fellowships at post-CSCST stage in order to gain further expertise prior to taking up consultant posts.

NDTP analysis of BST retention patterns shows that of those who graduate from O&G BST and enrol in further specialty training, 76% of these continue into HST in O&G. The majority of those who do not continue in O&G training transfer to the GP training programme. [16] This clearly indicates that not all future graduates in O&G BST can be assumed to continue to HST. Furthermore, O&G BST exhibits the highest within-programme attrition rate of all specialty training programmes in the HSE, with 11% of BSTs withdrawing in the training year 2023-2024. These issues are not explicitly addressed in supply modelling of this report (see Section 2.2), but highlight ongoing challenges faced by the O&G training pipeline. Any ambition to increase intake to training programmes must be accompanied by continuing efforts to minimise the influences which cause O&G trainees to withdraw from specialty training or transfer to other specialties.

4. Review of the Obstetrics & Gynaecology Workforce in Ireland

This section of the report outlines the demographic breakdown of the O&G medical workforce as of December 2024 in both headcount (HC) and WTE. WTE is the preferred means of quantifying the workforce as it accounts for those who work LTFT and across multiple clinical sites, accurately capturing the capacity of the health system.

4.1 Demographics of the Obstetrics & Gynaecology Workforce

Table 4 below details the demographics of the consultant and NCHD workforces in O&G. These parameters are used as the inputs for the statistical supply model which underpins all projections in this report. Of the 222 consultants in O&G working in the HSE-funded services, approx. 46% are men and 54% are women, with women working with slightly lower WTE rates than men on average. Table 5 and Table 6 show a detailed breakdown of the characteristics of the consultant and NCHD workforces, respectively. The total number of NCHDs encompasses those on formal training schemes and those in non-training posts (Non-Training Scheme Doctors, NTSDs)

Table 4: Status of the O&G medical workforce December 2024. [4, 5]

Variable	Value
Consultant HSE funded services (HC)	222
Consultant HSE funded services (WTE)	206.3
WTE rate HSE funded services	95.6% (male) 90.7% (female) 92.9% (average)
Gender balance consultants HSE funded services	41.9% male, 58.1% female
Expected retirements by 2040 (HC)	157 (84 female, 74 male)
Exclusive private sector consultants (HC)	22
Exclusive private sector consultants (WTE)	17.5
BST years 1-3 (HC)	80
HST Years 1-5 (HC)	95*
Gender balance HST	7.6% male, 92.4% female
NTSDs	232
Gender balance NTSD	24.5% male, 75.5% female

**This value includes 24 individuals enrolled in the O&G HST programme who are currently out of programme either accruing or not accruing credit, such as for maternity leave or other approved leave.*

Table 5: Detailed characteristics of HSE-funded consultant workforce in O&G. [4]

Obstetrics & Gynaecology	HC	WTE	WTE Rate	% Over 55 Years	% Fulltime	% Permanent	% Temporary	% Locum	% Agency	% General Register	% Vacant >18m
Total	222	206.3	92.9%	31.5%	85.1%	86.0%	6.8%	5.0%	2.3%	3.6%	0.9%

A locum doctor works on a temporary basis to cover staff absences (maternity, illness, holiday etc.) or to meet service needs. Reasons for locum cover include when there is a permanent consultant post pending but not yet filled, a requirement for an additional temporary post, when a permanent post is difficult to fill and when there is a need for back-fill for a national or clinical director role.

The age profile of the consultant and NCHD workforces are illustrated by gender in Figure 3. The O&G consultant workforce has a gender split 54% female, 46% male. However, the current cohort of HSTs is >90% female, indicating that the feminisation of the O&G workforce will continue to become more pronounced in the coming years. Furthermore, Figure 3 highlights a trend seen across the HSE where, on average, male consultants are older than female consultants. As more male consultants will reach retirement age than women in the next 10 years, this will further drive feminisation of the O&G medical workforce. Summary statistics of the consultant and NCHD workforces are presented in Table 6.

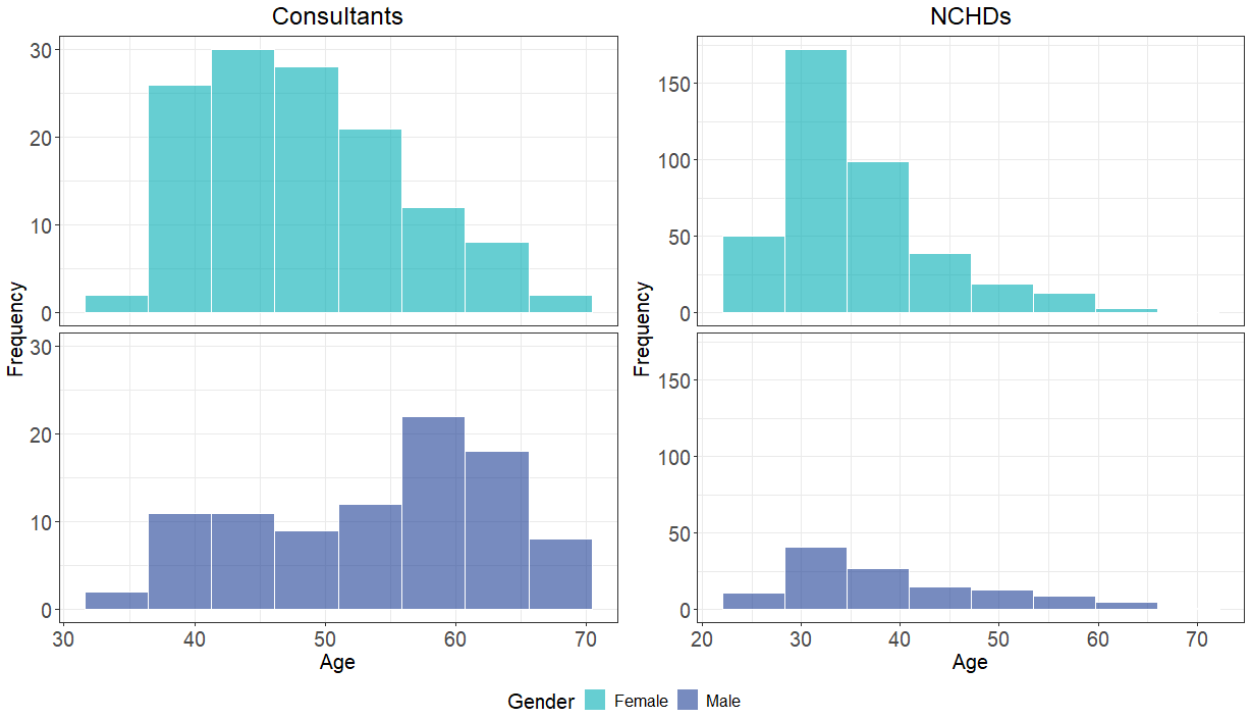

Figure 3: Age profile of O&G consultant and NCHD workforces, by gender. [4]

Table 6: Summary age statistics for O&G medical workforce. [4]

	Consultants		Trainees		NTSDs	
Gender	Female	Male	Female	Male	Female	Male
Mean Age	48.2	54	32.3	32.5	39.5	46.3
Median Age	48	56	32	32	38	47

Non-Training Scheme Doctors

The number of NTSDs employed in O&G has grown annually by >5% since 2019, with a significant increase recorded in 2023. [4, 43] This growth in the NTSD workforce is typically reflective of recruitment in individual clinical sites to address immediate unmet demand or fill service gaps. Table 7 summarises the distribution of NTSDs in O&G by hospital model over the years 2019-2024. [4] This clearly highlights that the total number of NTSDs in O&G is consistently driven by model 3 hospitals. Approximately 60% of NTSDs recruited into O&G posts in model 3 hospitals in the years 2022-2024 had not worked in the HSE the previous year. As it is clear HSE policy to move towards a consultant-delivered health system, the expansion of the NTSD cohort is a concerning issue which ideally will be addressed by conversion of some of these posts to training posts and expansion of consultant numbers.

Table 7: Distribution of NTSDs in O&G by Hospital Model 2019-2024. [4]

Hospital Model	2019	2020	2021	2022	2023	2024	Annual Growth 2019-2024
Model 4	33	32	36	36	45	46	**6.9%**
Model 3	107	110	117	128	135	136	**4.9%**
Model 2	2	2	2	2	1	2	**0%**
Specialist Maternity	39	41	34	36	53	48	**4.2%**
Total	181	185	189	202	234	232	**5.1%**
Model 3 Proportion	**59%**	**59%**	**62%**	**63%**	**58%**	**59%**	

Longitudinal analysis of DIME data reveals that 28% of NTSDs working in HSE-funded services in December 2024 had been working in these posts for 4 consecutive years. 8.3% had been working in NSTD posts for 10 consecutive years. [16] When the same analysis is carried out for NTSDs in O&G, 40% of O&G NTSDs have been in-post for 4 consecutive years and 12.8% have been in-post for 10 consecutive years. This shows that O&G exhibits a statistically significantly greater proportion of long-term NTSDs compared to all other specialties in the HSE. Of those NTSDs currently working in O&G, 90% are working on fixed-term contracts. Furthermore, Figure 4 illustrates that NTSDs working in O&G are typically older than those working in all other HSE specialties. This is particularly the case for male NTSDs, where the median age in O&G is 13 years older than in all other specialties. This further serves to highlight the extent to which O&G depends on NTSDs for service delivery.

Taken together, the above highlights that not only does O&G have a high reliance on NTSDs relative to other specialties in the HSE, but that significantly more of these doctors remain working in the system for many years in O&G, mostly working consecutive fixed-term contracts. These patterns have significant implications for standards of care, patient outcomes, and disruption to services, which must be addressed by reconfiguring services in O&G to a consultant-delivered model, supported by an increased cohort of NCHDs in specialty training programmes.

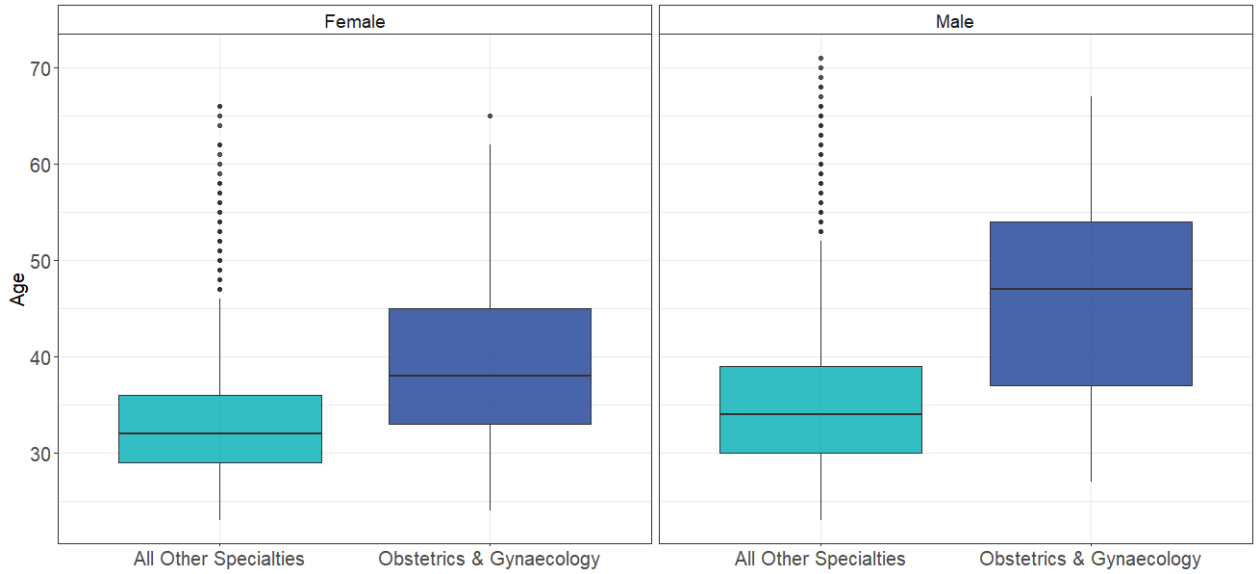

Figure 4: Boxplots visualising the age profile of NTSDs in O&G compared to all other HSE Specialties, by gender. [4]

4.2 Location of Obstetrics & Gynaecology Workforce

Table 8 summarises the location in which consultants in O&G work in HSE-funded settings, broken down by Health Region and hospital type. Table 9 summarises the medical workforce in O&G (consultant and NCHDs) per 100k population across each of the Health Regions. The trainee figure here does not include interns or trainees from other specialty training programmes (such as GP) rotating through O&G posts. When considering metrics such as workforce per capita it is important to consider contextual factors such as population density, number of urban centres, and number of clinical sites such as hospitals. The West-Northwest Health Region is geographically large with a small population dispersed across a number of small urban centres. Efforts to locate clinical services proximally to the resident population results in a large workforce/population ratio. In contrast, the large population of Dublin-Northeast, for example, is concentrated in a smaller geographic area with larger urban centres, reducing the impact of geographic dispersion in providing services close to the population. This highlights how provision of specialist services in acute hospitals close to a geographically dispersed population serves drives up workforce demand.

Table 8: Regional distribution of consultants in O&G (WTE) by hospital model level in HSE- funded settings, December 2024. [4]

Health Region	Model 4	Model 3	Model 2	Specialist Maternity	Specialist Oncology/ Radiotherapy	Specialist Paediatric	Academic	Total
Dublin & Northeast	4.8	16.9	0.9	22.7		0.7		**46.1**
Dublin & Midlands	6.7	10.2		21	0.1		6.3	**44.3**
Dublin & Southeast	7.8	15.9	1.6	13				**38.3**
South-Southwest	0.1	5.2	0.5	21.9			2.1	**29.9**
Midwest	7.9		1	3.6			0.5	**12.9**
West-Northwest	10.5	22.8					1.5	**34.8**
Total	**37.8**	**71**	**4**	**82.2**	**0.1**	**0.7**	**10.4**	**206.3**

Table 9: Public O&G medical workforce population ratios by Health Region, December 2024. [4, 44]

Health Region	Consultants/100k	NTSDs/100k	Trainees/100k*
Dublin & Northeast	3.74	3.33	2.76
Dublin & Midlands	3.86	3.40	3.31
Dublin & Southeast	3.80	4.76	3.47
South-Southwest	3.89	3.92	3.26
Midwest	3.05	4.46	2.35
West-Northwest	4.48	7.08	2.19
Total	**3.85**	**4.13**	**2.93**

**Trainees here encompasses individuals enrolled in either the BST or HST programmes in O&G.*

4.3 International Peer Comparison

An international comparison of the number of O&G consultants per 100k population was carried out to provide further context to the composition of the O&G consultant workforce. This is summarised below in Table 10 and visualised in Figure 5. It is apparent that Ireland has a lower ratio of consultants per capita than any comparable jurisdictions, with a disproportionate reliance on NTSDs.

It is imperative that selected NTSD posts are converted to training posts, as this will ensure the supply of trainees to the training pipeline which is the desired source of new entrants into the consultant workforce. Additionally, this is consistent with the objectives set out by Sláintecare regarding moving towards a consultant-delivered health system. [18] This is also in compliance with the WHO Code on ethical recruitment in healthcare and underpins the development of a sustainable consultant workforce. [45]

Table 10: International comparison of the O&G medical workforce WTE per 100k population.

Role	Ireland [4, 46]	England [47, 48]	Scotland [47, 49]	Wales [47, 50]	Australia [51, 52]	New Zealand [53, 54]	Canada [55]
Consultants (public)	3.85	5.37	5.74	4.97	5.91	6.6	5.72
Consultants (public + private)	4.18						
Trainees	2.93	7.16	5.81	5.6		2.25	
NTSDs	4.13	0.9	1.17	1.52		2.47	

Workforce data for Canada and New Zealand is provided in HC. WTE values presented here assume a WTE rate of 90% for comparative purposes.

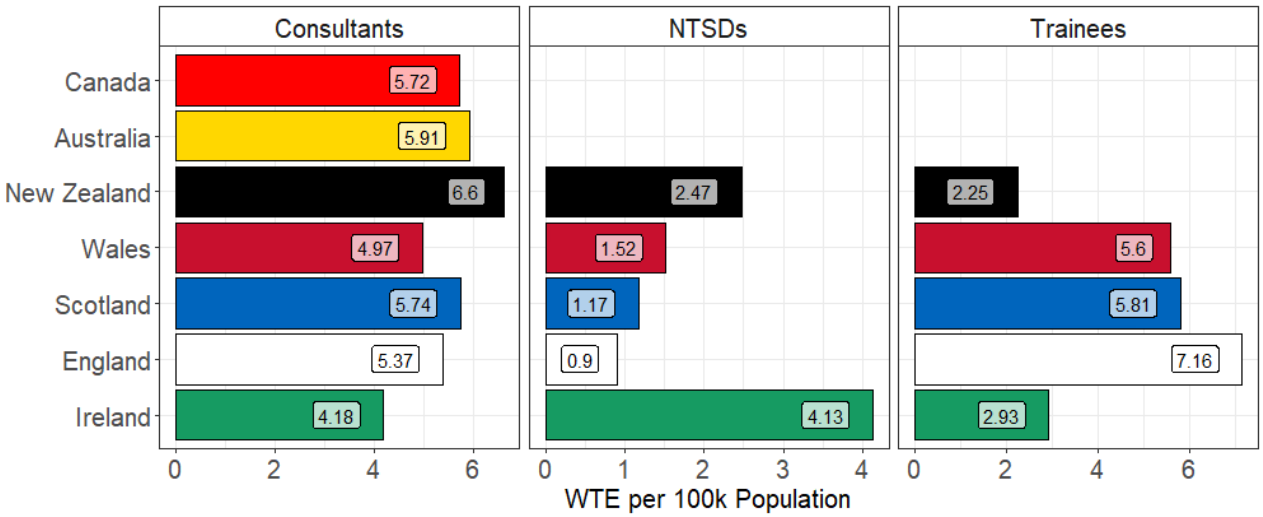

Figure 5: Graphical representation of population ratios for consultants, NTSDs, and trainees in WTE per 100k population. Data for NCHDs was unavailable for Australia and Canada.

4.4 Challenges Facing Obstetrics & Gynaecology in Ireland

O&G in Ireland faces a range of significant challenges that impact both the delivery of care and the sustainability of the workforce. Qualitative research of NCHDs working in HSE O&G services in Ireland has shown that among the most pressing issues are difficulties in recruitment and retention of trainees and consultants, driven by concerns about work-life balance, high stress levels, and the demanding nature of the specialty. [56-59] NCHDs and prospective trainees in O&G are often deterred from entering O&G owing to its long average working hours, onerous on-call demands, and a perceived lack of career flexibility. This research also suggests that these concerns are compounded by a broader sense of low morale within the specialty, as well as fears around professional litigation and media scrutiny.

Litigation is a particularly acute concern in O&G, which ranks among the highest-risk specialties in Ireland for malpractice claims. In recent years, there has been a sharp rise in both the number and cost of clinical negligence cases, with O&G being a major contributor, with medical protection costs for practitioners in this field having increased by over 250%. [60, 61] These pressures not create financial strain on the healthcare system and contribute to recruitment and retention challenges within O&G.

Stakeholders engaged as part of this workforce review expressed significant concerns about the capacity of specialist training in O&G to substantially increase output of CSCSTs. While the overall duration of training in O&G (typically 10+ years from starting BST to achieving CSCST) already poses a challenge to the pace at which increased training output can be scaled up, there are practical constraints to the total numbers in training that the system can support while maintaining clinical standards. Even at current levels, specialty stakeholders expressed concerns about whether all trainees can develop the comprehensive clinical competencies necessary in O&G. This can be attributed to a combination of the factors discussed above. Any expansion in training capacity must be carefully planned to ensure it does not compromise the high standard of O&G training for which Ireland is internationally recognised. NDTP is committed to supporting the conversion of NTSD posts to training posts and works closely with all HSE specialties to support this goal.

When specifically considering obstetrics care, a number of low-activity MUs in Ireland compound some of the issues highlighted above. Low numbers of births in a MU may limit exposure of clinicians to a wide range of obstetric cases, which can impact on opportunities to develop and maintain clinical competencies. Small MUs drive consultant demand in order to sustain 24/7 on-call emergency cover, while not necessarily having the required day-to-day clinical activity to justify such a workforce. Furthermore, there are well-documented recruitment issues across many of these units, with significant vacancies in the consultant workforce and an over-reliance on NTSDs and temporary/locum staff to fill service rotas. [62]

5. Drivers of Demand

5.1 Drivers of Demand: Obstetrics

5.1.1 Total Fertility Rate

Total Fertility Rate (TFR) is defined as the average number of children born to women of childbearing age across their lifetime. A TFR of 2.1 is required to maintain population levels in the absence of net immigration. The TFR in Ireland dropped from 1.83 in 2011 to 1.5 by 2022 and is projected to decrease to 1.3 by 2037. [46, 63, 64] The impact on maternity services of Ireland's decreasing TFR is twofold. The primary impact is that the total number of births has been decreasing since 2008, resulting in decreasing activity levels across all MUs. Table 11 shows the projected number of births for 2023 and 2040 according to the CSO, based on Census 2022 data (Scenario M2). This indicates that the total number of births is expected to decrease by 0.6% annually to 2040. The actual number of births for 2023 as recorded by the IMIS (also included in Table 11) was lower than the projected value, highlighting inherent difficulties in projecting complex patterns such as number of births. Nonetheless, the *rate* of decrease according to the CSO projections was used in projecting changes to consultant demand in this exercise, regardless of the actual number of births.

Table 11: Projected and actual number of births in Ireland 2023-2040. [35, 46]

	2023	2040	Average Annual Growth Rate
Births (projected) [46]	57,357	51,687	-0.6%
Births (actual) [35]	54,484		

A secondary effect of the decreasing TFR in Ireland is the impact on parity; the number of previous pregnancies that a woman has carried to a viable gestational age. Women experiencing their first childbirth (nulliparas) often experience longer labours and higher rates of medical intervention. A similar pattern is observed for women with at least five previous births (grand multiparas), with increased risk of obstetric complications. Women experiencing their 2nd childbirth and low multiparas (2-3 previous pregnancies) are at the lowest risk of obstetric complications or perinatal morbidity. [65, 66] As the TFR decreases, a greater proportion of mothers will be nulliparous at the time of childbirth. This assumption is further borne out by the average family size in Ireland, which stood at 1.34 children per family in 2022 and is decreasing with time. [67]

5.1.2 Maternal Age

Despite the falling birth rate, the average age of mothers during pregnancy has steadily increased for several decades in Ireland, as illustrated in Figure 6. Furthermore, the average maternal age for first time pregnancies has increased even more significantly in this time. A detailed breakdown of maternal age bands at childbirth for the years 2008-2022 is shown in Figure 7, further highlighting the increased proportion of births in older age bands. [68]

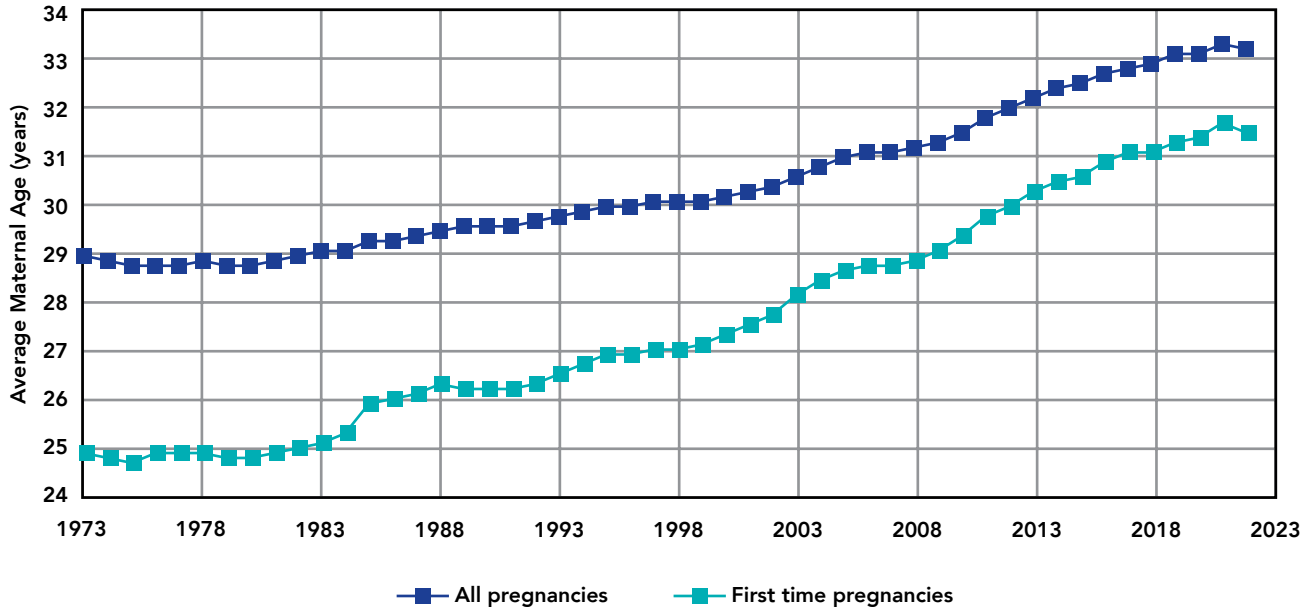

Figure 6: Average age of mothers during pregnancy in Ireland for the years 1973-2022. [68]

When this data is considered against the backdrop of an ever-decreasing total annual number of births, the net result is that all age bands have experienced a decrease in the total number of births over this time period; with the exception of the 35-39 and Over 40 age bands, which have experienced an overall increase in the total annual number of births since 2008. [46] Increased maternal age is associated with increased rates of caesarean or assisted delivery, preterm delivery, and longer hospital stays. [69-71]

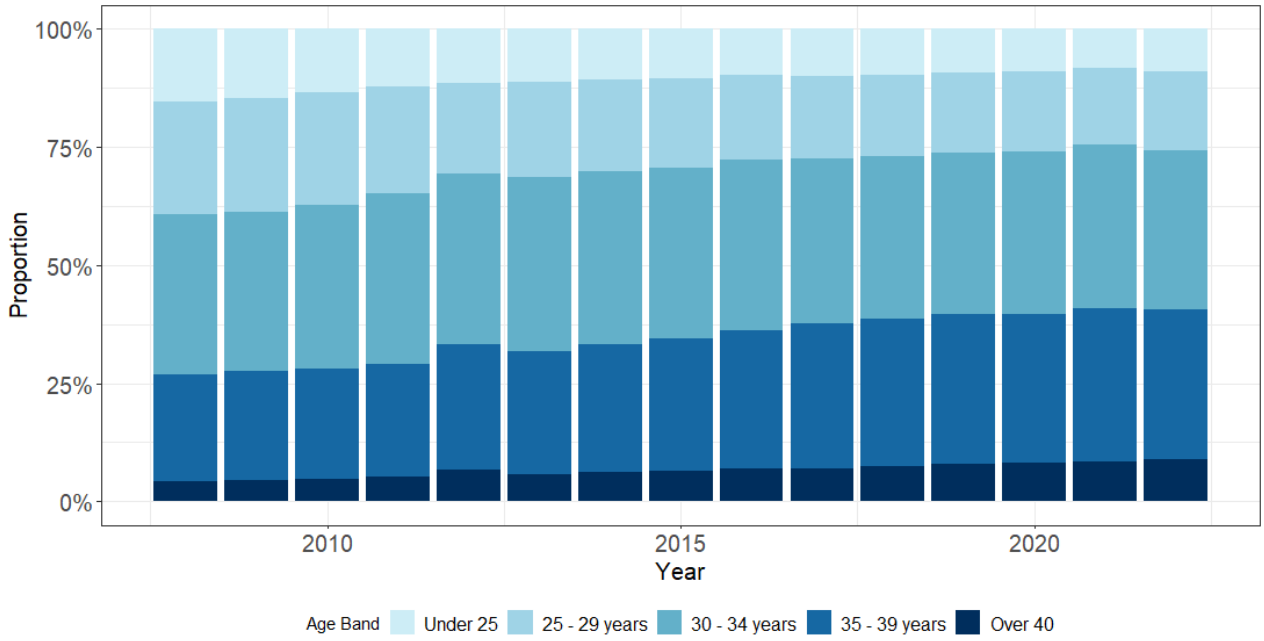

Figure 7: Proportion of births by maternal age in Ireland 2008-2022. [68]

5.1.3 Maternal Body Mass Index

Trends seen in the broader developed world have been reflected in Ireland in recent decades, with obesity levels rising and > 50% of people aged 15 years and up being either overweight or obese in 2019. [72, 73] Body Mass Index (BMI), although limited when applied at individual level, has utility as a simple metric in population-level analysis of rates of obesity and being overweight. To date there has not been a systematic and periodic review of BMI levels across Ireland with a high number of individuals, both reports cited above each had approx. n=7,500 participants with self-reported data. This data is the most detailed available at the time of preparing this report.

During pregnancy, BMI plays a significant role in both maternal and foetal health outcomes. Higher BMI (≥ 25 kg m-2) can contribute to infertility, miscarriage, macrosomia, preterm birth, labour complications, assisted or caesarean delivery, and foetal or maternal death. [74] It is expected that the distribution of BMI amongst pregnant women in Ireland will continue to rise in line with the overall population, with a greater proportion of adults being classified as overweight or obese.

5.2 Drivers of Demand: Gynaecology

5.2.1 Demographic Ageing and Population Growth

The projected national demographic changes to the female population in Ireland between 2023 and 2040 according to Scenario M2 projections from the CSO are summarised in Table 12. Clearly evident is the projected increase in the older adult population, who have a greater requirement of healthcare services than younger adults due to increased rates of chronic diseases and co-morbidities, complexity of care requirements, and age-related physiological changes that impact overall health and functional capacity.

Table 12: Projected demographic changes to the female population in Ireland 2023-2040. [46]

Demographic Group	2023 Value	2040 Value	Average Annual Growth Rate
0-15	528,836	427,221	-1.25%
16-30	481,601	535,143	0.62%
31-45	601,624	607,762	0.06%
46-60	519,743	654,947	1.37%
61-75	364,882	534,819	2.27%
76-85	129,511	226,618	3.35%
Over 85	46,251	103,387	4.85%
Total	**2,672,448**	**3,089,897**	**0.86%**

5.2.2 Gynaecology Referrals

The number of patients referred to gynaecology services (for example from GP/Primary Care or other acute hospital specialties) for the years 2016-2024 are shown in Table 13 and Figure 8 below, with the corresponding rate of referrals per 1,000 women included. The evident year-on-year increase in referrals is driven both by the increasing overall population and by increased rate of referral per capita, the latter of which exhibited a growth rate of 8.3% per annum over the time period shown. While there is a clear overall growth in referrals, there is significant annual variation, with further impact due to Covid-19 evident in 2020.

Projecting future trends in referral rate per capita is challenging, as it is influenced by a number of social and medical factors such as changing patient expectations, evolving clinical practices/ behaviours in primary healthcare settings, and the scale of unmet demand for services yet to interact with healthcare services. Furthermore, the annual referral rates per capita in Table 13 are calculated from two separate editions of CSO population projections, which carry inherent uncertainties due to variations in both natural population increase and immigration – the latter having consistently exceeded forecasts in recent years. For the purposes of this exercise, it is assumed that the rate of referrals will remain constant at the current rate of 40 per 1,000 women through to 2040. However, this rate may continue to rise or even decline in the future as a backlog of unmet demand is addressed. Therefore, ongoing monitoring and analysis will be essential to identify changes in referral patterns and their potential impact on the demand for gynaecology services.

Table 13: Total referrals for gynaecology service as recorded by the HSE BIU 2016-2024, [9] and corresponding ratios of referrals per 1,000 women. [46, 75]

Year	2017	2018	2019	2020	2021	2022	2023	2024
Referrals	49,257	53,659	59,612	51,645	70,384	79,605	89,376	108,039
Referrals per 1,000 Women	20.36	21.94	24.12	20.70	27.94	30.36	33.44	39.9

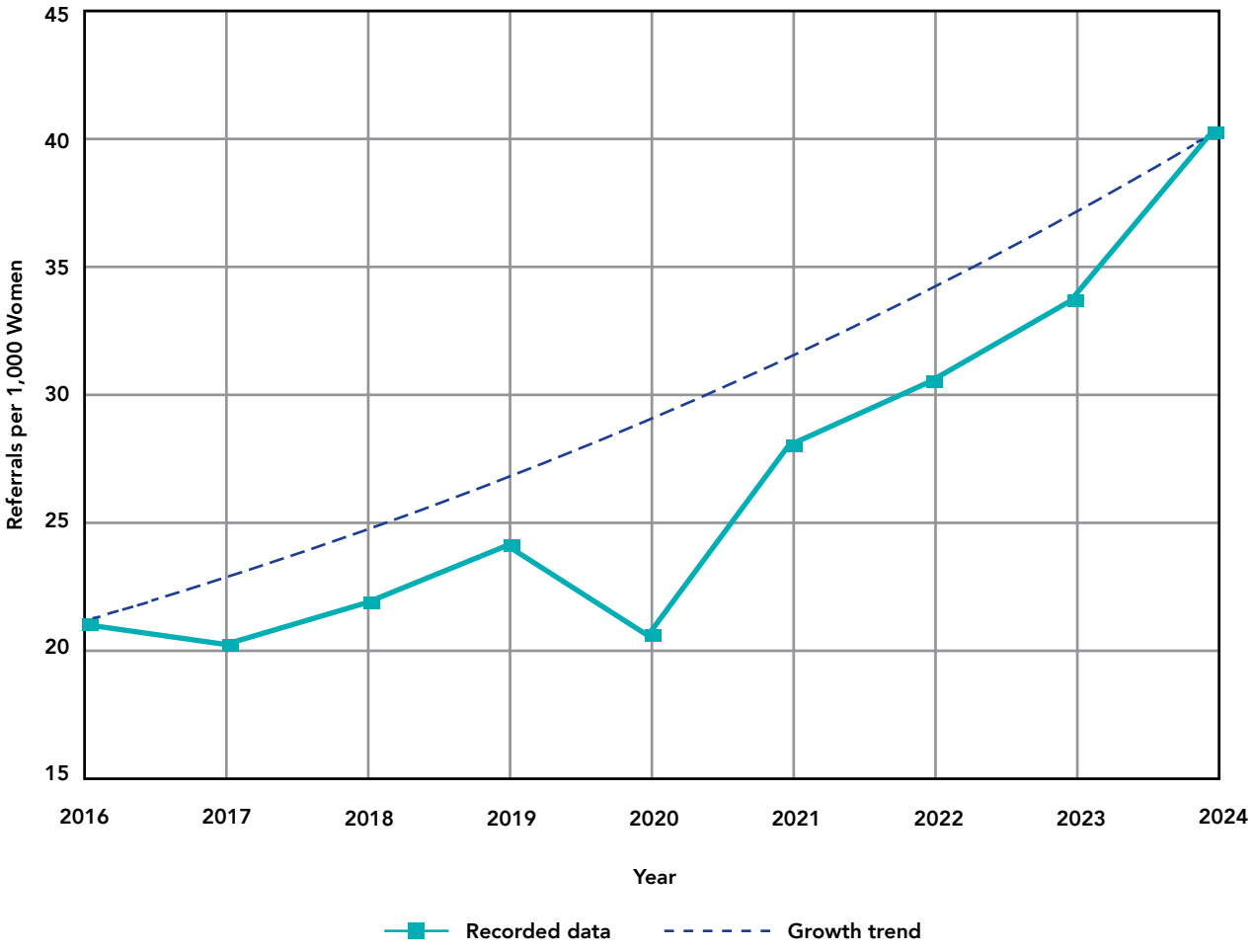

Figure 8: Gynaecology referrals per 1,000 women 2018-2024. [9, 46, 75]

5.2.3 Epidemiological Change

According to projections from the NCRI, the incidence rate of gynaecological cancers (ovarian, uterine, and cervical cancers) is projected to experience annual growth of 1.7% over the period 2023-2040. [14] This growth value was used to capture anticipated annual epidemiological changes and complexity in gynaecological cancers through the projection period. Appendix 5 provides more detail in how this value was calculated.

5.2.4 Care Pathways

As outlined above in Section 3.2, several specialised care pathways have been introduced in the last 3-5 years following extensive reviews of women's health in Ireland. The establishment and maturation of these specialist clinics has significant implications for demand for consultants as these services will improve the efficiency of care across many aspects of gynaecology services and influence the demand for consultants. Low-complexity outpatient workload is handled through Ambulatory Clinics, where the complexity of medical care is assumed to remain invariant, as any higher complexity cases will be directed to acute hospitals services. Consequently, while drivers for change above may drive overall complexity up, the nature of the workload in Ambulatory Clinics will be largely unaffected and demand for consultant gynaecologists in Ambulatory Clinics may, in fact, remain constant. As such, it is necessary to estimate the proportion of total attendances which can be expected to attend acute hospitals and quantify complexity and volume of this workload and project changes underpinned by the drivers for change discussed here.

6. Modelling Demand

Quantification of demand for consultants in O&G was carried out in separate exercises for each of obstetrics and gynaecology. While there are common drivers for demand across all services in O&G, they act differently on each half of the discipline. Thus, demand for each was addressed separately.

6.1 Complexity of Care

6.1.1 Complexity of Care: Obstetrics

A number of key metrics were identified to quantify and project complexity of care in obstetrics which captures the general health profile of women in the maternity system and the demands placed on the medical system during pregnancy and childbirth. More detailed discussion of the methodologies used in calculating these metrics and using these to project future demand are provided in Appendices 1-3 of this report.

Severe Maternal Morbidity

Severe Maternal Morbidity (SMM) is a collective term capturing the most critical health complications which can arise during pregnancy, childbirth, or the immediate postpartum period. Women experiencing SMM often require intensive care, blood transfusions, or major surgical procedures, creating a significant demand for complex medical care delivered by highly skilled and experienced consultant obstetricians. Longitudinal analysis of Irish maternity data shows an iceberg effect where SMM only captures a portion of recorded health complications during pregnancy. For every incidence of SMM from 2009-2019, there were 561.3 hospitalisations for less severe maternal health issues requiring medical treatment. [77] Assuming that these proportions remain broadly the same, projecting changes to the rate of SMM incidence allows for a proxy projection of the anticipated changes to overall healthcare demands in maternity settings.

Delivery Method

Caesarean deliveries are complex surgical procedures which require experienced surgical teams and carry significantly higher risk than spontaneous or instrumental births. Accordingly, an increased rate of caesarean deliveries carries an associated increased demand for consultant obstetricians. caesarean delivery rates have risen steadily across developed nations in recent decades, broadly attributed to increased maternal age, increased obesity rates, growing preferences for elective caesarean births, and medical attitudes to interventional practices during childbirth.

In Ireland, the overall caesarean delivery rate rose from 29.6% in 2014 to 39.4% in 2023. [35] The caesarean rate was consistently higher for nulliparas than for multiparas across this time period. It is noteworthy that caesarean rates showed no statistically significant patterns according to the scale of MUs. Accordingly, the national rate of caesarean deliveries was used as a proxy metric for changes to complexity of delivery method, in addition to the SMM rate discussed above.

Ectopic Pregnancy

Longitudinal analysis of data from Irish MUs shows that the rate of ectopic pregnancies increased exponentially by 4.4% annually from 2014-2023. [35] At a high level, ectopic pregnancies lead to increased demand for emergency and unscheduled care, medical and surgical interventions, incidences of SMM, intensive monitoring and follow-up appointments, increased need for maternal mental health services, and increased risk profile for future pregnancies. All of these factors increase workload and resource allocation, increasing demand for consultants. However,

the morbidity, mortality, and disease burden of ectopic pregnancies have declined in recent decades, particularly in developed nations. This can be attributed to a number of factors such as improved early detection and diagnostic techniques, and minimally invasive medical and surgical interventions. Accordingly, an increasing rate of ectopic pregnancies may not directly correlate with increased demand for and complexity in medical services. Thus, this was not used as a basis for projecting future complexity in Irish maternity care in this review.

6.1.2 Complexity of Care: Gynaecology

Quantifying complexity of gynaecology care was performed using Length of Stay (LoS) as recorded for acute hospital attendances on HIPE as a proxy metric. Stakeholder engagement indicated that the duration an inpatient spends admitted to hospital broadly captures the medical complexity and demand on resources involved. All HIPE records coded as "Pregnancy-Related" were omitted for this exercise, so-as to avoid confounding projection of gynaecology care with maternity-related care.

All gynaecology attendances recorded on HIPE are coded in broad diagnosis groups such as "Pregnancy-Related", "Urogenital", "Cancer", and several small volume categories. Once pregnancy-related entries have been removed, urogenital entries comprise 78% of 2023 records, 7% are cancer-related, and the remainder are other small volume categories. Figure 9 illustrates the total number of HIPE 2023 records across these diagnosis groups, with LoS indicated by fill colour and each column corresponding to an age band. Figure 10 presents the same data as a proportion of the total number of attendances for each age band. It is apparent that a greater proportion of cancer attendances have a long LoS when compared to other diagnosis groups, while LoS increases with patient age within all diagnosis groups. This highlights two key elements which drive overall LoS at a macro level: patient age distribution and the proportion of cancer-related attendances. Accordingly, calculations of future demand were underpinned by demographic ageing and cancer incidence.

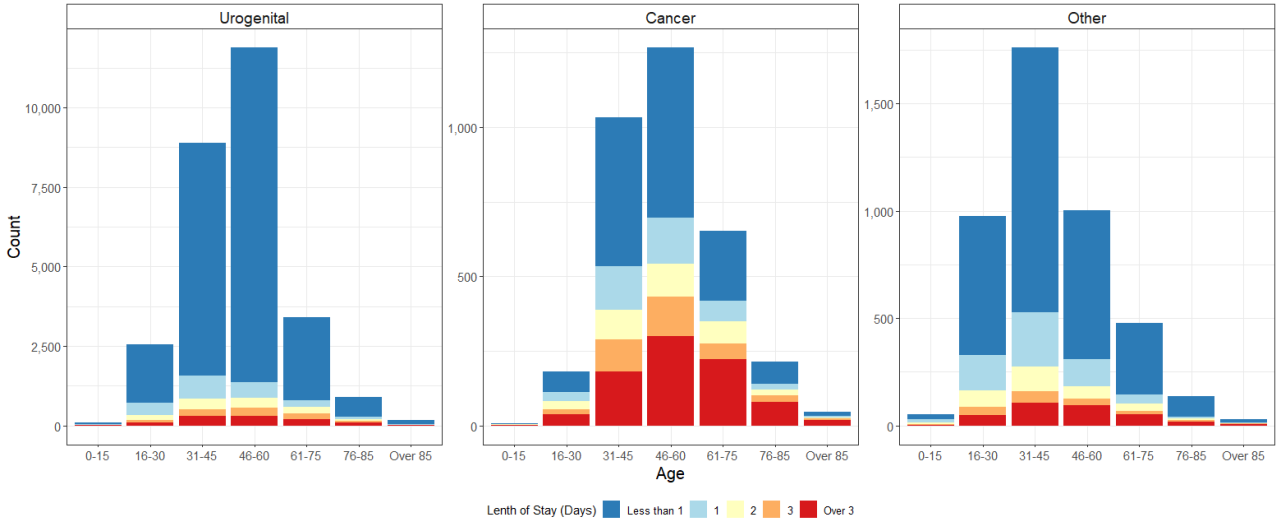

Figure 9: Frequency of gynaecology hospital attendances by age for the year 2023 separated by main diagnosis groups. [8] Attendances coded as "Pregnancy-related" have been removed.

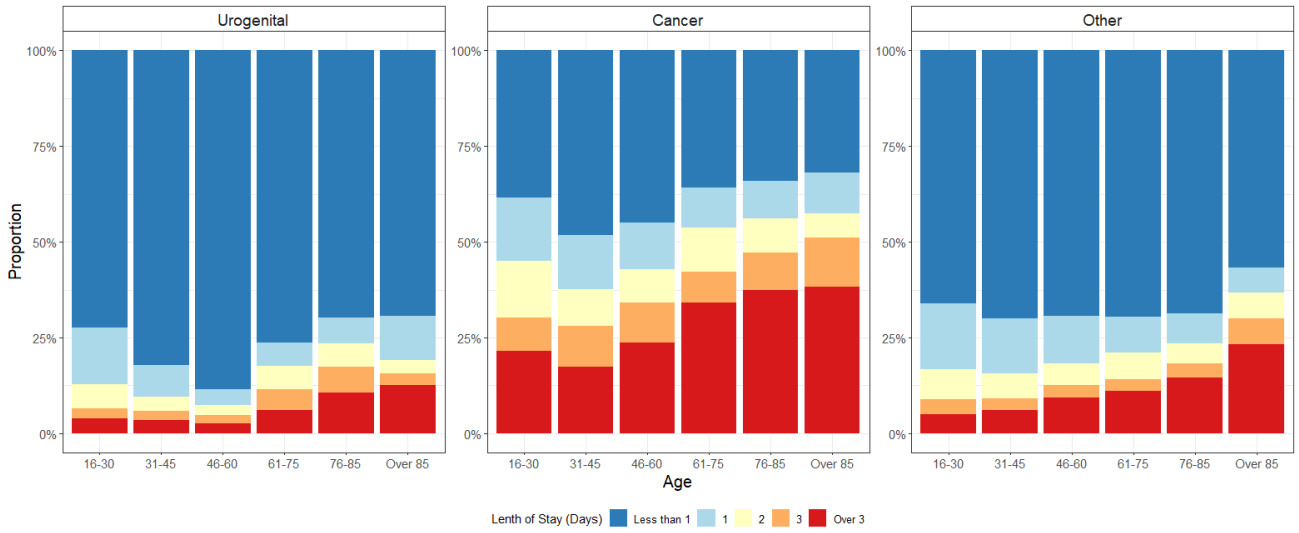

Figure 10: Proportion of gynaecology hospital attendances by age and LoS for the year 2023 separated by main diagnosis groups. [8] Attendances coded as "Pregnancy-related" have been removed. The Under 15 age band has been removed from this visualisation due to very low numbers of cases.

6.2 Baseline Demand

6.2.1 Baseline Demand Obstetrics

Maternity care in the Irish health system is somewhat unusual in that there are no formal waiting lists for clinical services. Given the time-sensitive nature of pregnancy, services are provided when they are needed. As such, unmet demand for consultants is not quantified in this manner, but through analysis of consultant working patterns across the MUs. The wide variety in scale of the Irish MUs has significant implications for appropriate staffing levels. Additionally, MUs in rural or smaller urban areas have long had difficulty with recruitment and retention of consultant obstetricians, with a heavy reliance on NTSDs to ensure 24/7 emergency cover and fill service gaps. At the time of the HIQA report "National Standards for Safer Better Maternity Services, with a focus on obstetric emergencies", larger MUs exhibited an average on-call frequency of 1 in 7, which is considered appropriate for work/life balance. However, smaller MUs exhibited an average on-call frequency of 1 in 4 or 1 in 3, which is unsustainable and represent an unmet demand for consultants. [62]

Baseline consultant demand for 2023, accounting for unmet demand, was determined for each MU on the basis of overall activity (annual births) while assuming minimum staffing required to ensure on-call frequency of 1 in 7 across all MUs. Aggregated to national level, the baseline demand for consultant obstreticians in 2023 was 113.3 WTE. This exercise highlighted that for 8 of the 19 MUs, consultant demand was driven by minimum safe staffing rather than overall activity levels.

6.2.2 Baseline Demand Gynaecology

As outlined in Section 5.2, demand for gynaecology services has steadily increased in recent years at a pace which couldn't be met by available services, resulting in ever-increasing numbers of women on waiting lists. Waiting list statistics reports published by the HSE's NTPF show that total numbers on inpatient/daycase waiting lists grew by an average of 11.5% per year from 2014-2021, while outpatient waiting list numbers grew by an average of 8.7% per year across the same period. [76] This information is visualised in Figure 11. This year-on-year growth represents a significant unmet demand for services.

However, it is clear that the overall numbers on waiting lists and the proportion of those waiting long durations have begun to reduce since 2021/2022. This likely reflects the impact of interventions carried out in line with recommendations of the Women's Health Taskforce. These include the establishment of specialist clinics (such as ambulatory, menopause, and endometriosis) and more efficient care pathways. In addition to an overall reduction in numbers on waiting lists in the last 2-3 years, there has been a marked reduction in numbers of patients on waiting lists for 12 months or more across both inpatient/daycase and outpatient services (orange and red fill in Figure 11).

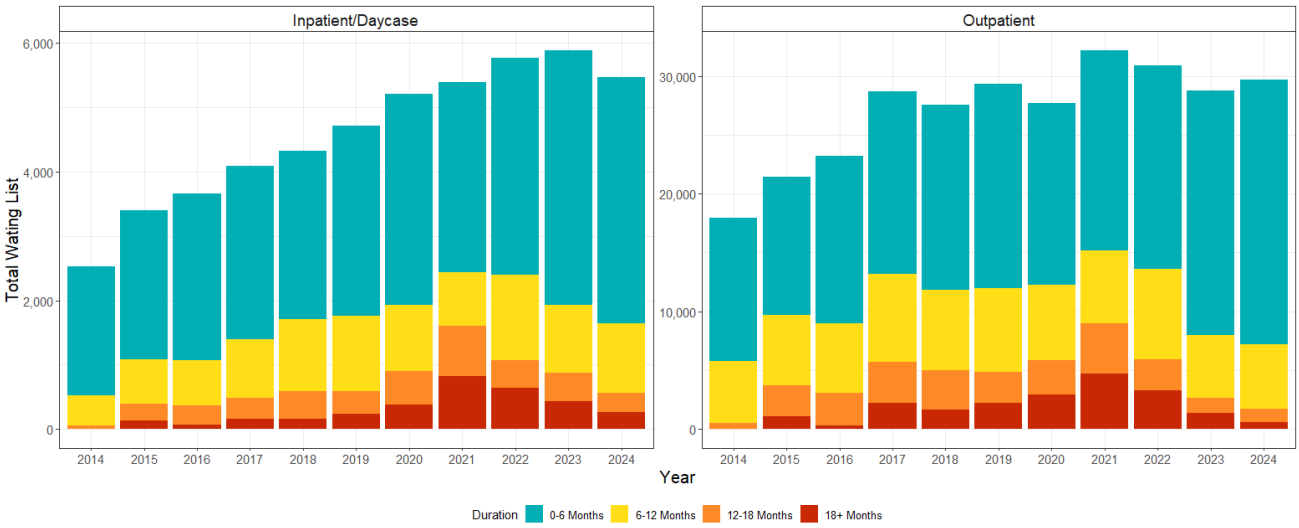

Figure 11: Gynaecology waiting list numbers for March report of each year 2014-2024. Wait duration indicated by colour as indicated. [76]

Further reduction in waiting list numbers is not explicitly addressed in this review as the recent interventions and enhanced care pathways are already reducing waiting list volumes and durations, as outlined above. Furthermore, the anticipated opening of elective hospitals is expected to accelerate the reduction of waiting list volume in the coming years. [25] Accordingly, waiting list trends will need to be reviewed in another 2-3 years and periodically thereafter to accurately gauge the status and dynamics of waiting lists for gynaecology services. Various specialty gynaecology services such as Ambulatory Clinics and colposcopy have differing waiting time targets, and on-going monitoring of these services will indicate if these targets are being met or if further changes are required.

Baseline demand for gynaecology was calculated on the basis of attendance data for 2023, on the assumption that all recent and currently underway service reconfiguration was complete and operating efficiently. All attendances for obstetrics services were discounted from the exercise. It was assumed that 65% of all attendances could be diverted to and treated in Ambulatory Clinics, in line with ambitions of the MoC and stakeholder feedback on performances on these clinics to date. In 2023, there were 208,415 patient attendances across hospitals and outpatient clinics which were coded as "Gynaecology". Under the assumptions above, approx. 135,500 of these attendances could be diverted to Ambulatory Clinics, should sufficient capacity exist, while the remaining 73,000 attendances would be treated in acute hospitals.

If all 21 Ambulatory Clinics move to a full-time footing with clinics 5 days per week, approx. 70,000 attendances could be accommodated annually at current operating models, with a total consultant requirement of 31.5 WTE in lead roles. It is anticipated that increasing the capacity of

these clinics could be achieved through non-consultant members of the MDT and administrative staff. Thus, for the purposes of these projections, it is assumed that the consultant demand for staffing of Ambulatory Clinics remains 31.5 WTE.

The remaining 73,000 attendances were assumed to require treatment in acute hospital settings. Consultant productivity in 2023 HIPE data indicates that the above patient attendances would require 133.5 WTE consultants across acute hospitals. When combined with the demand for Ambulatory Clinics, the total baseline demand for consultants in gynaecology services in 2023 was 165 WTE in 2023.

6.3 Future Demand

Future consultant demand was estimated by applying annual growth rates to the baseline demand outlined above. These growth rates were calculated to account for the combined effects of various drivers for change.

6.3.1 Future Demand Obstetrics

Statistical modelling of activity data for MUs in 2021 and 2022 (see Appendix 2) indicated that increased maternal age and BMI corresponded to an increased risk of SMM. The risk of SMM decreases for a mother's second and third birth relative to their first but increases thereafter for each subsequent birth. Future SMM incidence was projected on the basis of assumed maternal age, BMI, and parity distributions outlined in Appendix 1. This exercise indicated that the incidence of SMM is expected to grow by 0.35% annually to 2040, based on demographic change, alone.

A similar statistical modelling approach was taken to project the future rate of caesarean deliveries with maternal age and parity as descriptors. This is described in detail in Appendix 3. Key findings indicated that likelihood of caesarean delivery increases with increasing maternal age, while decreasing for multiparous women compared to women experiencing their first childbirth. Future caesarean rates were projected in line with the assumed maternal demographics outlined in Appendix 1, which predicts that 42% of all deliveries in 2040 will be caesarean. This represents an annual growth rate of 0.37% for the caesarean delivery rate.

It must be noted that the projected overall caesarean delivery rate of is a conservative projection based simply on assumed trends in maternal demographics. This calculation does not account for changes to patient expectations, defensive medicine practice, or medical attitudes to interventional practices, which could have substantial impacts on future caesarean rates. Nonetheless, this value is used in projecting changes to complexity in obstetrics, as outlined below, but it is acknowledged that this value likely represents a minimum value and will need to be monitored and reviewed periodically.

The above growth rates for SMM (increasing 0.35% annually) and caesarean deliveries (increasing 0.37% annually) capture drivers which increase consultant demand. A geometric-mean of these values was calculated as 0.36% and was used to capture a complexity growth rate to 2040. In parallel, the declining number of births (declining by 0.6% annually) acts to decrease demand for consultant obstetricians. Thus, the overall demand for consultant obstetricians will decrease by 0.24% annually from 2023 to 2040. Taking the same approach as above to minimum staffing levels to ensure on-call frequency of 1 in 7, the consultant demand for obstetrics in 2040 is projected to be 109.8 WTE.

6.3.2 Future Demand Gynaecology

Driven by expected overall population growth and increased referrals per capita, the total number of attendances in Ambulatory clinics is expected to increase by approx. 1.9% each year to 2040. In spite of this, the demand for consultant gynaecologists in lead roles is assumed to remain constant at 31.5 WTE, as increased throughput in these clinics will be achieved through bolstering the roles of other HCPs within the MDT and administrative staff.

Projecting future demand for gynaecology services in acute hospital settings was performed by applying annual growth rates to the adjusted LoS discussed in Section 6.1.2. These growth rates accounted for different demographic ageing growth rates (Table 12), increased referrals per capita, and increased cancer incidence, as appropriate. Overall, demand in acute hospitals is projected to grow by 1.79% 2023-2040 (accounting for increased complexity and increased referrals per capita), resulting in a consultant demand of 180.7 WTE in 2040. Accounting for Ambulatory Clinics and acute hospitals, the overall demand for consultant gynaecologists in 2040 is projected to be 212.2 WTE. Appendix 4 provides more detailed discussion of calculations to project changes to complexity of gynaecology in acute hospital settings.

6.3.3 Overall Future Demand

Based on the demand projections outlined here, the overall baseline and projected demand for Consultants in O&G are summarised in Table 14. The total demand in HSE-funded services in 2040 is estimated as 322 WTE. Accounting for private sector assumptions, the total Public + private workforce demand in 2040 is projected to be **346 WTE**.

Table 14: Summarised overall baseline (2023) and projected (2040) consultant demand across obstetrics and gynaecology in HSE-funded services.

	Baseline Consultant Demand 2023 (WTE)	Projected Consultant Demand 2040 (WTE)
Obstetrics	113.3	109.8
Gynaecology	165	212.2
Total O&G (public)	**278.3**	**322**

7. Supply of Obstetrics & Gynaecology Consultants

Current approved intake into the HST programme for O&G stands at 18 trainees each year. If this pattern is sustained for the coming years and no further recruitment external to the training pipeline takes place, the consultant workforce will reach approx. 300 WTE by 2040, under supply model assumptions set out in Section 2.2.1. This value is substantially below the estimated consultant demand, necessitating both increases in training capacity and recruitment from outside of the domestic training pipeline to bridge this gap.

7.1 Training Intake Recommendations

Following supply modelling, it is recommended that HST intake should gradually build from present levels of 18 per year to an average of 24 per year by 2030. This pattern will ultimately result in a total of 120 HSTs in post in a given training year. Additionally, the factors which cause trainees to withdraw from O&G BST (either mid-programme or post-BST) must continue to be addressed to ensure that skilled trainees are not lost to the specialty. If current trainee attrition patterns continue, it is likely that insufficient eligible candidates would be available in a given year to fill all Year 1 HST posts. Thus, keeping early-stage O&G trainees in programme is imperative to supply the future consultant workforce.

There are currently >200 NTSDs employed across all services in O&G, and it is expected that some of these posts will be suitable for conversion training posts. The recommended roadmap for increased training intake is summarised in Table 15.

7.2 Additional Recruitment Recommendations

It will be necessary to recruit approx. 16 consultants who qualified outside of the Irish training programme to bolster the consultant workforce in the medium term. These individuals will serve to offset anticipated retirements and facilitate expansion of the consultant workforce while the training programmes ramps up in capacity. The proposed roadmap for recruitment of consultants external to the domestic training pipeline is summarised in Table 15. The annual profile of consultants recruited may vary from that shown here, but workforce targets will be met if the total recruitment target is achieved.

Across 2021-2023, 38% of newly appointed consultants to permanent posts in O&G qualified outside of Ireland. [16] This is among the highest value across all medical disciplines in HSE-funded services, highlighting a dependency on non-domestically trained individuals to fill consultant posts in O&G. For consultants recruited on a non-permanent basis (locum, temporary, or agency), the proportion of non-domestically trained consultants was substantially higher. This serves to provide further support to the case to increase training output. Figure 12 illustrates the projected proportion of new appointments to consultant posts on the basis of the supply scenario presented here. Beyond 2030, it is expected that consultant demand will be met sustainably through the domestic training programme.

Table 15: Recommended roadmap for training intake and additional recruitment in O&G to meet consultant demand to 2040.

	2025	2026	2027	2028	2029	2030
HST intake	18	20	22	22	24	24
Additional Recruitment	5	4	4	3		

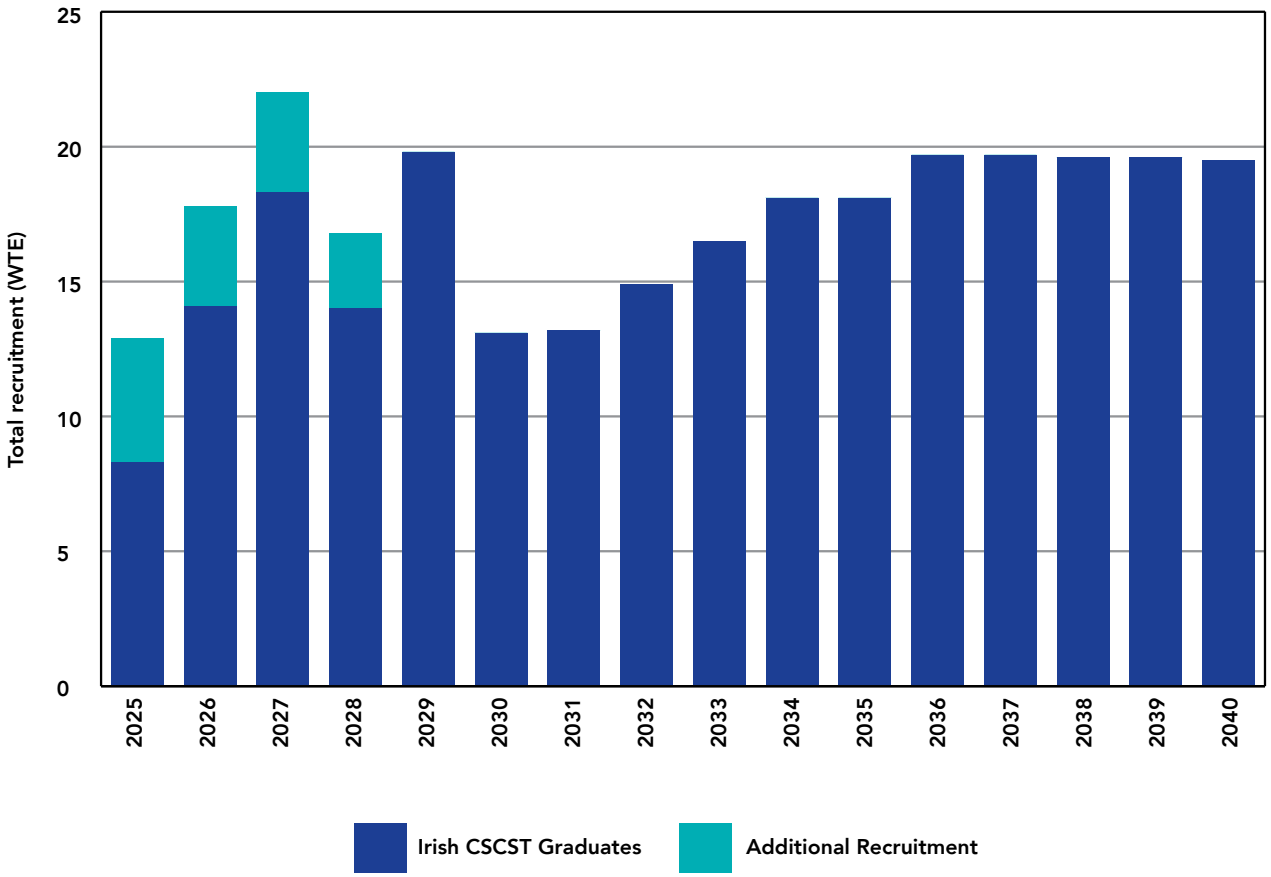

Figure 12: Projected annual appointments to consultant posts (WTE) from domestic CSCST graduates or additional external recruitment.

7.3 Detailed Supply Summary

A detailed summary of the supply scenario outlined above is shown in Table 16, below. This summary breaks projected total recruitment by replacement and expansion demand, entrants to the workforce by CSCST graduates or additional external recruitment, as well as providing annual metrics around average WTE rate and estimated headcount. Note that slight variations may arise if, for example, there are deviations in the annual recruitment of overseas consultants, trainee intake, gender balance, or retirement patterns compared to the profile presented here.

Table 16: Detailed supply summary to meet consultant demand to 2040.

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Consultant Supply (@ year-end) (WTE)	223.8	224.3	231.5	241.8	247.2	254.5	256.1	259.7	263.6	270.3	278.8	287.8	298.9	310.5	322.5	333.9	346.3
Replacement Posts (WTE) (Retirements & Exits)		12.5	12.6	11.3	10.9	12.1	11.0	9.1	10.5	9.4	9.1	8.6	8.1	7.5	7.1	7.6	6.6
New Posts (WTE) (Service Expansion)		0.5	5.2	10.7	5.9	7.7	2.1	4.1	4.4	7.1	9.0	9.5	11.6	12.2	12.5	12.0	12.9
Total Recruitment (WTE)		13.0	17.8	22.0	16.8	19.8	13.1	13.2	14.9	16.5	18.1	18.1	19.7	19.7	19.6	19.6	19.5
Domestic CSCST Graduates (WTE)		8.3	14.1	18.3	14.0	19.8	13.1	13.2	14.9	16.5	18.1	18.1	19.7	19.7	19.6	19.6	19.5
Additional Overseas Recruitment (WTE)		4.6	3.7	3.7	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average WTE rate	91.7%	91.6%	92.4%	92.1%	91.8%	91.5%	91.2%	91.0%	90.7%	90.5%	90.3%	90.1%	89.9%	89.7%	89.5%	89.4%	89.2%
Estimated Headcount (HC)	244.0	245	251	263	269	278	281	285	290	299	309	319	332	346	360	374	388

7.4 Geographic Distribution of Consultants in 2040

Table 17 provides a proposed breakdown of the consultant workforce in O&G in 2040. The regional workforce is aligned with the distribution of all services across O&G, such as the location of MUs, Ambulatory Clinics, endometriosis clinics, etc. Generally speaking, Health Regions with large geographic area and a low population density dispersed across a number of urban centres (such as West-Northwest) will have a higher number of consultants per capita compared to geographically smaller Health Regions with high population density (such as Dublin-Northeast), as proximity to clinical sites plays a factor in planned location of services.

Table 17: Current (2024) and projected (2040) consultants per HR (WTE) across public and private sectors.

Health Region	Consultant workforce 2024 (WTE)	Consultants per 100k population 2024 (WTE)	Recommended consultant workforce 2040 (WTE)	Consultants per 100k population 2040 (WTE)
Dublin & Northeast	45.35	3.69	67.8	4.84
Dublin & Midlands	40.23	3.50	64.5	4.80
Dublin & Southeast	43.14	4.28	67.2	5.96
Southwest	29.9	3.90	47.0	5.53
Midwest	12.94	3.04	24.0	5.09
West-Northwest	34.78	4.48	53.3	6.22
Private	17.5		24.4	
Total (Public only)	**206.3**	**3.85**	**323.7**	**5.43**
Total (Public + Private)	**223.8**	**4.18**	**348**	**5.84**

7.5 Regional Workforce Planning

Table 18 outlines a roadmap for expansion of the consultant workforce in O&G across the HSE Health Regions in the medium and long term. This is also visualised in Figure 13. This information can support Regional Executive Officers and other decision makers and stakeholders across the HSE Health Regions in building regional consultant workforces with the appropriate skill mix to serve population needs across all specialties. Note that the scale of increase in the workforce is not uniform across each Health Region. This is due to the need to address unmet demand and facilitate establishment of specialist clinical services in the medium term and the overall expansion of the workforce to match evolving population needs in the longer term.

Table 18: Proposed growth profile of consultant workforce (in WTE) across HSE Health Regions.

Health Region	Consultant workforce 2024 (WTE)	Recommended consultant 2030 (WTE)	Recommended consultant workforce 2040 (WTE)
Dublin & Northeast	46.1	53.5	67.8
Dublin & Midlands	44.3	55.0	64.5
Dublin & Southeast	38.3	47.0	67.2
Southwest	29.9	34.0	47.0
Midwest	12.9	18.0	24.0
West-Northwest	34.8	43.0	53.3
Total	**206.3**	**250.4**	**323.7**

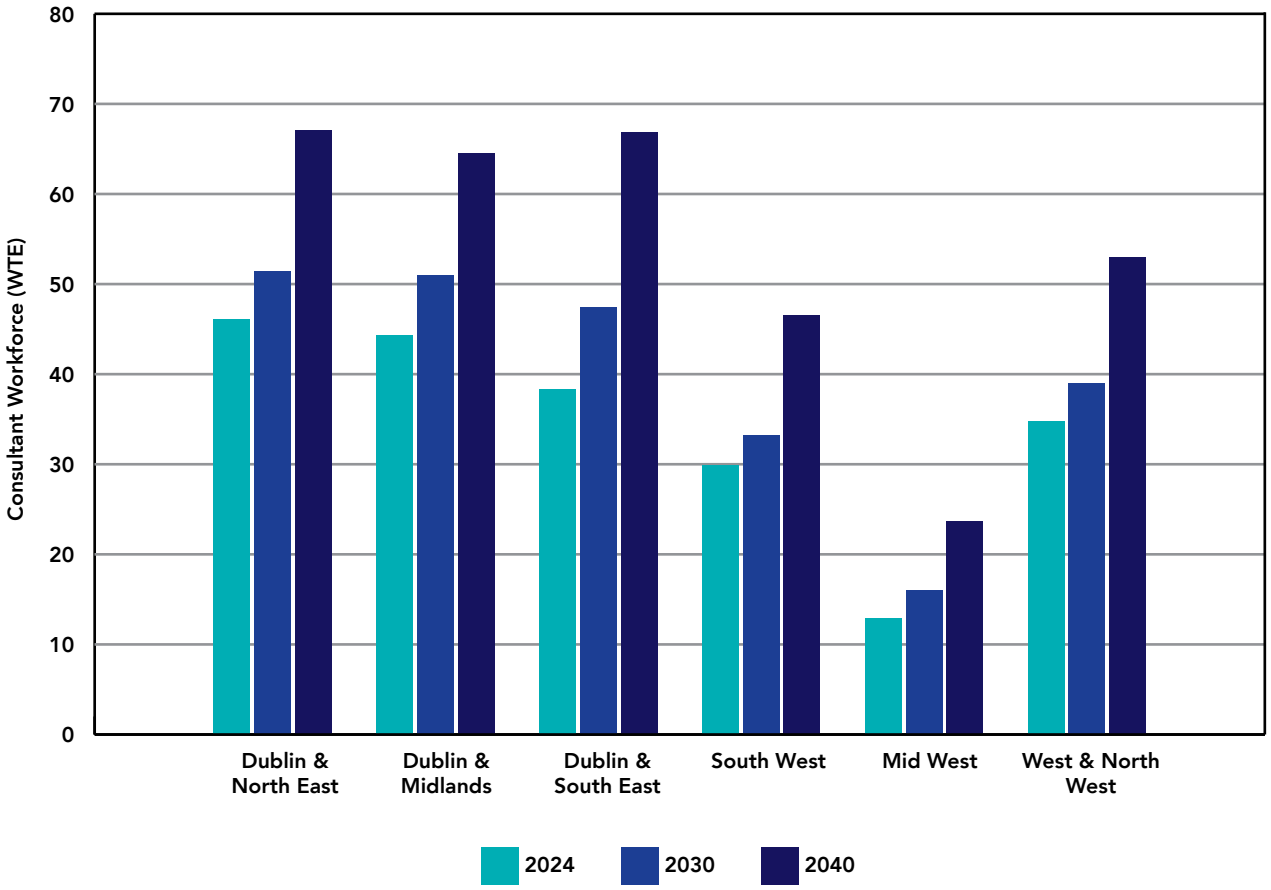

Figure 13: Proposed growth profile of the consultant workforce (in WTE) across the HSE Health Regions.

8. Conclusions and Recommendations

- The consultant workforce in O&G is required to expand substantially in the coming 10-15 years in accordance with ongoing service developments and projected service demand.

- Currently, O&G in Ireland has a significantly lower number of consultants per capita than in comparable international jurisdictions, and an over-reliance on NTSDs. Moving to a consultant-delivered service, meeting ageing demographic demand, and appropriately staffing specialist services across O&G will require the O&G consultant workforce to increase by almost 60% in the next 15 years.

- Meeting these staffing requirements presents a significant challenge, as the domestic training pipeline is not currently equipped to service this demand. In addition to overall training programme capacity, BST in O&G exhibits among the highest rates of in-programme attrition across all HSE training programmes.

- The projections outlined in this report detail the scale of required increases to training capacity over the next 5 years as follows:

  - HST should build to an intake of 24 trainees per annum.

  - Ongoing efforts are required to improve trainee retention at mid-BST and post-BST stages.

- In addition to the increased capacity of O&G training programme, it will be necessary to recruit approx. 16 consultants from outside of the domestic pipeline in the short to medium-term. This will serve to offset anticipated consultant retirements and meet service expansion demands while the training programme output increases.

- The specific distribution of the consultant workforce across the HSE Health Regions will be determined by the specific services located in different clinical sites. This will be monitored on an on-going basis is subject to change to ensure that service provision and the corresponding workforce are appropriately located.

- The scale of workforce expansion outlined in this document will be ambitious but is reflective of the changing nature of projected patient care in O&G. Demand for consultants in obstetrics is driven by safe staffing requirements in small MUs in remote geographic locations, while demand for consultants in gynaecology is primarily driven by demographic ageing. Should the number or organisation of MUs change, demand in obstetrics would change correspondingly.

- Specialty stakeholder feedback indicates that challenges remain in terms of increased output from the O&G training programmes while maintaining the universally high levels of competence and skill across the breadth of medical care provided by consultants in O&G.

Appendix 1: Future Maternal Demographic Assumptions

The future distribution of maternal age, BMI, and parity were assumed based on international trends and other relevant research. The distributions outlined in the following section underpin the calculations around projecting SMM incidence and caesarean delivery rates.

Birth Rate

As outlined in Section 5.1 and summarised in Table 11, the CSO's Population and Labour Force Projections are used to project the total number of future births. [46] The baseline and projected number of births are summarised with the corresponding annual growth rate in Table 19 below. While the reported number of births for 2023 was less than the projected values, the overall growth rate for births is taken from the projected values, as this profile captures the effects of the decreasing TFR.

Table 19: Total baseline (2023) and projected (2040) number of births in Ireland. [46]

2023	2040 (projected)	Growth Rate 2023-2040
54,484 (actual)	51,687	-0.6%
57,357 (projected)		

Maternal Age

Maternal age distribution is assumed to change as outlined in Table 20 below. The age distribution for 2022 is as published by the NPRS, the most recent validated report available at time of writing. [64] The assumed distribution for 2040 is based on current trends of increasing maternal age.

Table 20: Maternal age distribution at time of birth 2022 (actual) and 2040 (assumed). [64]

Age Band	Proportion 2022 (actual)	Proportion 2040 (assumed)
Under 25	9.2%	7%
25-29	16.5%	14%
30-34	33.8%	31%
35-39	31.6%	35%
Over 40	8.9%	13%

Maternal Body Mass Index

It is assumed that the maternal BMI distribution in Ireland will continue to rise in line with the overall population and trends seen in the broader developed world, with a greater proportion of adults being classified as overweight or obese. Assumed maternal BMI proportions in 2040 are show in Table 21. Actual 2022 data is as recorded on the MN-CMS for that year. [11]

Table 21: Maternal BMI distribution for 2022 (actual) and 2040 (assumed). [11]

BMI Category	Proportion 2022 (actual)	Proportion 2040 (assumed)
Normal	49.7%	40%
Overweight	27.4%	30%
Obese	22.9%	30%

Parity

The future parity distribution is expected to change in line with the ongoing and projected trend in TFR. Baseline and assumed parity distributions are shown in Table 22. [11]

Table 22: Parity distribution for 2022 (actual) and 2040 (assumed). [11]

Parity	Proportion 2022 (actual)	Proportion 2040 (assumed)
0	41.9%	60%
1	35.4%	25%
2	15.8%	12%
3+	7.2%	3%

Appendix 2: Projecting Severe Maternal Morbidity

A statistical modelling approach was used to understand the drivers for SMM. Historic aggregated maternity activity data sourced from the MN-CMS was modelled and subsequently used to project future rates of SMM based on assumed maternal demographic changes. [11]

Modelling Severe Maternal Morbidity

A binomial logistic regression model was fitted to estimate the probability of SMM as a function of maternal age, BMI, and parity. This demonstrated that obesity was the strongest independent predictor of SMM, increasing odds almost twofold compared to mothers with BMI < 25. Maternal age ≥ 40 was associated with a 1.5-fold higher risk compared to mothers aged under 25. Parity exhibited a U-shaped relationship with increased risk for primiparous and high-parity mothers, consistent with international research. [65] Table 23 presents a comprehensive summary of the results of the regression model, expressing the impact of descriptors on SMM likelihood. The p-value indicates whether observed associations are statistically significant (i.e. highly unlikely to be due to random variation), with a p-value of < 0.05 deemed the threshold for statistical significance. The impact of these relationships are visualised in Figure 14.

Table 23: Summary of SMM risk model outputs.

Predictor	Category	Odds-Ratio	p-value	Interpretation
BMI	Normal	**1**		Reference BMI category
	Overweight	**1.19**	0.072	Slight SMM risk increase versus normal BMI. Not statistically significant.
	Obese	**1.89**	<0.001	~90% higher odds of SMM versus normal BMI. Highly statistically significant.
Age	Under 25	**1**		Reference Age category.
	25–29	**1.09**	0.63	Marginal increase SMM risk versus under 25. Not statistically significant.
	30–34	**1.05**	0.75	
	35–39	**1.26**	0.16	Increase in SMM risk versus under 25. Not statistically significant.
	≥40	**1.53**	0.023	Significantly increased risk of SMM versus Under 25. Statistically significant.
Parity	poly(parity, 2) 1		<0.001	Indicates non-linear effect (higher risk for primiparous and high-parity mothers)
	poly(parity, 2) 2		<0.001	

Note: The two polynomial terms for parity cannot be directly interpreted as simple odds ratios but together describe a non-linear U-shaped relationship with SMM risk.

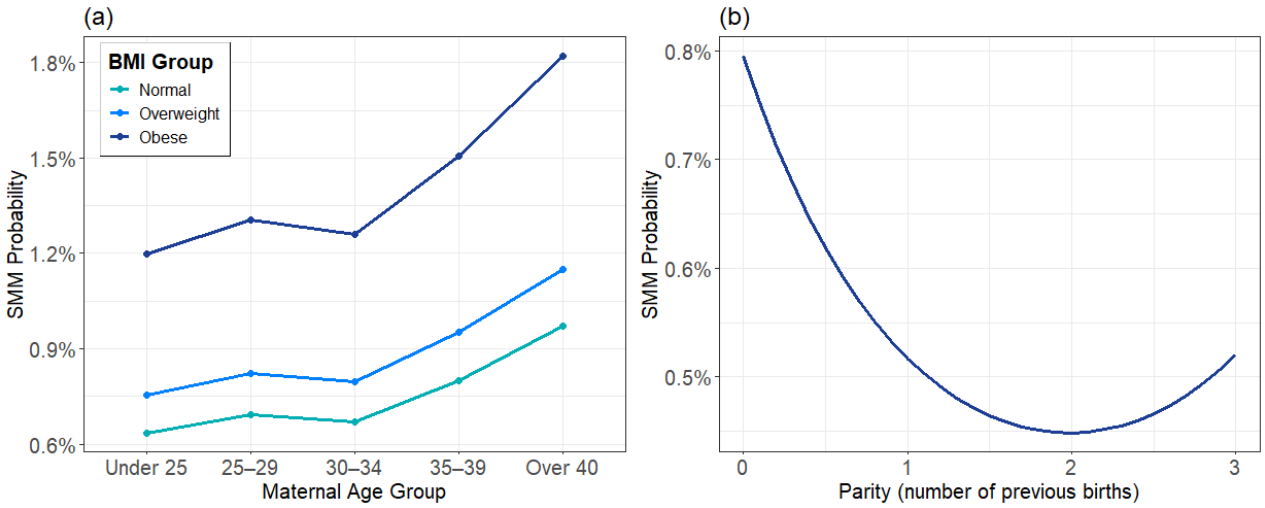

Figure 14: (a) Predicted SMM risk profile across maternal age and BMI groups with parity = 0. (b) Predicted SMM risk profile for parity where BMI group is "Overweight" and maternal age group is "30-34".

Projecting Future Severe Maternal Morbidity

The overall population level rate of SMM was predicted for a simulated dataset of births in 2040 with maternal demographics as discussed in Appendix 1. Although not all coefficients in the model were statistically significant, all were retained to maintain population level accuracy. The outcome of this exercise was that the overall population SMM rate is expected to grow by 0.35% annually from 2023 to 2040. Further details of the projection calculations are available on request to the authors.

Appendix 3: Projecting Delivery Method

Statistical modelling was also used to understand the observed rates of caesarean deliveries. A statistical model was trained on historical data as recorded by the NPRS, which was subsequently used to project future caesarean delivery rates based on assumed maternal demographic changes. [10]

Modelling Caesarean Delivery

A binomial logistic regression model was fitted to estimate the probability of caesarean delivery as a function of maternal age and parity. The data available for this exercise did not record parity in granular detail, nor was other health information (such as BMI) recorded, as was available for modelling SMM.

The fitted model showed that the likelihood of caesarean delivery increased steadily with maternal age. Compared with mothers aged under 25, those aged 25–29 were 1.5 times more likely to deliver by caesarean, while mothers aged 40 and over had odds almost four times higher. Parous mothers had lower odds of caesarean delivery relative to first-time mothers, indicating a protective effect of prior births. Table 24 presents a comprehensive summary of the results of the fitted logistic regression model, with these relationships visualised in Figure 15. Limitations of this model include the absence of information on the delivery method of previous births for parity ≥ 1. This is an important predictor as prior caesarean delivery is strongly associated with subsequent caesarean births. Additionally, the absence of any reported health conditions or comorbidities which might impact delivery method limits the predictive power of the model.

Table 24: Summary of caesarean delivery model outputs

Predictor	Category	Odds-Ratio	p-value	Interpretation
Age	Under 25	**1**		Reference age category.
	25–29	**1.50**	<0.001	50% higher odds of caesarean versus under 25s.
	30–34	**1.87**	<0.001	Almost doubled odds versus under 25s.
	35–39	**2.47**	<0.001	2.5× higher odds versus under 25s.
	40 and over	**4.02**	<0.001	Odds ~4× higher versus under 25s.
Parity	0	**1**		Reference parity category.
	1+	**0.72**	<0.001	28% lower odds versus primiparous mothers.

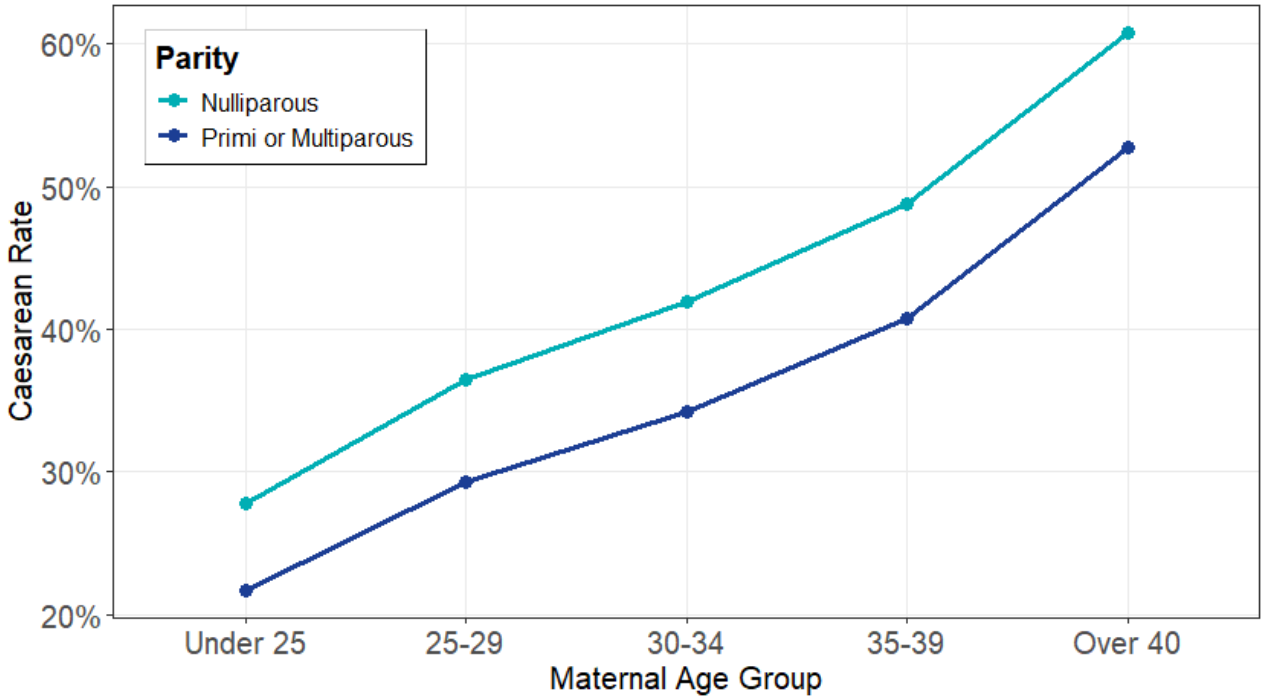

Figure 15: Predicted caesarean delivery risk profile for different combinations of maternal age and parity.

Predicting Caesarean Delivery

The population-level rate of caesarean delivery was projected for a simulated dataset of births in 2040 using the fitted model coefficients. Maternal age and parity distributions in the simulated dataset were based on projected demographic patterns (see Appendix 1). This exercise projects that the overall population caesarean delivery rate will increase from an estimated 39.4% in 2023 to approximately 42% by 2040, based solely on changes to maternal demographics. This corresponds to the population rate of caesarean deliveries growing by 0.37% annually over the period 2023-2040. Further details of the projection calculations are available on request to the authors.

Appendix 4: Gynaecology Complexity

Adjusted LoS as recorded on HIPE for 2023 was used to gauge complexity of gynaecology workload in acute hospitals. Stakeholder feedback indicated that the duration a patient spends in hospital can be used as a proxy measure of the complexity of care involved. All HIPE entries coded as "Pregnancy-related" were omitted from this exercise (quantification and projection of complexity in obstetrics was handled using the methods outlined in Appendices 1-3). Attendances where LoS < 1 (daycases) and LoS = 1 (overnight inpatient attendances) were deemed to be the lowest acuity cases and assigned the same value. The recorded LoS value was adjusted with the maximum value being LoS > 3. This is summarised in Table 25. The reasons for this were twofold. Firstly, this removed the effect of outliers, as a small number of individual HIPE entries had very high LoS, which would overly impact aggregated data. Secondly, stakeholder feedback generally indicates that consultant input into patient care is concentrated in the early stages of a patient's hospital stay. The total sum of adjusted LoS was used to quantify a baseline complexity value for 2023 HIPE records.

Table 25: Adjusted LoS values used in gynaecology complexity calculations.

Length of Stay (days)	LoS Adjusted
Less than 1 (daycase)	1
1	1
2	2
3	3
More than 3	4

Growth rates were applied to all records in accordance with projected demographic ageing, increased referrals per capita, and increased cancer incidence. Demographic growth rates from Table 12 were applied in accordance with patient age. The number of referrals per capita is projected to grow by 1.05% annually from 2023 to 2040, matching assumptions regarding future referral rates. Finally, all cancer cases were subject to an additional annual growth rate of 1.7%, capturing the increased incidence of gynaecological cancers projected in this period (see Appendix 5). The results of this exercise are summarised in Table 26.

Table 26: Summary of calculations projecting complexity growth rates across gynaecology services 2023-2040.

Diagnosis Group	Total Attendances 2023 (actual)	Adjusted LoS 2023 (actual)	Adjusted LoS 2040 (projected)	Complexity Growth Rate 2023-2040
Urogenital	27,897	33,676	41,261.2	1.2%
Cancer	3,401	6,941	12,000.6	3.2%
Other	4,433	6,026	7,176.3	1%
Total	**35,731**	**46,643**	**60,438.2**	**1.5%**

The overall adjusted LoS is projected to grow by 1.5% annually to 2040, when accounting for all drivers for change. This is taken as a universal growth rate for complexity of gynaecology services over this time period. A feature of note is that complexity is projected to experience different growth rates across the different diagnosis groups. This is due to the different patterns in demographics of patients presenting for services across different diagnosis groups, as well as the expected epidemiological change in gynaecological cancers.

Appendix 5: Gynaecological Cancer Projections

The NCRI collects and analyses data on all cancer cases which occur in Ireland, with periodic publications reporting on trends and patterns. [13] According to NCRI age-standardised projections, the number of cases of cervical, uterine, and ovarian cancers are expected to grow by 50% over the period 2023-2040. [14] Accounting for projected female populations used in the NCRI projections, the overall population-normalised incidence rate for gynaecological cancers is projected to experience an average annual growth rate of 1.7% over this period. These projections assume reduced future incidences of cervical cancer due to the results of the ongoing national HPV vaccination programme.

While this growth value does not capture the changing nature of gynaecological cancers over the projection period, it does capture the projected increased prevalence of these cancers within the population. Accordingly, the growth rate in gynaecological cancer incidence was used to capture the growth of attendances in acute hospitals related to gynaecological cancers. No consideration was given to the rapidly evolving landscape in therapeutic treatment of cancers. Thus, total cancer incidences and their impact on medical workforce demand will need to be monitored on an ongoing basis, with revised workforce demand estimates if necessary.

Table 27: Projected total gynaecological cancer cases and corresponding population-normalised incidence rates for Ireland 2023-2040. [14]

	2023	2040	Annual Growth Rate
Projected gynaecological cancer cases	1,372	2,063	2.4%
Projected incidence rate	0.053%	0.072%	1.7%

Glossary

ANP	Advanced Nurse Practitioner
BIU	Business Intelligence Unit
BMI	Body Mass Index
BST	Basic Specialty Training
CHI	Children's Health Ireland
CSCST	Certificate of Satisfactory Completion of Specialty Training
CSO	Central Statistics Office
DIME	Doctors Integrated Management E-system
GP	General Practitioner/Practice
HCP	Health Care Practitioner
HIPE	Hospital Inpatient Enquiry
HIU	Health Intelligence Unit
HSE	Health Service Executive
HST	Higher Specialty Training
IMC	Irish Medical Council
IMIS	Irish Maternity Indicator System
LTFT	Less Than Full Time
MDT	Multidisciplinary Team
MoC	Model of Care
MU	Maternity Unit
MN-CMS	Maternal & Newborn Clinical Management System
NCCP	National Cancer Control Programme
NCHD	Non-Consultant Hospital Doctor
NCRI	National Cancer Registry of Ireland
NDTP	National Doctors Training & Planning
NPEC	National Perinatal Epidemiology Centre
NSS	National Screening Service
NTPF	National Treatment Purchasing Fund
NTSD	Non-Training Scheme Doctor
NWIHP	National Women & Infants Health Programme
O&G	Obstetrics & Gynaecology
RCPI	Royal College of Physicians, Ireland
SATU	Sexual Assault & Treatment Unit
SI	Special Interest
SMM	Severe Maternal Morbidity
TFR	Total Fertility Rate
WHO	World Health Organisation
WTE	Whole Time Equivalent

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