Critical Care Capacity, Workforce and Activity Census Report 2023

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EXECUTIVE SUMMARY

The Government's Critical Care Strategic Plan announced by Minister Donnelly 18th Dec 2020 and the subsequent HSE National Service Plan 2022 are welcomed by National Clinical Programme for Critical Care as plans to increase the national adult critical care capacity permanent baseline to 456. That there is a deficit in critical care service capacity was recognised during COVID 19 pandemic and addressed in this plan. There is a major multidimensional deficit in critical care service capacity and this deficit has a number of components: namely capacity and workforce.

This data has been collected and collated from 33 intensive care/critical care units equating to 28 hospitals, 31 units delivering adult intensive care/critical care and 2 delivering paediatric critical care/intensive care. The number of ICU beds in Ireland is very low by international standards. The average number of ICU beds per 100,000 of the population is 11.5 for European countries; this is compared with 6 beds per 100,000 of the population in Ireland. As per Chapter 3 in this report, it is clear that there are relatively few consultants with a full WTE dedicated to critical care /intensive care medicine in Ireland and a discussion re the importance of these WTEs is essential. From this census, it is clear that there are a significant number of Special Interest (SI) in Intensive Care Medicine posts and this reflects the flexible approach to critical care/intensive care medicine delivery, whereby many consultants retain a practice in their core specialty (usually anaesthesiology). The anaesthesiologist as outlined in the Model of Care for Anaesthesiology remains an essential part to safe service and roster provision for Model 3 hospitals. These Units have smaller volume of Intensive Care patients, lower acuity case-mix, and a need to provide for anaesthesia, critical care, and obstetric anaesthesia emergency care.

As per Chapter 3, the current numbers of training posts for those pursuing a career in Intensive Care Medicine is inadequate to meet the needs of current workforce to meet all the above demands. It is obvious from this census that there will need to be an increase in critical care/ intensive care medicine trainee numbers to meet Joint Faculty staffing standards *(Joint Faculty of Intensive Care Medicine Ireland – National Standards for Critical Care Services (2021),* in line with the projected increase in the number of critical care beds.

This census provides data from the paediatric critical units for the first time. Following on from this data, the required increase in Paediatric Critical Care Mediciine (PCCM) Consultant, trainee and nursing workforce to enable the opening of the National Children's Hospital (NCH) Critical Care Unit with 42 beds requires a CHI workforce document which is in line with medical nursing and HSCP national standards. As this is projected to open in the next 2 years,resourcing and planning for projected increase in beds needs to be prioritosed.

The presentation of data outlining the level of care delivered in Model 4 hospitals shows that this is primarily Level 3/3S whereas Model 3 hospitals deliver both level 3 and level 2 but primarily Level 2 care. This data is useful in allocation of funding for planning critical care capacity reconfiguration where increase in Level 2 care is advocated for.

Chapter 4 outlines the significant work completed since 2017 to align the Adult Critical Care Nursing workforce with the critical care quality requirements. This has been enabled through the work of the Hospital Group Critical Care Nursing Workforce Planning Groups, through whom these figures have been collated and verified. Developing the structures of an Adult Critical Care Nurse Career Pathway has been a key part of this. This includes an increase in Critical Care Clinical Nurse Educators since 2017 and access to a National Foundation Education Module. The development and implementation of ANP led critical care outreach services and the increase of undergraduate placements in Critical Care will enable a sustainable workforce plan.

This report includes detailed data from the Health and Social Care Professions (HSCP). Chapter 5 provides a workforce report for HSCPs working in Irish public critical care units. This data was not collected as part of the Critical Care Programme Census and was independently collected by the HSCP National Critical Care Lead. This data compares the current workforce to national minimum standards laid out in the MOC 2014. HSCPs comprise 26 different disciplines and are the second largest clinical group in the Irish public health system ((*HSE 2021*).

The MOC 2014 sets out minimum standards for 5 of the 26 HSCPs, Dietetics, Physiotherapy, Occupational therapy, Speech and language therapy and Medical social work (MSW). This report outlines current staffing within these specialties and allows gap analysis with the minimum recommended staffing standards set out in the MOC 2014. It is clear that many units do not have access to MSW and OT. Also, of note there is no national minimum standard set for the other 5 HSCP professions, which include clinical psychology, medical sciences, clinical engineering, radiography and cardiac physiology. While Pharmacy do not fall under the same governance of HSCPs, they have been included in this section. As with medical and nursing colleagues, a critical care workforce plan and training programme should be developed to align with the MOC 2014 for HSCPs or Pharmacy.

The Government's Critical Care Strategic Plan which is projected to provide a further 162 critical care beds is vital to the continued development of capacity and workforce. The delivery of this capacity and the workforce requires close collaboration with the National Clinical Programme and the HSE. The development to date has been facilitated by a National Critical Care Steering group and we strongly advocate for the continuation of this group. The provision of five new Critical Care builds, identified within this strategic plan, is a key part of the development of critical care in Ireland.

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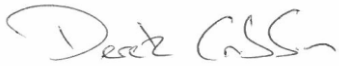


Aine Kelly
HSCP Lead in Critical Care HSE

1.0 INTRODUCTION

This census is a snapshot in time and reports the current provision of ICU in Ireland and gives an update of bed availably, operational beds and a snapshot of staffing in May 2023.

There are numerous Critical Care audits and reports published giving vital information to the National Critical Care Programme, HSE Acute Operations and Education and Training bodies which include medical, nursing and HSCP workforce groups. However, all reports are published separately and independently of each other.

The purpose of this report is to present up to date information on bed capacity, ICU activity, and workforce. This includes medical, nursing and HSCPs in post. The survey includes information from all 28 hospitals with critical care units including the 2 paediatric hospitals. This report, with all this information, informs on current practice on Critical Care in Ireland for 2023.

The Government's Critical Care Strategic Plan announced by Minister Donnelly 18th Dec 2020 and the subsequent HSE National Service Plans are welcomed by National Clinical Programme for Critical Care as plans to increase the national adult critical care capacity permanent baseline to 456.

Therefore, there is an urgent need to complete the commissioning of the Phase 1 beds (42 beds) see Appendix 1- and to accelerate the implementation of Phase 2 beds. Phase 2 focuses on the development of new build capacity at five prioritised sites (Beaumont Hospital, St James's Hospital, the Mater Misericordiae University Hospital, St Vincent's University Hospital and Cork University Hospital) to support the delivery of an additional 106 beds and thereby reduce the risk of surge volumes of critically ill patients having adverse outcomes due to a lack of capacity in critical care beds (Dept. of Health 2021).

The Intensive Care Medicine professional bodies propose a Critical Care Capacity Resource Allocation Framework based on the principles of population-based, activity-based and specialty-based allocation. This allows critical care capacity resource allocation to align with National Clinical Programmes' Models of Care. It is important to audit what is currently in place in all units nationally and this audit addresses this need.

We appreciate the time taken by all stakeholders to complete this audit as it will provide the basis of reporting current status. It will also allow us to reference staffing and occupancy with adherence to National Standards in Critical Care Adult and Paediatrics.

Figure 1 Adult Critical Care Capacity 2023

National	Level 3	Level 2	Total	Model 4	Level 3	Level 2	Total	Model 3	Level 3	Level 2	Total
Open* Beds	251	68	319	Open	172	42	214	Open	79	26	105
**Closed /Funded	46	0	46	Closed / Funded	45	0	45	Closed / Funded	1	0	1
Total	**297**	**68**	**365**	**Total**	**217**	**42**	**259**	**Total**	**80**	**26**	**106**

ICU bed is open; funding is available and bed is operational on a daily basis

****Funding is available but bed not open due to workforce deficits***

On behalf of HSE Acute Operations, Critical Care Programme has completed a critical care bed capacity, critical care workforce and activity census. As part of the Census procedure, each hospital's Census return is verified locally and countersigned by the Hospital CEO, Hospital Clinical Director, Hospital Director of Nursing, Hospital ICU Director, Hospital ICU CNMIII, Hospital Group CEO, Hospital Group Chief Clinical Director and Hospital Group CDoN- multiple Hospital/Hospital Group signature verifications. This co-signed individual Hospital critical care capacity profile report is thus collated, reconciled, and validated by CCP Census Working Group.

In line with the volume-outcome evidence identifiable in the acute care literatures, the NCPCC published the Model of Care for Adult Critical in 2014 (National Clinical Programme for Critical care, 2014) and Paediatric Critical Care in 2019. These models of care define the pathway for ICM service delivery as a 'hub-and-spoke' critical care service arrangement for a regional hospital network or Area.

The National Standards for Adult Care Services (2021) and The National Standards for Paediatric Critical Care Services (2018) published by the Joint Faculty of Intensive Care Medicine of Ireland (JFICMI), define the medical, nursing and HSCP staff requirements to commission a Critical Care Service.

1.1. Methodology Critical Care Capacity Census 2023

Medical and Nursing

On behalf of HSE Acute Operations, Critical Care Programme has completed a critical care bed capacity, critical care workforce and activity census. As part of the Census procedure, each hospital's Census return is verified locally and countersigned by the Hospital CEO, Hospital Clinical Director, Hospital Director of Nursing, Hospital ICU Director, Hospital ICU CNMIII, Hospital Group CEO, Hospital Group Chief Clinical Director and Hospital Group CDoN- multiple Hospital/Hospital Group signature verifications. This co-signed individual Hospital critical care capacity profile report is thus collated, reconciled, and validated by CCP Census Working Group.

HSCP and Pharmacy

On behalf of HSE Acute Operations, the HSCP office completed an observational study using online surveys, distributed to 26 adult critical care units across the Republic of Ireland. Surveys consisted of seven profession specific surveys distributed via hospital CEOs and completed by HSCP and Pharmacy department managers and clinical specialists.

1.2 Published Critical Care Reports

1. Prospectus: REVIEW OF ADULT CRITICAL CARE SERVICES IN THE REPUBLIC OF IRELAND Towards Excellence in Critical Care FINAL REPORT Submitted to the Health Service Executive September 2009 https://www.hse.ie/eng/services/publications/clinical-strategy-and-programmes/towards-excellence-in-critical-care-report.pdf
2. NCPCC has produced an annual critical care capacity and nursing workforce report since 2010.
3. Model of Care for Adult Critical Care (2014) and the Model of Care for Paediatric Critical Care (2019) https://www.hse.ie/eng/services/publications/clinical-strategy-and-programmes/model-of-care-for-adult-critical-care.pdf
4. Critical Care Nursing Workforcce Report (2018 and 2021) https://www.hse.ie/eng/about/who/cspd/ncps/critical-care/critical-care-capacity-planning/hse-national-report-of-the-critical-care-nursing-workforce.pdf
5. From 2019 NOCA published the Irish National ICU Audit which reports risk adjusted outcomes for critically ill patients. It currently capatures approxomately 96% of public hospitall adult critial care data and provides data on 11,420 critically ill adult patients in Ireland, based on data from 26 units across 22 hospitals.
6. National Doctors Training & Planning Intensive Care Medicine Workforce Plan (2020) determines the current consultant workforce in ICU and projects future need. This report highlights a requirement for investment in greater critical care resource, the staffing for which requires a suitable body of medical professionals and a training pathway. https://www.hse.ie/eng/staff/leadership-education-development/met/plan/specialty-specific-reviews/icm-workforce-plan-2020-final-report.pdf
7. Critical Care Capacity Develoment Plan (2022). Recommendation from this report includes:Completion of phase 1 in line with the Model of Care for Adult Critical Care and a rapid completion of remaining beds to achieve a target of 340 by year end 2023.
8. ICS-UK (2022) *Guidance and Service Specification: Integrated Practitioner Psychologists in Intensive Care Units*, available: https://ics.ac.uk/asset/FACCA317-2802-41BC-88F48DDE7640FAB6/ [accessed 10 July 2023]
9. FICM (2022) *Guidelines for the Provision of Intensive Care Services - Version 2.1*, England, United Kingdom: National Health Service, available: https://ficm.ac.uk/sites/ficm/files/documents/2022-07/GPICS%20V2.1%20%282%29.pdf [accessed 10 July 2023
10. HSE (2024). HSCP and Pharmacy in critical care: A workforce survey of the Irish public system [Unpublished]

1.3. Critical Care/ICU Leads at May 2023

Hospital	ICU Clinical Lead
RCSI Hospital Group	
Cavan General Hospital	Dr. Ivan Krupa
Our Lady of Lourdes Hospital, Drogheda	Dr. Dinesh Kuriakose
Beaumont Hospital	Dr. Sinead Galvin
Connolly Hospital	Dr. Cait Cody
Ireland East Hospital Group	
Our Lady's Hospital, Navan	Dr. Jubil Thomas/*Dr. Dinesh Kuriakose
Mater Hospital	Dr. Ian Conrick Martin
Midland Regional Hospital Mullingar	Dr. Muhammad Farooq
St Vincents University Hospital	Dr. Donal Ryan/*Dr. Orsolya Solomos
St. Lukes General Hospital, Kilkenny	Dr. Lisa Zimmerman
Wexford General Hospital	Dr. David Honan
Dublin Midlands Hospital Group	
Naas	Dr. Nader Almane
Midland Regional Hospital Portlaoise	Dr. Masud Ur Rehyman
Midland Regional Hospital Tullamore	Dr Rajesh Jain/*Dr. Noel Hemmings
Tallaght	Dr. Lindi Snyman
St. James Hospital	Dr. J.D. Coakley
St. James Hospital Burns ICU	Dr. J.D. Coakley
St. James Hospital Cardiothoracic ICU	Mr. Vincent Young
Saolta Hospital Group	
Letterkenny General Hospital	Dr. Michael Ronayne/* Dr. Lori Dippenaar
Mayo General Hospital	Dr. Aidan O'Shea
Sligo General Hospital	Dr Bruno Biancardi/*Dr. Sinead Farrell
University Hospital Galway	Patrick Neligan
Portiuncula Hospital	Dr. Vinod Sudhir
South Southwest Hospital Group	
Cork University Hospital	Dr. Rob Plant
Mercy University Hospital	Dr. Michelle O'Mahony
University Hospital Kerry	Dr. Niamh Feely
University Hospital Waterford	Dr. Wahid Altaf
Tipperary University Hospital Clonmel	Dr. Marcella Lanzinger
Limerick University Hospital	Dr. Seosamh O'Riain
Paediatric Critical Care Clinical Lead for CHI	
Critical Care Clinical Lead for CHI	Dr. Helen Daly

current ICU leads post May 2023

1.4. Hospital Modelling Framework

Hospital Model *Report of the National Acute Medicine Programme 2010*	**Model 2 Hospital**	**Model 3 Hospital**	**Model 4R Hospital (Regional)**	**Model 4S Hospital (Supra-Regional)**
Hanly Report *Report of the National Task Force on Medical Staffing 2003*	**Local Hospital**	**Major Hospital**	**Regional or University Hospital**	**Children's Hospital**

Level 0 Acute Care (not Critical Care Service)	Hospital ward clinical management
Level 1 Acute Care (not Critical Care Service)	Hospital ward observation area for patient at risk of deterioration; CCU
Level 2 Critical Care	Active management by critical care team to treat and support critically ill patients with single organ failure
Level 3 Critical Care **Level 3s Critical Care**	Active management by critical care team to treat and support critically ill patients with two or more organ failures. Level 3s critical care with supra-regional/national critical care specialty service

Level 0: Hospital ward clinical management

Level 1: Hospital ward observation area for patient at risk of deterioration; CCU

Patients who require basic respiratory/circulatory/neurological or renal support whose needs cannot be met on the acute ward and require the input of the critical care team.

Level 2: Critical care requiring a nurse-to-patient ratio of 0.5:1

A patient requiring continuous nursing supervision who is receiving advanced respiratory support (complex non-invasive ventilation or invasive ventilation), according to the 2021 national standards. Level 2 also pertains to the unstable non-intubated patient.

Level 3: Critical care requiring a nurse-to-patient ratio of 1:1

The critically ill patient with two or more organ failures, requiring intensive supervision, who needs additional complex therapeutic procedures. For example, patients requiring respiratory support, patients with multiple organ failure requiring vasoactive and inotropic medications, and postoperative patients requiring ventilation and vasoactive medications, such as major abdominal surgery or paediatric scoliosis surgery.

Level 3S: Critical care requiring a nurse-to-patient ratio of 2:1

The critically ill patient requiring the most intensive therapeutic interventions, e.g. including ECLS, and/or renal replacement therapy (RRT) and paediatric neurosurgical critical care. These criteria may change with advances in technology.

*Level 2 Critical Care or greater is only provided at Model 3, Model 4 and Model 4S and not at Model 2 hospitals, in accordance with Adult Critical Care services

2.0 CRITICAL CARE CAPACITY

Critical care bed capacity, adult and paediatric, is described in this report in terms of clinical staff, clinical space (bed space) and critical care clinical activity. Critical Care clinical staff comprise Critical Care Nursing, Medical and Health and Social Care Professionals.

The deficit in critical care capacity in Ireland has been well documented. The NCPCC has advocated for an increase in bed numbers over the past number of years, supported by the independent external 'Review of Adult Critical Care Services in the Republic of Ireland' (Prospectus Strategy Consultants, 2009) and the more recent Health Service Capacity Review (Department of Health, 2018) and National Office of Clinical Audit (NOCA) annual Reports 2017-23. The Government's Critical Care Strategic Plan 2020 and the subsequent HSE National Service Plans are welcomed by National Clinical Programme for Critical Care as plans to increase the national adult critical care capacity permanent baseline to 456. The number of ICU beds in Ireland is very low by international standards. The average number of ICU beds per 100,000 of the population is 11.5 for European countries; this is compared with 6 beds per 100,000 of the population in Ireland. These figures reflect public and private bed availability (National Office of the Clinical Audit, 2021).

The Irish National ICU Audit (INICUA) Report (2021) (National Office of the Clinical Audit (NOCA), 2023) reports risk adjusted outcome for critically ill adult patients, capturing approximately 96% of public hospital adult critical care activity. This is based on an extrapolated estimate annualised volume of critically ill adult patients of 11,420 in Ireland. This is based on data from 26 units in 22 centres.
Key findings from this report show:

- 88.5% occupancy of available ICU beds nationally. The recommended bed occupancy rate is 85% but many of the larger units had rates greater than 90%.
- The mean length of stay in ICU was 6.6 days.
- In 2021 there were 1671 patients admitted to critical care with Covid-19, representing 15% of all patients admitted to ICU. However, their percentage of total ICU bed days was 29%.
- 1515 episodes of patients discharged were delayed more than 24 hours representing 22% of all discharges nationally. This equates to 1966 critical care bed days occupied by patients who had been cleared for discharge for mor than 24 hours.

NOCA has published annually a National ICU Audit Report since 2017. These reports have consistently recommended the expansion of critical care capacity nationally along with other recommendations based on the data collated.

2.1 Adult Critical Care Capacity 2017-2023

The table below represents the annual published adult critical care capacity from 2017-2023 collated by the National Clinical Programme for Critical Care for Critical Care Capacity, Workforce and Activity Census. This table identifies the annual critical care capacity increase since 2017 and gives further detail regarding that capacity increase, nationally and in both Model 4 and Model 3 hospitals.

On behalf of HSE Acute Operations, Critical Care Programme has completed a critical care bed capacity, critical care workforce and activity census. As part of the Census procedure, each hospital's Census return is verified locally and countersigned by the Hospital CEO, Hospital Clinical Director, Hospital Director of Nursing, Hospital ICU Director, Hospital ICU CNMIII, Hospital Group CEO, Hospital Group Chief Clinical Director and Hospital Group CDoN- multiple Hospital/Hospital Group signature verifications. This co-signed individual Hospital critical care capacity profile report is thus collated, reconciled, and validated by CCP Census Working Group.

Table 1: Adult Critical Care Capacity 2017-2023

Adult Critical Care Bed Capacity 2017

National	Level 3	Level 2	Total	Model 4	Level 3	Level 2	Total	Model 3	Level 3	Level 2	Total
Open	188	46	234	Open	124	34	158	Open	64	12	76
Closed / Funded	18	0	18	Closed / Funded	11	0	11	Closed / Funded	7	0	7
Total	**206**	**46**	**252***	**Total**	**135**	**34**	**169**	**Total**	**71**	**12**	**83**

Adult Critical Care Bed Capacity 2018

National	Level 3	Level 2	Total	Model 4	Level 3	Level 2	Total	Model 3	Level 3	Level 2	Total
Open	189	60	249	Open	126	47	173	Open	63	13	76
Closed / Funded	14	0	14	Closed / Funded	10	0	10	Closed / Funded	4	0	4
Total	**203**	**60**	**263***	**Total**	**136**	**47**	**183**	**Total**	**67**	**13**	**80**

Adult Critical Care Bed Capacity 2019

National	Level 3	Level 2	Total	Model 4	Level 3	Level 2	Total	Model 3	Level 3	Level 2	Total
Open	195	58	253	Open	128	52	180	Open	67	6	73
Closed / Funded	22	0	22	Closed / Funded	11	0	11	Closed / Funded	11	0	11
Total	**217**	**58**	**275***	**Total**	**139**	**52**	**191**	**Total**	**78**	**6**	**84**

Adult Critical Care Bed Capacity 2020

National	Level 3	Level 2	Total	Model 4	Level 3	Level 2	Total	Model 3	Level 3	Level 2	Total
Open	215	65	280	Open	146	47	193	Open	69	18	87
Closed / Funded	28		28	Closed / Funded	21		21	Closed / Funded	7		7
Total	**243**	**65**	**308***	**Total**	**167**	**47**	**214**	**Total**	**76**	**18**	**94**

Adult Critical Care Bed Capacity 2021

National	Level 3	Level 2	Total	Model 4	Level 3	Level 2	Total	Model 3	Level 3	Level 2	Total
Open	248	54	302	Open	167	44	211	Open	81	10	91
Closed / Funded	29	5	34	Closed / Funded	29	0	29	Closed / Funded	5	0	5
Total	**277**	**59**	**336***	**Total**	**196**	**44**	**240**	**Total**	**86**	**10**	**96**

Adult Critical Care Bed Capacity 2022

National	Level 3	Level 2	Total	Model 4	Level 3	Level 2	Total	Model 3	Level 3	Level 2	Total
Open	254	58	312	Open	173	44	217	Open	81	14	95
Closed / Funded	44	0	42	Closed / Funded	40	0	40	Closed / Funded	4	0	4
Total	**298**	**58**	**356***	**Total**	**213**	**44**	**257**	**Total**	**85**	**14**	**99**

Adult Critical Care Bed Capacity 2023

National	Level 3	Level 2	Total	Model 4	Level 3	Level 2	Total	Model 3	Level 3	Level 2	Total
Open	251	68	319	Open	172	42	214	Open	79	26	105
Closed / Funded	46	0	46	Closed / Funded	45	0	45	Closed / Funded	1	0	1
Total	**297**	**68**	**365***	**Total**	**217**	**42**	**259**	**Total**	**80**	**26**	**106**

2.2. Critical Care Bed Capacity 2023

Hospital	No. of beds in your unit	Average No. of critical care beds open over one week	Total No. of funded critical care beds in your hospital	Bed Spaces present but not open over one week	No. of Level 3 (ICU) Beds	No. of Level 2 (HDU) Beds
RCSI Hospital Group	**50**	**50**	**50**	**0**	**46**	**4**
Beaumont Hospital General ICU	20	20	20	0	20	
Beaumont Hospital Neuro ICU	10	10	10	0	10	
Cavan Hospital ICU	5	5	5	0	3	2
Drogheda Hospital ICU	10	10	10	0	8	2
Connolly Hospital ICU	5	5	5	0	5	
Dublin Midlands Hospital Group	**79**	**65**	**79**	**10**	**78**	**1**
Tallaght ICU	21	18	21	3	21	
Tallaght PACU	5	4	5	1	5	
St James Hospital Burns ICU	2	1	2	1	2	
St. James ICU	29	24	29	5	29	
St James Hospital Cardiothoracic	8	6	8		8	
Naas	4	4	4	0	4	
Portlaoise Hospital ICU	3	3	3	0	2	1
Tullamore Hospital ICU	7	5	7	2	7	
Ireland East Hospital Group	**91**	**75**	**94**	**1**	**74**	**19**
Mater Hospital ICU/HDU	51	35	52	1	35	16
St. Vincents University Hospital	18	19	21	0	21	
Mullingar Hospital ICU	6	6	6	0	5	1
Navan Hospital ICU	5	4	4	0	2	2
Kilkenny Hospital ICU	6	6	6	0	6	
Wexford Hospital ICU	5	5	5	0	5	
South Southwest Hospital Group	**90**	**55**	**62**	**15**	**44**	**8**
Waterford Regional Hospital ICU/HDU	14	14	11	0	6	4
Cork University Hospital Cardiothoracic ICU	10	6	6	4	6	
Cork University Hospital General ICU	26	15	25	11	26	
Tipperary University Hospital	5	5	5	0	5	
Mercy University Hospital ICU	6	6	6	0	6	
Kerry General Hospital ICU	9	9	9	0	5	4
Saolta Group	**54**	**42**	**53**	**12**	**36**	**17**
University College Hospital Galway General ICU	24	18	24	6	18	6
Letterkenny General Hospital ICU	6	6	6	0	6	
Mayo General ICU	8	6	8	2	4	4
Sligo General Hospital ICU	8	5	8	3	4	4
Portiuncula	8	7	7	1	4	3
University of Limerick Hospital Group	**28**	**28**	**28**	**0**	**12**	**16**
University Hospital Limerick	28	28	28	0	12	16
TOTAL						
Paediatric Critical care Beds	32	32	32			
Temple Street	9	9	9	9		
Crumlin	23	23	23	20		

3.0 MEDICAL WORKFORCE

Tables 3 and 4 below outline the current critical care consultant medical workforce as of May 2023 in Model 3 and Model 4 hospitals. This report provides detail on the following:

- Total Number of Consultants (WTE) in Anaesthesiology and Critical Care/Intensive Care
- Number of WTE Consultants in Critical Care
- Number of Consultants who work across Anaesthesiology and Critical Care/Intensive Care
- Breakdown of WTEs for Anaesthesiology and Critical Care
- How many Consultants are rostered to the Critical Care Unit to provide daytime cover.
- Number of WTE Consultants rostered solely for Critical Care out of hours.
- Do Anaesthesiology Consultants simultaneously cover both Critical Care and Anaesthesiology areas out of hours?

3.1 Joint Faculty of Intensive Care Medicine in Ireland Standards

Joint Faculty of Intensive Care Medicine of Ireland National Standards for Adult Critical Care Services (2021) sets out the national standards for minimum workforce requirements for critical care.

'Every Critical Care Unit should have 24-hour availability of a dedicated Consultant in Critical Care Medicine. During daytime hours, the consultant intensivist should have an exclusive sessional commitment to Intensive Care Medicine (ICM) and no conflicting clinical commitment. For out of hours cover, larger units (>8 bed and/or > 400 level 3 admissions per year), should have a dedicated ICM consultant with no conflicting on-call duties. International recommendations suggest that this also applies to smaller units (6-8 beds and/or 200-400 level 3 admissions per year) but the JFICMI recognizes the considerable manpower deficit for these units and recommends that hospitals work toward this standard over a 5-year cycle. In the interim, smaller units must have an appropriately trained specialist who is immediately available to attend critically ill patients. If they have conflicting on-call commitments, a second consultant must be available to release the ICU consultant to attend to critically ill patients at any time consistent with the 2+2 model of care.

The consultant to patient ratio should be a minimum one consultant to twelve critical care patients during routine hours. A minimum of one consultant to thirty critical care patients must be provided out-of-hours, depending on case mix and where supported by appropriate trainee and NCHD staffing'.

Table 3: Critical Care Consultant Medical Workforce Census 2023 Model 4 Hospitals

Critical Care Consultant Medical Workforce Census 2023							
					Day time Cover	Out of hours cover	
Model 4 Hospitals (bed capacity in brackets)	Total No. of Consultants (WTE) in Anaesthesiology and Critical Care in your hospital	No. of Consultants (WTE) in Critical Care in your hospital	No. of Consultants who work across Anaesthesiology and Critical Care	Breakdown of WTEs for Anaesthesiology and Critical Care e.g., 60/60 - 50/50	How many Consultants are rostered to the Critical Care Unit to provide daytime cover in your hospital each weekday?	No. of Consultants (WTE) rostered solely for Critical Care out of hours?	Do Anaesthesiology Consultants simultaneously cover both Critical Care and Anaesthesiology areas out of hours? Yes/No
Mater Hospital (35)	37.29	6.5	12	30/70	4	1	No
Beaumont Hospital (30)	30	0	10.5	60/40	2	1	No
Tallaght Hospital (26)	29.5	2.5	5	Theatre 0.3 ICU 0.7	3	1	No
St. James Hospital (39)	37.63	3	6	50/50 to 33/66 anaesthesia/ ICU	3 to 4	1	No
St Vincents (18)	38	1.5	7	60/40 ICU Anaes	2	1	No
Waterford (11)	12.5	2	12.5		1	0	Yes
Cork (31)	30	2	8	75/25	2		No
Galway (24)	32.25	6.5	12.5	83/17 daytime 50/50 on call	2	1	No
Limerick (28)	24	0	11	8 x 1/6 3 x 1/3	2	1	No
Paediatric Hospitals							
Temple Street (9)	18	8	0.34		1	1	No
Crumlin (23)	26.8	6.5	0		2	1	No

Table 4: Critical Care Consultant Medical Workforce Census 2023 Model 3 Hospitals

Critical Care Consultant Medical Workforce Census 2023							
					Day time Cover	Out of hours cover	
Model 3 Hospitals (bed capacity in brackets)	Total No. of Consultants (WTE) in Anaesthesiology and Critical Care in your hospital	No. of Consultants (WTE) in Critical Care in your hospital	No. of Consultants who work across Anaesthesiology and Critical Care	Breakdown of WTEs for Anaesthesiology and Critical Care e.g. 60/60 - 50/50	How many Consultants are rostered to the Critical Care Unit to provide daytime cover in your hospital each weekday?	No. of Consultants (WTE) rostered solely for Critical Care out of hours?	Do Anaesthesiology Consultants simultaneously cover both Critical Care and Anaesthesiology areas out of hours? Yes/No
Cavan (5)	5	0	5	70/30	1	0	Yes
Drogheda (10)	22	0	18	60/40	1	0	Yes
Connolly (5)	10.9	0	10.9		1	0	Yes
Naas (4)	2.23	0	5	(2 x 60/40 2 x 50/50 and	1	0	Yes
Portlaoise (3)	3	0	3	70/30	3	0	Yes
Tullamore (7)	9	0	9		1	0	Yes
Mullingar (6)	6	1	6	60/40 anaes ICU	1	0	Yes
Navan (5)	22 (cover provided by OLOL Drogheda)	0	0	60/50	1	0	No
Kilkenny (6)	7	0	3	60/40 ICU Anaes	1	0	Yes
Wexford (5)	4	0	all share		1	0	Yes
Tipperary (5)	5	0	5	50/50	1	0	Yes
Mercy (6)	9.5	0	9.5		1	0	Yes
Kerry (9)	8	1	8	70/10	1	0	Yes
Letterkenny (6)	12	0	12	1	1	0	Yes
Mayo (8)	8	0	8	100/0	1	0	Yes
Sligo (8)	13.5	0	13.5		1	0	Yes
Portiuncula (8)	4.5	0.5	4.5	60/40	0.5	0.5	Yes

3.2 Consultant Medical Workforce

The Intensive Care Medicine Workforce plan (2020) reports that '*The current consultant workforce in Critical Care in Ireland is among the lowest in the OECD. The ratio of consultants in intensive care in Ireland is low by international standards with 0.48 per 100,000 population compared with 2.4 per 100,000 in Australia. The current Intensive Care Medicine consultant workforce configuration in Ireland is complex, having evolved to match the nature of the acute hospital configuration in Ireland, and also as an essential patient-centred response, which to date has stretched anaesthesia services in particular*'.

From this census report, it is clear that there are 3 groups of consultants providing Critical Care/Intensive Care Medicine in Ireland.

The majority of consultants working in critical care/intensive care in Model 4 hospitals are ICM with special interest (SI) subspecialties – mainly Anaesthesiology but including Emergency Medicine, Respiratory and General medicine.

a) There are few WTE consultants in critical care/intensive care medicine in Ireland and a discussion re the importance of these WTE is essential.

b) In total there are **209.2** consultants working across Anaesthesiology and critical care/Intensive Care Medicine. 87.34 of these are consultants with a SI in critical care/Intensive and work in Model 4 hospitals, and 2.5. work in Model 3 hospitals. This reflects the flexible approach to critical care/intensive care medicine service, whereby many consultants retain a practice in their core specialty (usually anaesthesiology) and have scheduled sessions in critical care/Intensive Care Medicine.

c) 121.86 Anaesthesiologists provide either sessional ICM activity and/or roster support. The anaesthesiologist as outlined in the Model of Care for Anaesthesiology remains an essential to safe service and roster provision for Model 3 hospitals with smaller volume critical care/intensive care patient volumes, lower acuity case-mix, and a need to provide for anaesthesia, critical care, and obstetric anaesthesia emergency care.

3.3 Critical Care Trainee/NCHD Medical Workforce

Tables 5, 6 and 7 below outline the current critical care trainees/ NCHD's medical workforce as of May 2023 in Model 3 and Model 4 hospitals. This audit provides detail on the following.

- How many Anaesthesiology NCHDs (WTE) in total in the hospital?
- How many Anaesthesiology trainees (NCHDs on the national training scheme for anaesthesiology) in the hospital?
- How many Critical Care NCHDs (WTE) in total in the unit
- How many critical care trainees (NCHDs on the national critical care training scheme) in the unit?
- How many critical care trainees (WTE) from other training schemes in the unit e.g. ED Surgery etc?
- How many (WTE) NCHDs are rostered to the critical care unit to provide daytime cover in the hospital each weekday?
- How many doctors undertaking CAI approved post CCST fellowship in CCM?
- How many doctors who are not on a national training programme working in critical care?
- How many NCHDs (WTE) are rostered to the critical care unit during out-of-hours shifts in the hospital.
- Do Anaesthesiology NCHDs simultaneously cover both Anaesthesiology and Critical Care areas out of hours? Yes/No
- How many tiers of on-call exist in the hospital across the Anaesthesiology and Critical Care areas?

3.3.1 Joint Faculty of Intensive Care Medicine – National Standards for Critical Care Services (2021)

'The Critical Care medical team comprises the Intensive Care specialist(s) supported by appropriately trained (or in training) non-consultant hospital doctors. There should be one non-consultant hospital doctor (NCHD) for each six to eight critical care patients, depending on local case-mix. Out of hours staffing of the Critical Care Unit should be provided, at a minimum, by an experienced non-consultant hospital doctor appointed to the Critical Care team.

The ratio of NCHD to patients out of hours will be determined by local case mix and activity but should not exceed one NCHD to every twelve patients. Critical Care registrar(s) should not have any concurrent responsibilities and on-call accommodation should be provided in, or appropriately close to the Unit.

Critical Care registrar(s) should not have any concurrent responsibilities and on-call accommodation should be provided in, or appropriately close to the Unit. National Standards for Adult Critical Care Services 2019 Rev-01 13'.

Table 5: Model 4 Critical Care Trainee/NCHD Medical Workforce Census 2023

Critical Care Trainee/NCHD Medical Workforce Census 2023												
						DAY TIME COVER			OUT OF HOURS COVER		OUT OF HOURS	
Model 4 Hospitals (bed capacity in brackets)	**How many Anaesthesiology NCHDs (WTE) in total in your hospital?**	**How many Anaesthesiology trainees (NCHDs on the national training scheme for anaesthesiology) in your hospital?**	**How many Critical Care NCHDs (WTE) in total in your unit**	**How many critical care trainees (NCHDs on the national critical care training scheme) in your unit?**	**How many critical care trainees (WTE) from other training schemes in your unit e.g. ED Surgery etc?**	**How many (WTE) NCHDs are rostered to the critical care unit to provide daytime cover in your hospital each weekday?**	**How many doctors undertaking CAI approved post CCST fellowship in CCM?**	**How many doctors who are not on a national training programme working in critical care?**	**How many NCHDs (WTE) are rostered to the critical care unit during out-of-hours shifts in your hospital**		**Do Anaesthesiology NCHDs simultaneously cover both Anaesthesiology and Critical Care areas out of hours? Yes/No**	**How many tiers of on-call exist in your hospital across the Anaesthesiology and Critical Care areas?**
Beaumont (30)	40	25	3	1	1 (ED)	2	1	15	1	2	No	3
Tallaght (26)	40	23	18	0	2	4	2	17		2	No	3
St. James Hospital (39)	36	20	3	2	1	5	0	1		2	No	4
Mater Hospital (35)	50	27	10	4	6	6 to 10	4	0	0	3	No	5
St Vincents (21)	38	18	11	4	1	4 to 5	2 to 4	11	1	2	No	3
Waterford (11)	22	10	14	0	1	2	0	7	1	1	No	3
Cork (CUH) (32)	56	19	14	1	0	4 to 5	0	10.5	0	2	No	6
Galway UHG (24)	43	18	1	1	5	4	1	30		2	Yes	6
UHL Limerick (28)	40	20	40	0	4	5	0	20		2	No	3

Table 6: Model 3 Adult Critical Care Trainee/NCHD Medical Workforce Census 2023

						Day Time Cover			Out of Hours Cover		Out of Hours	
Model 3 Hospitals (Bed capacity in brackets)	How many Anaesthesiology NCHDs (WTE) in total in your hospital?	How many Anaesthesiology trainees (NCHDs on the national training scheme for anaesthesiology) in your hospital?	How many Critical Care NCHDs (WTE) in total in your unit	How many critical care trainees (NCHDs on the national critical care training scheme) in your unit?	How many critical care trainees (WTE) from other training schemes in your unit e.g. ED Surgery etc?	How many (WTE) NCHDs are rostered to the critical care unit to provide daytime cover in your hospital each weekday?	How many doctors undertaking CAI approved post CCST fellowship in CCM?	How many doctors who are not on a national training programme working in critical care?	How many NCHDs (WTE) are rostered to the critical care unit during out-of-hours shifts in your hospital		Do Anaesthesiology NCHDs simultaneously cover both Anaesthesiology and Critical Care areas out of hours? Yes/No	How many tiers of on-call exist in your hospital across the Anaesthesiology and Critical Care areas?
Cavan (5)	9	0	0	0	0	1	0	8		0	Yes	2
OLOL Drogheda ((10)	33	11	0	0	0	3	0	12		1	No	3
Connolly (5)	14	4	0	0	0	1	0	9	0	1	Yes	2
Naas (4)	5	0	0	0	0	1	0	5		1	Yes	1-2
MRH Portlaoise (3)	4	0	0	0	0	1	0	0		1	Yes	1
MRH Tullamore (7)	8	0	0	0	0	0	0	1.8	2	0	Yes	2
MRH Mullingar (6)	13	2	2	0	0	2	0	11	11	1	Yes	2
OLG Navan (2)	4	0	0	0	0	1	0	4		1	No	1

Table 6: Model 3 (cont.) Adult Critical Care Trainee/NCHD Medical Workforce Census 2023

Model 3 Hospitals (Bed capacity in brackets)						Day Time Cover			Out of Hours Cover		Out of Hours	
	How many Anaesthesiology NCHDs (WTE) in total in your hospital?	How many Anaesthesiology trainees (NCHDs on the national training scheme for anaesthesiology) in your hospital?	How many Critical Care NCHDs (WTE) in total in your unit	How many critical care trainees (NCHDs on the national critical care training scheme) in your unit?	How many critical care trainees (WTE) from other training schemes in your unit e.g. ED Surgery etc?	How many (WTE) NCHDs are rostered to the critical care unit to provide daytime cover in your hospital each weekday?	How many doctors undertaking CAI approved post CCST fellowship in CCM?	How many doctors who are not on a national training programme working in critical care?	How many NCHDs (WTE) are rostered to the critical care unit during out-of-hours shifts in your hospital		Do Anaesthesiology NCHDs simultaneously cover both Anaesthesiology and Critical Care areas out of hours? Yes/No	How many tiers of on-call exist in your hospital across the Anaesthesiology and Critical Care areas?
Mercy (6)	15	7	0	0	1	1	0	7	1.7	1	Yes	2
Kerry (9)	15	0	0	0	0	1	0	15		2	Yes	2
Wexford (5)	10	2	0	0	0	1	0	8		2	yes	2
Tipperary (5)	9	0	0	0	0	0.5	0	9		0	Yes	2
Letterkenny (6)	15	6	0	0	0	1 or 2	0	7		1	Yes	3
Mayo (8)	14	7	0	0	0	2	0	7		1	Yes	3
Sligo (8)	16	6	0	0	0	1	0	1.9	2	1	No	2
Portiuncula (7)	13	0	0	0	0	2	0	13		2	Yes	3

3.3.2 Critical Care Trainee/NCHD Medical Workforce Census 2023

As per Intensive Care Medicine Workforce Plan (NDTP) the increase in consultants with a Special Interest in Intensive Care Medicine (38 to 94 in the 5-day model) and Consultants in ICM (13 to 58) requires that 18 trainees complete their training per annum. The Intensive Care Medicine Workforce plan (2020) outlines that:

'Training to become a specialist in Intensive Care Medicine is a minimum 7-year programme comprising completion of core specialty training (Anaesthesiology, Medicine, Surgery, and Emergency Medicine) followed by supraspeciality training programme of 2 years duration. Increasing specialisation and expanding demand for Intensive Care Medicine create demands on the training system to ensure an appropriate "pipeline" of trained specialists to meet the consultant workforce projections. The roster arrangements of the Model of Care for Anaesthesiology are an important part of intensive care services for Model 3 hospitals. A large and significant increase in the numbers of consultants and trainees is required to meet critical care requirements for the next 5-10 years.

The current numbers of training posts for those pursuing a career in critical care/Intensive Care Medicine is inadequate to meet the needs of current workforce to meet all the above demands. It is obvious from this report that there will need to be an increase in critical care/intensive care medicine trainee numbers to meet Joint Faculty staffing standards in line with the projected increase in the number of critical care beds.

3.4 Paediatric Critical Care Workforce Census 2023

Table 7: Paediatric Critical Care Consultant Medical Workforce Census 2023

Model 4 Hospitals					Day time Cover	Out of hours cover	
	Total No. of Consultants (WTE) in Anaesthesiology and Critical Care in your hospital	No. of Consultants (WTE) in Critical Care in your hospital	No. of Consultants (WTE) who work across Anaes/transport and Critical Care	Breakdown of WTEs for Anaesthesiology and Critical Care e.g., 60/60 - 50/50	How many Consultants are rostered to the Critical Care Unit to provide daytime cover in your hospital each weekday?	No. of Consultants (WTE) rostered solely for Critical Care out of hours?	Do Anaesthesiology Consultants simultaneously cover both Critical Care and Anaesthesiology areas out of hours? Yes/No
Temple Street (9)	18	6	4	50:50	1	1	No
Crumlin (23)	26.8	6.5	0		2	1	o

Table 8: Paediatric Critical Care Trainee/NCHD Medical Workforce Census 2023

	How many Anaesthesiology NCHDs (WTE) in total in your hospital?	How many Anaesthesiology trainees (NCHDs on the national training scheme for anaesthesiology) in your hospital?	How many Critical Care NCHDs (WTE) in total in your unit	How many critical care trainees (NCHDs on the critical care training scheme)	How many critical care trainees (WTE) from other training schemes in your unit e.g. ED Surgery etc?	How many (WTE) NCHDs are rostered to the critical care unit daytime in your hospital?	How many doctors undertaking CAI approved post CCST in CCM?	How many doctors who are non-training programme NCHDs in critical care?	How many NCHDs (WTE) are rostered to the critical care unit during out-of-hours shifts in your hospital	Do Anaesthesiology NCHDs simultaneously cover both Anaesthesiology and Critical Care areas out of hours? Yes/No	How many tiers of on-call exist in your hospital across Anaesthesiology and Critical Care areas?
Temple Street	18	8	3	0	1.5	3	0	4	1	No	2
Crumlin	18	13	11		7	4 to 5	1	4	2	No	3

Table 9: CHI Critical Care Nursing Workforce 2023

CHI Critical Care Capacity as per Census 2022 returns			
	Level 3	Level 2	Total
Open	29	3	32
Closed / Funded	0	0	0
Closed/ Not Funded	0	0	0

	Approved WTE	**Funded WTEs in POST**	**Headcount**	Required as per MOC*	Variance Approved	Variance In Post	Vacant Posts
Divisional Nurse Manager/ADON (please identify WTE dedicated to critical care)	2	2	2				0
Registered Advanced Nurse Practitioners (RANP)	0						
Candidate Advanced Nurse Practitioners (cANP)	0						
Clinical Nurse Manager 3 (CNM3) (unit specific or shared position – please identify WTE dedicated to critical care)	3	3	3	0	0	0	0
Clinical Nurse Manager 2 (CNM2)	17	21.41	29	23.2	-6.2	-6.2	0
Clinical Nurse Manager 1 (CNM 1)	0						
Critical Care Nursing Education & Training/Clinical Facilitator/Post Grad Clinical Co-ordinator/Clinical Educator	7.55	8.41	10	8	-0.45	0.41	0
Clinical Nurse Specialist (Please Specify role)	0						
*Staff Nurse (Includes 4 ACCESS Nurse per shift)	181.2	174.2	208	208.8	-27.6	-34.6	7
Critical Care Audit nurse	1.61	1.61	2	3	-1.39	-1.39	
CIS	1.53	1.53	2				1
Health Care Assistants	9	10.84	11	30	-21	-19.16	
Clerical/Administration Support (please put in Hours per day if needed and if out of hours is covered)	3.7	3.7	4				
Post Graduate Education							
Number of Nurses Currently Undertaking **Post-Graduate Diploma** in Critical Care Nursing		7					
Number of Nurses Currently Undertaking **National Foundation Education Module** in Critical Care Nursing		15					
Number of Critical Care Nurses with **Post Graduate Diploma in Critical Care Nursing**		79		39%			
Number of Critical Care Nurses with **Masters in Critical Care Nursing**		4					
If funding was available, how many nurses could you send on the **Post Graduate Diploma Course**		14					
Number of Nurses with the **old Certificate in ICU Course only**		3					
Number of Critical Care Nurses with **Foundation Course** in Critical Care Nursing **only**		41					
Number of HCAs with FETAC Level 5 or above course		9					
How many ACCESS nurses (floating) per shift are there in your unit		2.5					

3.4.1. Paediatric Critical Care Workforce Census 2023

As per the Intensive Care Medicine Workforce 2020 document:'

'Paediatric Intensive Care Medicine needs to be considered as outlined by the Model of Care for Paediatric Critical Care of the National Clinical Programme for Critical Care & National Clinical Programme for Paediatrics. A further review is required to identify the pipeline of graduates required to ensure an appropriate Paediatric Intensive Care Medicine consultant workforce is in place to meet the needs of the National Children's Hospital (NCH), to support the resuscitate and transport strategy for the critically ill child and support those regional university hospitals where paediatric intensive care is a part of the current and future service requirement.

A model of training programme graduate supply addressing scenarios pertinent to the longer-term best practice delivery of paediatric critical care needs to be developed with the NDTP. It has been agreed with NDTP that a specialty specific workforce plan should be a continuation of this current report recognising the immediacy of the workforce requirements of the National Children's Hospital in particular (ICM Workforce, 2020)'. As per recommendation above, this paediatric critical care workforce plan with NDTP must now be progressed in order that the increased staffing required to open new beds and retain existing beds can be achieved in the new Children's Hospital. As per **table 10** below, the paediatric critical care unit in the National Children's Hospital bed numbers will increase from current 32 to 42. This is scheduled to open in 2025.

Table 10: National Children's Hospital proposed Bed Capacity and Workforce

Current		Projected requirements 2025			
	CHI 2023	**NCH PCCU**	**NCH CCCU**	**Total**	**Variance(deficit)**
Beds	32	20	22	42	10
WTE Consultants in	14.5	8-10	8-10	16---20	6-10
***WTE NCHDs**	14	16 (*20)	16(*20)	32(*40)	18 (*26)
24-hour retrieval	0	4	4	8	8
Retrieval Consultants	2.5	2	2	4	1.5
Nursing					
CNM 3	2	1	1	2	0
CNM 2	17	10.75	10.75	21.5	19
Educators	7.03	4	4	12	4.45
Course Coordinators	2	1	1	2	0
S/N (includes ACCESS)	181.2	120.05	156.05	276.1	94.9
ECLS Coordinator	1	0	1	1	0
ECLS Deputies CNM2	2 Temp	0	4	4	4
Audit	1.61	2	2	4	4.39
CIS	1.53	1	1	3	1.47
Family Liaison CNS	0	.5	.5	1.0	1.0
HCA	9	7	7	14	5

*In view of the PICU and NCH hospital design, the requirement for a NCHD workforce to staff 3 rotas "out of hours" and to comply with National Standards, will increase staffing requirements from total 32 NCHDs to 40 NCHDs at a minimum. The development of Paediatric Critical Care Nursing workforce development and planning structures is welcomed.

This will enable the development of a sustainable Paediatric Critical Care Nursing workforce by alligning a Paediatric Critical Care Nursing Career pathway to the national standards outlined within the Paediatric Critical Care Model of Care and the JFICIMI. It is essential that this includes the development of regional High Dependency Units and expansion of paediatric retrieval services.

The required increase in PCCM Consultant, trainee and nursing workforce for opening the NCH Critical Care Unit with 42 beds should be part of a CHI workforce document which is in line with medical nursing and HSCP national standards.

The report also highlights the need to include Neonatal Intensive Care within Census reporting going forward. This is particularly relevant regarding Nursing governance arrangements for the New Childrens Hospital & with CHI currently looking to open 2-4 NICU beds in 2024 prior to the opening of the NCH.

4.0 Adult Critical Care Activity

The level of care delivered is illustrated in graphs below **Fig 3 and 4.**

Figure 2: Definitions of Acute Hospital Care Levels

Level 0 Acute Care (not Critical Care Service)	Hospital ward clinical management
Level 1 Aute Care (not Critical Care Service)	Hospital ward observation area for patient at risk of deterioration; CCU
Level 2 Critical Care	Active management by critical care team to treat and support critically ill patients with single organ failure
Level 3 Critical Care **Level 3s Critical Care**	Active management by critical care team to treat and support critically ill patients with two or more organ failures Level 3s critical care with supra-regional/national critical care specialty service

The data below outlines the difference in clinical activity between hospitals and Model groups.

Figure 3: Total number of patients admitted to critical care unit (includes HDU) per annum as per May 2023 census.

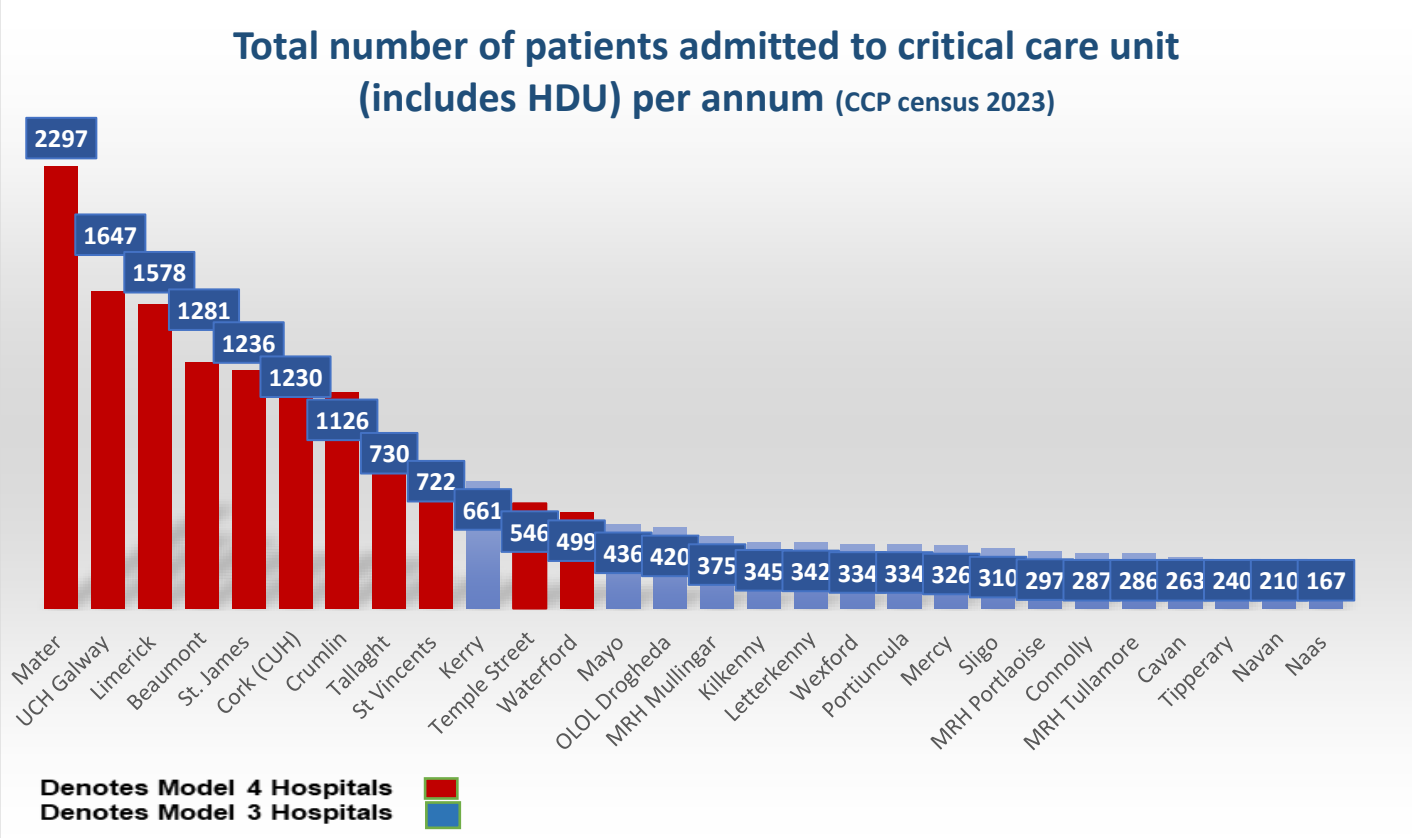


Figure 4: No. of Patients who received Invasive Ventilatory Support (Jan-Dec 2022) as per May 2023 Census

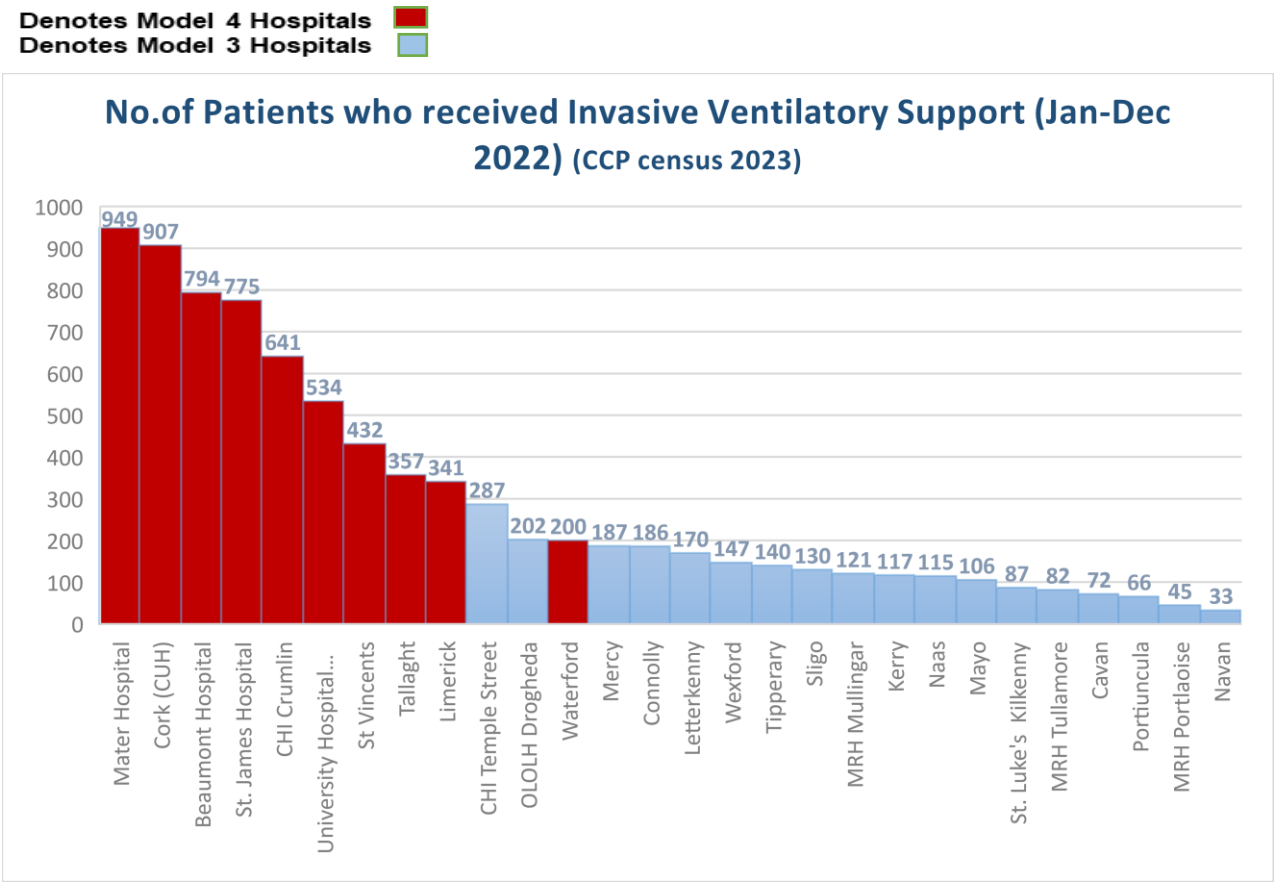
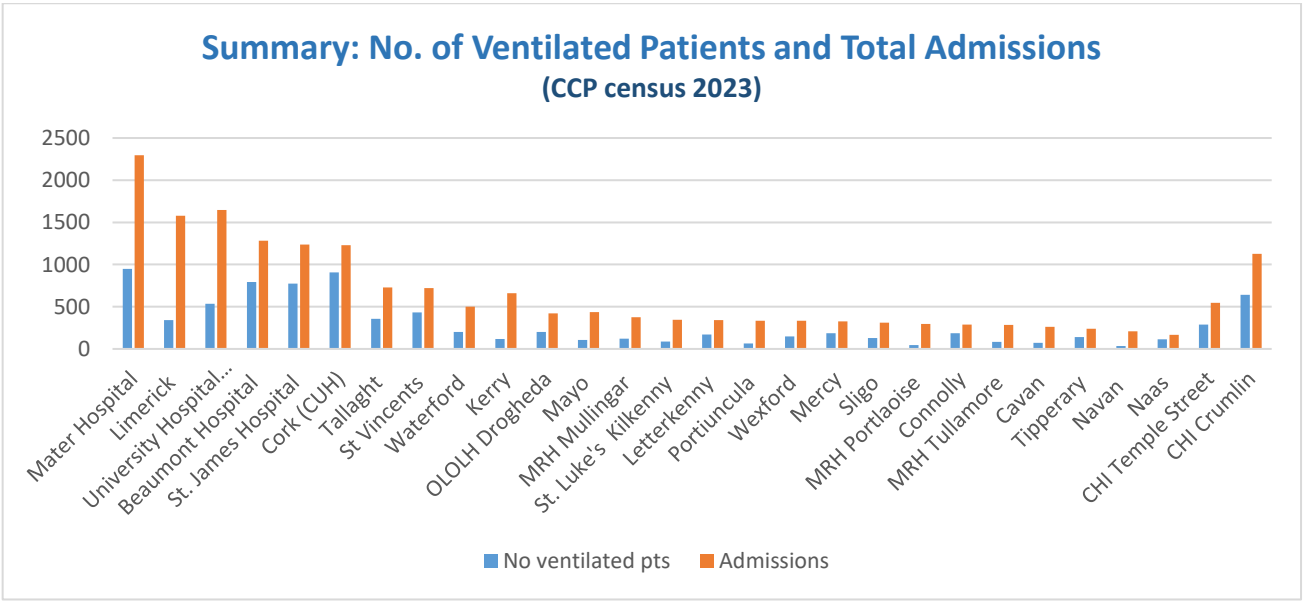


Figure 5: Summary: No. of Ventilated Patients and Total Admissions



From this data it is clear that Model 4 hospitals deliver primarily Level 3/3S where Model 3 hospitals deliver primarily Level 2 care.

This data is useful in allocation of funding for planning critical care capacity reconfiguration where increase in Level 2 care is advocated for.

5.0 Critical Care Nursing Census Workforce Report 2023

The adult critical care nursing workforce figures are based on the returned capacity as of Census Report 2023, in the table below.

Table 11: Critical Care Capacity as per Critical Care Census returns 2023.

National	Level 3	Level 2	Total
*Open Beds	251	68	319
**Closed / Funded	46	0	46
Total	**297**	**68**	**365**

ICU bed is open; funding is available and bed is operational on a daily basis

****Funding is available but bed not open due to workforce deficits***

On behalf of HSE Acute Operations, Critical Care Programme has completed a critical care bed capacity, critical care workforce and activity census. As part of the Census procedure, each hospital's Census return is verified locally and countersigned by the Hospital CEO, Hospital Clinical Director, Hospital Director of Nursing, Hospital ICU Director, Hospital ICU CNMIII, Hospital Group CEO, Hospital Group Chief Clinical Director and Hospital Group CDoN- multiple Hospital/Hospital Group signature verifications. This co-signed individual Hospital critical care capacity profile report is thus collated, reconciled, and validated by CCP Census Working Group.

There has been significant work completed since 2017 to align the Adult Critical Care Nursing workforce with the critical care quality requirements in the Model of Care for Adult Critical Care and the Joint Faculty of Intensive Care Medicine National Standards for Adult Critical Care Services. This has been enabled through the work of the Hospital Group Critical Care Nursing Workforce Planning Groups, through whom these figures have been collated and verified. The development of an Adult Critical Care Nurse Career Pathway, and developing the structures required to support our critical care nursing colleagues on their journey through a career in critical care has been a key part of this.

Examples are:

- Increase of Critical Care Clinical Nurse Educators by 50 WTE since 2017
- National Access to a National Foundation Education Module in Critical Care Nursing, delivered jointly by UCD and UCC, funded by the Office of the Nursing & Midwifery Services Director.
    - Over 800 Nurses have completed this since 2017.
- Development and implementation of ANP led critical care outreach services.
- Increase of undergraduate placements in Critical Care, notably Intensive Care Units

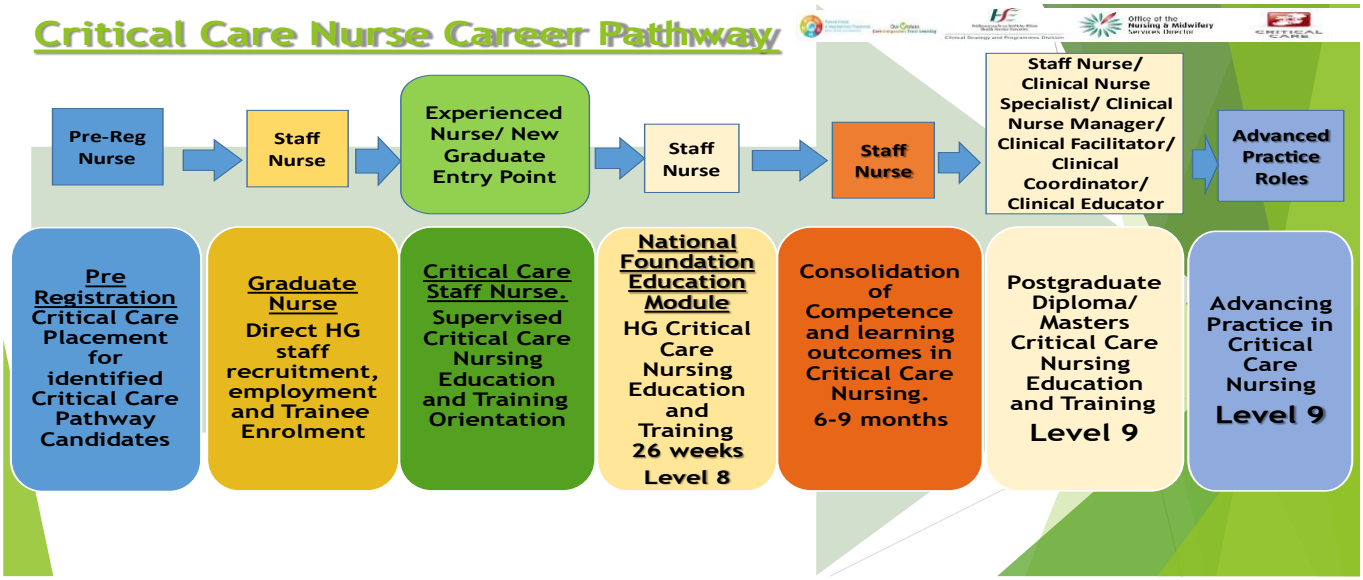
Our Net increase in the Adult Critical Care Nursing workforce since 2019, presented below, does not include the recruitment numbers required to replace Critical Care Nursing staff, estimated at between 10-15%.

Critical Care funded capacity increased by 110 beds between 2019 and 2023.

Table 12: Variance in WTE figures for critical care nursing grades since 2019

Variance 2019-2023	Approved WTE	In Post WTE
CNM3	4.10	3.30
CNM2	70.22	53.63
Educators	29.25	27.01
Staff Nurse	693.63	451
Audit nurse	4.11	6.51
HCAs	90.52	67.37

Figure 8: Critical Care Nurse Career Pathway



5.1 Postgraduate and Undergraduate Education in Critical Care

a) Advanced Nurse Practitioner (ANP) Programme

Development and implementation of ANP led Critical Care Outreach Services. There are currently 26 Registered ANPs and 25 Candidate ANPs. In 2019 there were none.

b) Post Graduate Diploma

There has been no increase in the number of nurses completing the **Post Graduate Diploma** in Critical Care Nursing, delivered by the RCSI, UCD, UCC, Trinity and NUIG since Critical Care Nursing workforce census collation requested this data in 2016.

- In 2023, 91.52 WTE Nurses completed this.
- 650.84 WTE Critical Care Nurses have completed their PG Diploma, representing 35% of our Critical Care Nursing workforce.
- 37% of Critical Care Nursing staff in Model 3 Hospitals have completed their PG Diploma
  - The range is 8% -81% across all Model 3 Critical Care Units
- Currently 31% of Critical Care Nurses have PG Diploma in Model 4 Hospitals
  - Range is 20%-52%

Business Cases have been unsuccessful in their submission into the Estimates process annually to increase PG Diploma access, despite a 30% increase in critical care capacity. Significant focus is required nationally to maximise PG Diploma participation in 2024.

c) National Foundation Education Module

The **National Foundation Education Module** in Critical Care Nursing and those delivered by Mater, St James and St Vincents were completed by over 300 Nurses in 2023. On completion of the national foundation education module, participants receive 10 Credits towards the completion of the 60 credit PG Diploma. Not providing access to the PG Diploma for these nurses represents a significant risk for recruitment, retention and quality of patient care.

Below is the breakdown of **Undergraduate placements** in Critical Care nationally:

Table 13: Breakdown of undergraduate placements nationally

National Undergraduate Placements			Model 4 Undergraduate Placements			Model 3 Undergraduate Placements		
2nd Year	3rd year	4th year	2nd Year	3rd year	4th year	2nd Year	3rd year	4th year
145	228	69	105	172	37	40	56	32
8%	13%	4%	← Based on 1800 Nurses Qualifying annually					

The development of Undergraduate Critical Care Modules in some 3rd Level colleges is welcomed. Optimisation of placement opportunities, particularly for those student nurses that would like a placement in Critical Care is recommended and for those undertaking Undergraduate Modules on Critical Care Nursing.

5.2 Critical Care Nursing Gap Analysis Reports

All Hospitals and Hospital Groups receive Critical Care Nursing Gap Analysis variance reports based on the Standards described both in the Model of Care for Adult Critical Care and the JFICIMI National Standards.

The annual critical care nursing workforce census returns outline the funded WTE, in post WTE and headcount for all critical care nursing grades in all hospitals.

The gap analysis represents the difference between the standards outlined, based on the returned capacity and the nursing workforce as reported.

5.2.1. Model 3 Hospitals Critical Care Nursing Workforce Gap Analysis 2023

Table 14: Model 3 Hospitals Critical Care Capacity and Gap Analysis 2023

Model 3 Hospitals Critical Care Capacity as per Census 2023 returns			
	Level 3	Level 2	Total
Open	79	26	105
Closed / Funded	1	0	1
Closed/ Not Funded	0	0	0

Model 3 Hospitals Critical Care Nursing Workforce Gap Analysis 2023	Approved WTE	WTEs in POST	Headcount	*Required as per MOC	Variance Approved	Variance In Post	Vacant Posts
Divisional Nurse Manager/ADON (please identify WTE dedicated to critical care)	5.51	6.15	12.46	0	0	0	0
Registered Advanced Nurse Practitioners (RANP)	1	0	0				
Candidate Advanced Nurse Practitioners (cANP)	10	9.92	10				
Clinical Nurse Manager 3 (CNM3)	6.4	4.6	6				2
Clinical Nurse Manager 2 (CNM2)	52.11	42.52	47.2				8.41
Clinical Nurse Manager 1 (CNM 1)	21	19.81	21				0
Critical Care Clinical Nurse Educators	17.5	17.42	18	20	-2.5	-2.58	0.08
Clinical Nurse Specialist (Please Specify role)	1	1	1	0	0	0	0
Staff Nurse (Includes ACCESS Nurse per shift)	552.22	517.76	601.42	614.8	-24.86	-59.34	43.04
Critical Care Audit nurse	9.73	9.35	14.5	10	-0.14	-0.74	0.5
CIS	2.5	2.5	3.5	0	0	0	0
Health Care Assistants	52.98	49.31	51	94	-35.02	-38.69	3.5
Clerical/Administration Support	7.41	6.45	16.5	15.5	-6.73	-7.59	0.86
Post Graduate Education							
Number of Nurses Currently Undertaking **Post-Graduate Diploma** in Critical Care Nursing		29.67					
Number of Nurses Currently Undertaking **National Foundation Education Module** in Critical Care Nursing		43					
Number of Critical Care Nurses with **Post Graduate Diploma in Critical Care Nursing**		220.32		37%			
Number of Critical Care Nurses with **Masters in Critical Care Nursing**		14.11					
If funding available, how many nurses could you send on the **Post Graduate Diploma Course**		55					
Number of Nurses with the **old Certificate in ICU Course only**		57.46					
Number of Critical Care Nurses with **Foundation Course** in Critical Care Nursing **only**		145.61					
Number of HCAs with FETAC Level 5 or above course		49.3					
How many ACCESS nurses (floating) per shift are there in your unit		4		12	-8		

* The required section relates to the 2014 Model of Care for Adult Critical Care pages 48-50, Critical Care quality requirements for Nursing and is aligned to the recommendations made within the Critical Care Nursing Workforce Report 2021 and JFICIMI National Standards for Adult Critical Care 2021. **Inclusive of MRH Mullingar capacity numbers, incomplete nursing workforce returns received.**

With the Haddington Road Agreement reinstated, the WTE staff nurse requirement per ICU Bed is 5.8 based on calculations within the Model of Care. All other grades, (CNM 2 and ACCESS Nurse) required for all shifts are therefore also calculated as a requirement of 5.8 WTE.

All Model 3 Hospitals, apart from Midlands Regional Hospital Mullingar, have received detailed Gap Analysis based on the above table.

1. There is considerable variance in Critical Care Capacity across all Model 3 Hospitals with the range between 4 and 10.
    - As such, recommendations relating to CNM 3 and CNM 2 posts vary and are not included within the above table.
    - Each Model 3 hospital has received specific recommendations regarding these important managerial and clinical supervisory posts.
2. Recommended ACCESS Nurse requirements are included within the Staff Nurse figures.
    - As per Critical Care Nursing Workforce report 2021, consideration required locally on the Grade of these posts.
3. Consideration for additional Critical Care Clinical Nurse Educator posts required to:
    - Increase accessibility to the PG Dip Critical Care
    - Increase Undergraduate placements in Critical Care

This additionality is not included in the above table but has been included in each hospital's recommendations.

4. Post graduate education:
    - 37% of Critical Care Nursing Staff in Model 3 Hospitals have completed their Post Graduate Diploma
    - The range is 8% -81% across all Model 3 Critical Care Units
    - Significant focus required in 2024 to maximise PG Diploma participation.
    - A minimum of 70% of staff should hold a specialist qualification (post graduate diploma) in intensive care nursing, with skills and competencies pertaining to the clinical speciality of the unit.
    - 30 Completed PG Dip in Sept 2023
    - 43 completed National Foundation Education Module in Critical Care Sept 2023
5. Additional funding required for specialist HCA posts.
6. Additional funding required for Administration posts. Please note that gaps here result in additional lost Nursing hours.

Variance since 2019

- 22 Additional Critical Care Beds
- 3.9 Additional CNM 3 posts
- 33.01 Additional CNM 2 posts, of which 11.84 are upgraded CNM 1 posts.
- 8.67 Additional Critical Care Clinical Nurse Educator posts
- 166.75 Additional S/N posts
- 2.36 Additional Audit Nurse Posts
- 23.32 Additional HCA posts
- All ANP posts funded since 2019.

5.2.2. Model 4 Hospitals Critical Care Nursing Workforce Gap Analysis 2023

Table 15: Model 4 Hospitals Critical Care Capacity and Gap Analysis 2023

Model 4 Hospitals Critical Care Capacity as per Census 2023 returns			
	Level 3	Level 2	Total
Open	172	42	214
Closed / Funded	45	0	45
Closed/ Not Funded	0	0	0

Model 4 Hospitals Critical Care Nursing Workforce Gap Analysis 2023	Approved WTE	WTEs in POST	Headcount	*Required as per MOC	Variance Approved	Variance In Post	Vacant Posts
Divisional Nurse Manager/ADON (please identify WTE dedicated to critical care)	6	5.8	10.3	0	0	0	0
Registered Advanced Nurse Practitioners (RANP)	29	24	25	72	-36	-39	5
Candidate Advanced Nurse Practitioners (cANP)	17	17	19				
Clinical Nurse Manager 3 (CNM3)	12.7	14.46	16	13	-0.5	-0.5	0
Clinical Nurse Manager 2 (CNM2)	125.6	114.47	112	158	-33.4	-44.48	11.08
Clinical Nurse Manager 1 (CNM 1)	9	8.28	9	0	8	7.28	1.28
Critical Care Clinical Nurse Educators	57	53.39	54	62	-4.8	-8.61	5.04
Clinical Nurse Specialist	1	1	1	0	0	0	0
Staff Nurse (Includes ACCESS Nurse per shift)	1444.07	1178.27	1205.15	1589.2	-145.13	-410.93	266.02
Critical Care Audit nurse	17.1	17.8	19.5	25.8	-8.7	-8	0.3
CIS	9.5	8.5	9.5	0	0	0	0
Health Care Assistants	135.5	108.09	109	230.8	-51.3	-78.71	21.66
Clerical/Administration Support	19	19	19	41.5	-15.5	-16.5	1
Post Graduate Education							
Number of Nurses Currently Undertaking **Post-Graduate Diploma** in Critical Care Nursing		61.85					
Number of Nurses Currently Undertaking **National Foundation Education Module** in Critical Care Nursing		114					
Number of Critical Care Nurses with **Post Graduate Diploma in Critical Care Nursing**		430.52		31%			
Number of Critical Care Nurses with **Masters in Critical Care Nursing**		69					
If funding available, how many nurses could you send on the **Post Graduate Diploma Course**		100					
Number of Nurses with the **old Certificate in ICU Course only**		69.4					
Number of Critical Care Nurses with **Foundation Course** in Critical Care Nursing **only**		384.56					
Number of HCAs with FETAC Level 5 or above course		109.15					
How many ACCESS nurses (floating) per shift are there in your unit		16		26	-10		

* The required section relates to the 2014 Model of Care for Adult Critical Care pages 48-50, Critical Care quality requirements for Nursing and is aligned to the recommendations made within the Critical Care Nursing Workforce Report 2021 and JFICIMI National Standards for Adult Critical Care 2021.

All Model 4 Hospitals have received detailed critical care nursing workforce gap analysis based on the above table.

1. There is considerable variance in Critical Care Capacity across all Model 4 Hospitals
    - 52 (funded) is the highest
    - 10 is the lowest.

2. Recruitment and retention strategies should include additional CNM 2 posts in Model 4 hospitals to align with national standards for these clinical supervisory posts. Table above highlights a deficit of 33.4 WTE funded posts.

3. Consideration for additional Critical Care Clinical Nurse Educator posts required to:
    - Increase accessibility to the PG Dip Critical Care
    - Increase Undergraduate placements in Critical Care

    This additionality is not included within the above analysis.

4. Post Graduate Education
    - 31% of Critical Care Nursing Staff in Model 4 Hospitals have completed their Post Graduate Diploma
    - Range is 20% - 52%
    - Significant focus required in 2024 to maximise PG Diploma participation & completion to move towards 70% completion across all units.
        - 62 Completed PG Dip in Sept 2023
        - 114 completed NFEM Critical Care Sept 2023

5. Recommended ACCESS Nurse requirements are included within the S/N figures.
    - Significant safety requirement in Model 4 Hospitals
    - Currently 31% of Critical Care Nurses have PG Diploma in Model 4 Hospitals
    - Less than 50% WTE qualified staff = 1 ACCESS nurse per 4 beds
    - For single room Level 3 units a ratio of 1 ACCESS nurse for every 4 side rooms is recommended

6. There is a shortfall of 8.7 WTE Audit Nurse posts for the funded Critical Care Capacity

7. Additional funding required for specialist HCA posts.

7. Additional funding required for Administration posts. Please note that gaps here result in additional lost Nursing hours.

Variance since 2019

- Additional Critical Care Beds (Funded) = 72
- Additional CNM 3 posts = 0.2 (WTE)
- Additional CNM 2 posts, of which 2 are upgraded CNM 1 posts = 37.21 (WTE)
- Additional Critical Care Clinical Nurse Educator posts = 20.58 (WTE)
- Additional S/N posts = 526.88 (WTE)
- Additional Audit Nurse Posts = 1.75 (WTE)
- Additional HCA posts = 67.2 (WTE)
- All ANP Posts funded since 2019, other than Cardiothoracic ANP posts in St James (6)

5.2.3 National Critical Care Nursing Workforce Gap Analysis 2023

Table 16: National Critical Care Capacity and Critical Care Nursing Gap Analysis 2023

National Critical Care Capacity as per Census 2023 returns			
	Level 3	Level 2	Total
Open	251	68	319
Closed / Funded	46	0	46
Closed/ Not Funded	0	0	0

National Hospitals Critical Care Nursing Workforce Gap Analysis 2023	Approved WTE	WTEs in POST	Headcount	Required as per MOC	Variance Approved	Variance In Post	Vacant Posts
Divisional Nurse Manager/ADON (please identify WTE dedicated to critical care)	11.51	11.95	22.76	0	0	0	0
Registered Advanced Nurse Practitioners (RANP)	30	24	25				
Candidate Advanced Nurse Practitioners (cANP)	27	28.92	29				
Clinical Nurse Manager 3 (CNM3)	19.1	19.06	22				
Clinical Nurse Manager 2 (CNM2)	177.71	156.99	159.2				
Clinical Nurse Manager 1 (CNM 1)	30	28.09	30				
Critical Care Clinical Nurse Educators	74.5	70.81	72	82	-7.3	-11.19	5.12
Clinical Nurse Specialist (Please Specify role)	2	2	2	0	0	0	0
*Staff Nurse (includes ACCESS Nurse requirements)	1996.29	1696.03	1806.57	2204*	-207.71	-508	301.56
Critical Care Audit nurse	26.83	27.15	34	35.8	-8.84	-8.74	0.8
CIS	12	11	13	0	0	0	0
Health Care Assistants	188.48	157.4	160	324.8	-86.32	-117.4	25.16
Clerical/Administration Support	26.41	25.45	35.5	57	-22.23	-24.09	1.86
Post Graduate Education							
Number of Nurses Currently Undertaking **Post-Graduate Diploma** in Critical Care Nursing		91.52					
Number of Nurses Currently Undertaking **National Foundation Education Module** in Critical Care Nursing		157					
Number of Critical Care Nurses with **Post Graduate Diploma in Critical Care Nursing**		650.84		33%			
Number of Critical Care Nurses with **Masters in Critical Care Nursing**		83.11					
If funding available, how many nurses could you send on the **Post Graduate Diploma Course**		155					
Number of Nurses with the **old Certificate in ICU Course only**		126.86					
Number of Critical Care Nurses with **Foundation Course** in Critical Care Nursing **only**		530.17					
Number of HCAs with FETAC Level 5 or above course		158.45					
How many ACCESS nurses (floating) per shift are there in your unit		20		38	-18		

* The required section relates to the 2014 Model of Care for Adult Critical Care pages 48-50, Critical Care quality requirements for Nursing and is aligned to the recommendations made within the Critical Care Nursing Workforce Report 2021 .

1. Recommended **ACCESS Nurse** requirements are included within the S/N figures.
    - Significant safety requirement

2. Returned **S/N Funded posts** outline a gap in funding v Model of Care as the following.
    - S/N 207.71 WTE. In post gap is 508 WTE.

3. Please see Model 4 Gap Analysis for **CNM posts** related to Model 4 Hospitals
    - Wide variance in Model 3 Hospital capacity means collating the gap analysis for CNM posts in Model 3 hospitals is not possible. These have been calculated within each Hospitals Gap Analysis

4. Currently 33% of Critical Care Nurses have **PG Diploma** in Critical Care Units
    - 50% is minimum requirement.
    - Range is 8%-81% in Model 3 hospitals.
    - Range is 20% - 52% in Model 4 hospitals.
    - Significant focus required in 2024 to maximise PG Diploma participation & completion to move towards 50% completion across all units.

5. Additional **Critical Care Clinical Nurse Educator** posts shown above required.

    - This figure would need to be reviewed to allow:
        - Increase accessibility to the PG Dip Critical Care
        - Increase Undergraduate placements in Critical Care
    - 91.52 WTE completed PG Dip in Sept 2023
    - 157 completed national foundation education module or in-house foundation courses Sept 2023 (1 Cohort)

6. There is a shortfall of 8.84 WTE **Audit Nurse** posts for the funded Critical Care Capacity

7. Additional funding required for specialist HCA posts.

8. Additional funding required for Administration posts. Please note that the deficit nationally is 25 WTE, which equates to 45,000 Nursing hours (approx.) lost annually to Administration.

Variance since 2019

- Additional Critical Care Beds (Funded) = 110
- Additional CNM 3 posts = 4.1 (WTE)
- Additional CNM 2 posts, of which 13.84 are upgraded CNM 1 posts = 70.22 (WTE)
- Additional Critical Care Clinical Nurse Educator posts = 29.25 (WTE)
- Additional S/N posts = 693.63 (WTE)
- Additional Audit Nurse Posts = 4.11 (WTE)
- Additional HCA posts = 90.52 (WTE)
- All ANP Posts funded since 2019, other than Cardiothoracic ANP posts in St James (6)

6.0 Health & Social Care Professions Staffing for Critical Care

6.1 Introduction

Health and Social Care Professions (HSCP) comprise 26 different disciplines and are the second largest clinical group in the Irish public health system, comprising 25% of the clinical workforce (*HSE 2021*). 10 of the 26 HSCPs provide a routine service to critical care. The Model of Care for Adult Critical Care (2014) sets out minimum standards for 5 of the 26 HSCPs and Pharmacy. The HSCPs include Dietetics (DT), Physiotherapy (PT), Occupational Therapy (OT), Speech & Language Therapy (SLT) and Medical Social Worker (MSW). There are currently no national minimum standards set out for the remaining 5 HSCPs, which include Clinical Psychology. Clinical engineering, Medical Sciences, Radiography and Cardiac Physiology. For the professions where national standards do exist, and unlike medical and nursing colleagues, no critical care workforce plan or training programme exists to align with these standards.

Unlike nursing and medical colleagues, no national workforce plan for HSCP and pharmacy in critical care exists. For the first time, a review of the HSCP and Pharmacy workforce in critical care has been commissioned by Acute Operations to inform the future workforce plan. The scope of this research initially extended to Pharmacy and the 6 'end of bed' HSCPs where national or international standards exist (Dietetics, Physiotherapy, Clinical Psychology, Speech and Language Therapy, Occupational Therapy and Medical Social Work). The research later extended to the remaining 4 'interventional' HSCP groups (Clinical Engineering, Medical Sciences, Radiography and Cardiac Physiology), but data is not included in this chapter. The aim of this research was to establish current staffing levels, roles and responsibilities, recruitment and retention challenges, service delivery, education and training structures and monitoring and evaluation practices. The full report is due to be published later this year. A summary of key findings under the headings; service provision, WTEs, grade and recruitment are presented below and followed by a short discussion.

Unlike nursing and medical colleagues, no national workforce plan for HSCP and pharmacy in critical care exists. For the first time, a review of the HSCP and Pharmacy workforce in critical care has been commissioned by Acute Operations to inform the future workforce plan. The aim of this research was to establish current staffing levels, roles and responsibilities, recruitment and retention challenges, service delivery, education and training structures and monitoring and evaluation practices. A summary of key findings under the headings; service provision, WTEs, grade and recruitment are presented below and followed by a short discussion.

6.2. Key Findings

6.2.1 Critical Care Units Providing a HSCP and Pharmacy Service

Of the professions who responded to the survey, 100% of units provided a dietetic service (n = 26) and Speech & Language Therapy (n = 24) service. 96% (n=25) and 88% (n=23) of units provided a Physiotherapy and Pharmacy service. A lower percentage of units provided an Occupational Therapy (71%, n=15), Medical Social Worker (53%, n=10) or Physio (18%, n=2) service. Of units which provided a service, the level of service provision ranged from a 'full service' defined by clinical indication to a 'limited service' or 'reduced service' due to inadequate staff availability or inadequate staff experience.

For Pharmacy, a full service was defined as 'daily clinical review on the unit' and a limited service was defined as 'weekly clinical review on the unit'. Where funding was provided, it was sometimes insufficient to deliver a 'full service'. The number of units providing any service are presented in table 17.

This is then broken down into the percentage of units providing a full versus limited service. For example, 24 units had a SLT service but only 56.5% (14 units) provided a full service. The remaining 43.5% (10 units) provided a limited service.

TABLE 17: AVAILABILITY AND TYPE OF SERVICE PROVIDED BY CRITICAL CARE UNITS

Profession	Units providing a service N (%)	Full service %	Limited service %
SLT	24 (100%)	56.5	43.5
PT	25 (96%)	53.8	46.2
OT	15 (71%)	47.4	52.6
DT	26 (100%)	100	0
MSW	10 (53%)	56.2	43.8
Psychology	2 (18%)	100*	0
Pharmacy	23 (88%)	77	23

Interpret with caution; Figure based on 2 filled posts. 24 units with 0 posts.

6.2.2. 7-Day Service Provision

DT, OT, SLT, PY and MSW reported no official weekend service in 100% of critical care units. Physiotherapy provided a service 7 days a week across all sites (100%). Weekend service was limited to on-call and emergency duty rotas. 38.5% of Pharmacy departments provided some form of service 6 or 7 days a week. Of those that provided a 7-day service, 0% provided a full service over the 7 days. Weekend service varied from '2 hours on a Saturday morning and bank holiday Monday in the dispensary' to an 'out of hour's emergency contact phone number'. Weekend service was limited to 'medication supply only' in 15.4% of units or an 'on call service' in 3.8% of units.

6.2.3 Whole time equivalents (WTEs)

Based on the responses to the survey questions, figure 9 compares the total number of approved, filled and recommended WTEs in critical care. Recommended WTE calculations were defined using the MOC 2014. Where the MOC 2014 did not specify a WTE requirement (i.e. for MSW and Psychology), UK recommendations from the 'Guidelines for the provision of intensive care services 2.1' or alternative references were used and are outlined in table 18. Psychology had the largest variance in WTE posts with recommendations (n=-17.38, 90%), followed by MSW (n=-25.3, 78%) and OT (n=-27.24, 42%). SLT had the lowest variance in WTE posts (n=-2.8, 14%) followed by physiotherapy (n=-14.07, 22%), Pharmacy (n=-13.65, 42%) and dietetics (n=-9.16, 24%). According to professions that provided a service, there was variation as to whether revenue for these services came from investment in critical care capacity following MOC 2014 or from elsewhere. HSCP groups which are relatively new to critical care (OT, MSW and Psychology) were most frequently funded as a result of investment in critical care capacity (60%, 70%, 100%), while the revenue for HSCP groups with a long-standing history of service delivery to critical care (Pharmacy, Physiotherapy) came from alternative sources and not directly from critical care (35%, 36%).

FIGURE 9: COMPARISON OF WTE POSTS APPROVED, FILLED AND RECOMMENDED

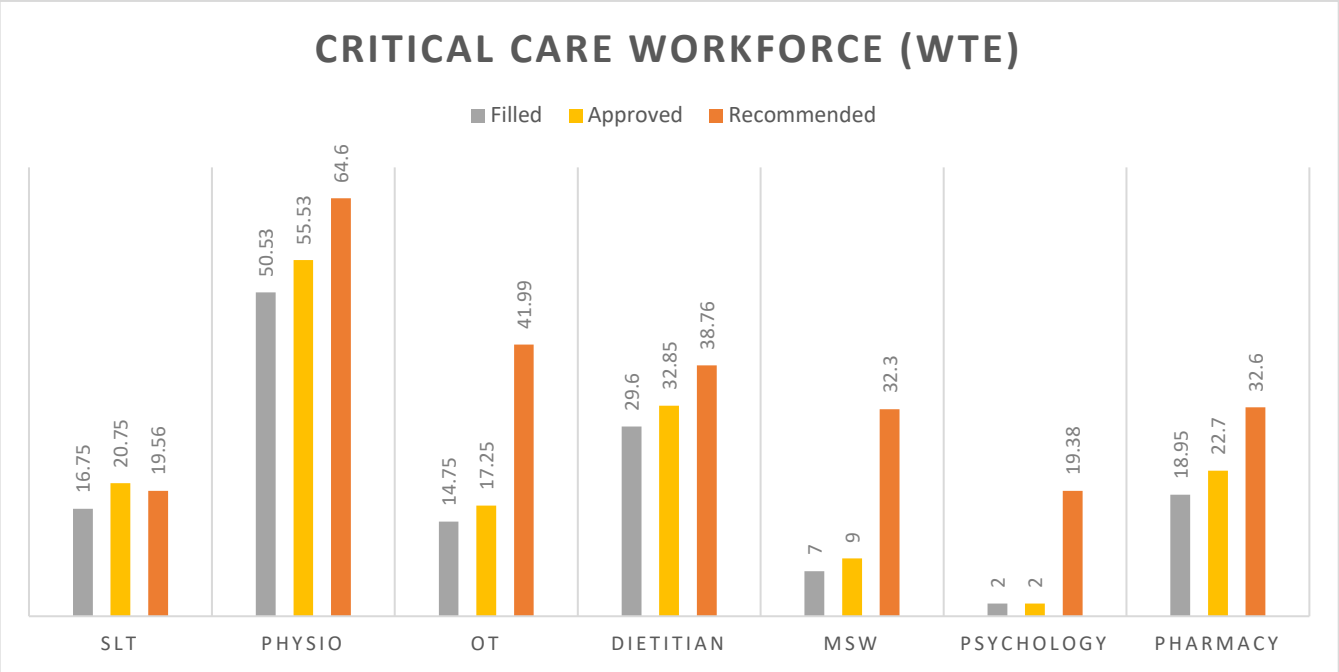


TABLE 18: THERAPIST TO BED RATIOS: CURRENT VERSUS RECOMMENDED

	Staff: bed ratio (overall)	Staff: bed ratio (funded by critical care)	MOC 2014 WTE:bed ratio	GIPICS v2.1 (2)
	WTE:Bed	**WTE:Bed**	**WTE:Bed**	**WTE:Bed**
SLT	1: 19.4	1:21	1: 16	1: 10
PT	1: 6.5	1:5.8	1: 4.8	1: 4
OT	1: 22.1	1:19	1: 8	1: 10
DT	1:11.2	1:10	1: 8.3	1: 10
MSW	1:47	1:37.2	1: 10*	-
Psy	1:163	1:33.5	1: 16**	1: unit
Pharmacy	1:17.2	1:11.7	1: 10	1: 10

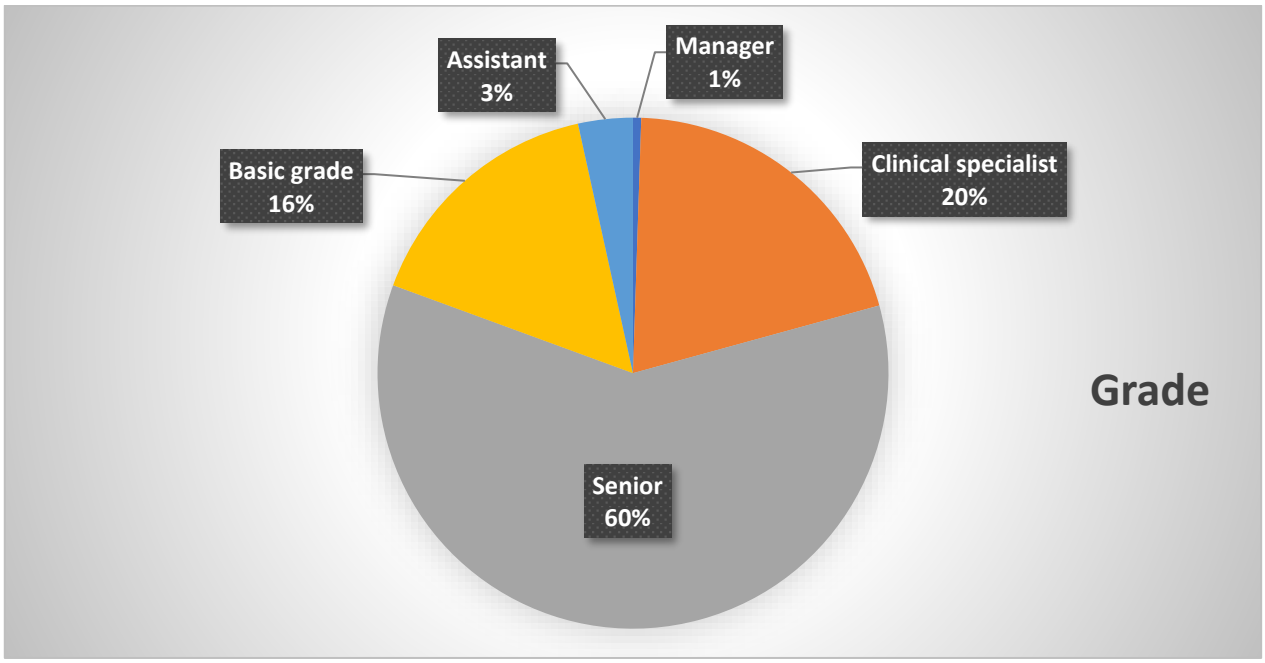
Workforce ratio not specified in MOC 2014. No clearly delineated staff requirement in national or international guidelines. WTE:Bed ratio of 1:10 defined by expert consensus, MSW managers group, HSE.

****Workforce ratio not specified in MOC 2014. WTE:Bed ratio defined using UK benchmarking data published by the intensive care society (ICS 2022). 20% headroom added to provide WTE:Bed recommendation 1:16.***

6.2.4 Grade

Further analysis was completed on the breakdown of grade of staff employed in critical care. SLT, PT, OT and DT share an identical grading structure whereas MSW, pharmacy and psychology follow a profession specific grading structure. Overall, Senior (60%) and clinical specialist (20%) grade made up the majority of HSCP and Pharmacy working in critical care. Manager (1%) and assistant grade (3%) had the least presence. Figure 10 presents the percentage of staff based on grade across all professions combined.

Figure 10: Percentage of staff based on grade across HSCP and pharmacy combined



6.3 Recruitment

6.3.1. Vacant Posts

A combined total of 20.5 WTE funded posts were reported as vacant by this survey. Table 19 presents the individual vacancy rate across each profession as reported by survey participants. Vacancies were greatest in SLT (19%), MSW (22%) and OT (14%) when compared to posts approved.

Comparing posts which were filled to national workforce recommendations, a combined workforce gap of 114.98 WTE posts was identified by this survey. Variance of posts filled with the recommended WTEs is outlined in table 19.

TABLE 19: VACANT POSTS

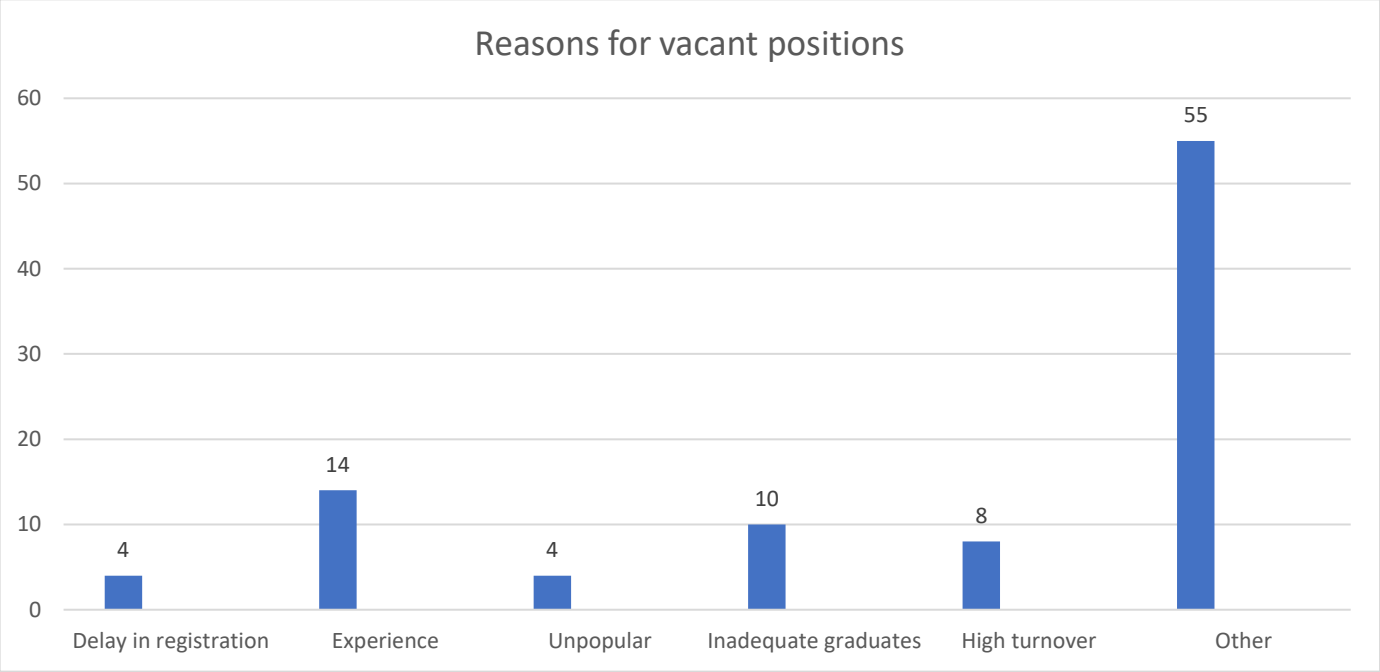
	Posts vacant (total) compared to number approved. N (%)	Variance between total number of posts filled and recommended WTEs. N (%)
SLT	4 (19%)	-2.8 (14)
PT	5 (9%)	-14.07 (22)
OT	2.5 (14%)	-27.24 (42)
DT	3.25 (10%)	-9.16 (24)
MSW	2 (22%)	-25.3 (78)
Psychology	0 (0)	-17.38 (90)
Pharmacy	3.75 (16.5%)	-13.65 (42)
Total	20.5	114.98

6.3.2. Barriers to recruitment

Those who reported vacant positions were asked to record the reasons for this. Reported reasons were grouped into 6 main categories and their contribution to vacant positions were calculated. The category 'other' was defined by the following list: 'Difficult to fill temporary positions', 'Maternity leave difficult to fill', 'Unpaid careers leave not backfilled', 'Redeployment', 'Promotion to other area and unable to back fill', 'Lack of accommodation /transport issues / cost of living associated with Dublin hospitals', 'Delays in employment procurement process', and 'Unable to recruit to <0.5 WTE positions.

The category 'other' (55) was reported by the greatest number of participants as the greatest reason for vacant positions, followed by inadequate 'critical care experience' (14) and 'lack of college graduates' (10). Table 5 presents the 6 categories and their reported contribution towards vacant posts in each profession. Figure 20 presents the reasons for vacant positions for all professions combined.

FIGURE 20: NUMBER OF PARTICIPANTS WHO REPORTED REASONS FOR VACANT POSITIONS ACROSS HSCP AND PHARMACY COMBINED



6.3.3 Discussion

Despite best practice recommendations and the long-standing recognition of the role of HSCP in critical care, 24 of 26 ICU units in Ireland have no Psychology service, 14 out of 26 units have no Medical Social Worker service and 11 of 26 units have no OT service.

The combined HSCP and pharmacy workforce in critical care in Ireland is currently at 139.18 WTE (1.2% of the HSCP and 2.3% of the pharmacy HSE Acute WTE employees). 20.5 WTE funded positions are currently vacant due to recruitment/retention challenges which stem from a combination of profession related barriers (e.g. low graduate numbers/limited career progression) and critical care specific barriers (e.g. lack of education and training supports).

A HSE workforce report for Quarter 1 2023 (unpublished) highlighted the highest turnover rate of 3.1% among HSCP and pharmacy in comparison to other staff categories, and this was highest within the Dublin Midlands Hospital Group (HSE, 2023). While this is not specific to critical care, it will negatively impact the recruitment capacity to new critical care posts in the Dublin Midlands region.

A workforce plan focused on recruitment and retention will be necessary to meet the current and future workforce requirements for critical care. This survey identified a number of challenges which will negatively impact recruitment and retention of HSCP and pharmacy to critical care.

- Challenges filling existing funded posts (20.5 WTE vacancies currently)
- Existing workforce gap due to lack of investment in HSCP roles (additional 114.98 WTE required to meet MOC for Critical Care 2014 minimum standards)
- High staff turnover rates amongst HSCP/Pharmacy in Dublin (3.1%) where majority of critical care beds are located.
- Service expansion and increased demand (additional 105.6 WTEs required to open 106 new critical care beds in 2025/2026)

This Irish workforce analysis of HSCP and pharmacy in critical care identified a number of challenges which will negatively impact the sustainability of a HSCP and pharmacy workforce:

- Inadequate investment in HSCP and pharmacy working in critical care.
- Lack of critical care experience/knowledge as a major barrier to recruitment
- Students do not routinely undertake practice placement in critical care, limiting experience.
- Critical care rotations for junior members of staff are not common practice, limiting training and experience.

These findings demonstrate that achieving the minimum standards for staffing in critical care will be challenging and requires commitment from operational and strategic stakeholders both within and outside the critical care remit.

Seven key recommendations have been developed using the results of this survey and are listed below. Full details of each recommendation and action plan will be available in the published report 'HSCP and Pharmacy in Critical Care: A workforce survey of the Irish Public System'. Each recommendation is designed to support the development of a HSCP and Pharmacy workforce plan for critical care. Recommendations which have implications across the services, not just for critical care, are framed as 'generic to the profession'. Several of these recommendations have been previously identified by the National HSCP Office and link to the 'HSE HR resourcing strategy April 2023, resourcing our future'. These recommendations will require the need to work with stakeholders to progress high service impact actions previously identified by the national HSCP office, such as increasing graduate numbers, improving the infrastructure to support clinical placements, enabling early recruitment of graduates, increasing the number of trainee psychologists and addressing challenges arising with professional registration processes. The revision of 2014 national workforce standards to include the 5 absent HSCPs and bring the existing standards in-line with international standards, ensuring adequate investment in HSCP and pharmacy staff by service delivery units is essential. As Pharmacy were not part of the HSE HR resourcing strategy April 2023 progressing recommendations may be more challenging until an approach to provide for pharmacy representation at leadership level is identified.

6.3.4. Recommendations

Workforce	• Support commissioners and hospital groups to ensure business plans are aligned to the MOC 2014 when seeking investment for critical care expansion. • Work with NCCP/ JFICM to support a review of national standards for critical care staffing (MOC 2014).
Supply	• Work with HSCP office to support an increase in graduate numbers and clinical practice placement infrastructure. • Work with professional bodies and HEIs to incorporate critical care into undergraduate curriculum
Retention	• Work with the HSCP office on the implementation of advanced practice. • Work with HR to review current terms and conditions of employment e.g. flexible working. • Work with the HSCP office to develop/support CPD opportunities' for HSCP in critical care
Service Delivery	• Work with HSCP hospital managers and professional bodies to review how services are delivered in acute care
Rehabilitation Service	• Work with NCCP and JFICM to assess the need for an ICU rehabilitation service in Ireland
Education and Training	• Develop business plan for investment in HSCP critical care education lead. • Develop Education strategic plan which aligns with national standards for clinical practice
Monitoring and Evaluation	• Engage with NOCA and NQPSD to review the quality structures in place for HSCP and Pharmacy in critical care

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Appendix 1 – Critical Care Capacity, Workforce and Activity Census 2023 – Data Collection Tool

Health Service Executive

National Adult and Paediatric Critical Care Capacity, Workforce and Activity Census (on 22nd May 2023)

CRITICAL CARE BED CAPACITY
Data completed by Clinical Director
Name (PRINT)
Signature:
Date:
Email:

HOSPITAL NAME

HOSPITAL GROUP

Data validated by ICU Medical Director
Name: (PRINT)
Signature:
Date:
Email:

Data validated by Hospital Group
Chief Clinical Director
Name: (PRINT)
Signature:
Date:
Email:

Data validated by Director of Nursing
Name: (PRINT)
Signature:
Date:
Email:

Data validated by Hospital Group
Chief Director of Nursing
Name: (PRINT)
Signature:
Date:

Data Approved by Hospital
Chief Executive Officer/Hospital Manager
Signature:
PRINT:

Date:

Data Approved by Hospital Group
Chief Executive Officer

Signature:
PRINT:
Date:

This document MUST be signed by ALL signatories as required above.

Please post the ORIGINAL SIGNED BY ALL COPY to Una Quill, Programme Manager, Critical Care Programme, 22 Merrion Square, D2
By Monday 5th June 2023 Contact email for queries ccp@coa.ie Tel: 01-2650638

National Adult and Paediatric Critical Care Capacity, Workforce and Activity Census, Critical Care Programme, Clinical Design and Innovation, Office of Chief Clinical Officer, HSE