Model of Care for Adult Critical Care Published

The Model of Care for Adult Critical Care was launched by the Critical Care Programme in the College of Anaesthetists last October. The Model is a 'hub-and-spoke' delivery model which provides a care pathway for the critically ill adult patient across the acute healthcare system in Ireland. The delivery model's framework or structure ensures critically ill patients can access safe, timely and effective care. The model consists of acute hospitals with Intensive Care Units (ICUs), High Dependency Units (HDUs) and crucially smaller local hospitals without ICUs. Each Hospital Group in Ireland will have or already has a combination of hospitals with ICUs and HDUs and also smaller hospitals without ICUs. Agreed transport and retrieval services will provide connectivity between hospitals 'ICUs so that critically ill patients can access safe, timely and effective treatment. Timely access to organised critical care capacity improves outcomes for critically ill patients.

Dr. Michael Power, National Clinical Lead, National Clinical Programme for Critical Care said "the implementation of the 'hub-and –spoke' configuration in the organisation of acute hospital services across the Hospital Groups will improve outcomes for critically ill patients. A critical illness episode can be a very stressful time for the patient and particularly for their family. Critically ill patients are vulnerable, with some high risk cohorts requiring critical care in 'hub' or in supraregional hospitals. It is important critically ill patients gain timely access to the critical care services they need. This model of care provides this access framework or pathway."

Dr Aine Carroll, National Director of Clinical Strategy and Programmes, added "this Model of Care is very important for the integrated clinical management of patients within our hospital networks and will have positive outcomes for patients who are critically ill".

Critically ill patients receive critical care service based on the level of care needed. The levels of critical care defined by the Joint Faculty of Intensive Care Medicine of Ireland (JFICMI) *National Standards for Adult Critical Care Services 2011* outlines the critical care service appropriate for the care of patients requiring level 2, level 3 and level 3(s) critical care. This care is generally delivered within a HDU or ICU.

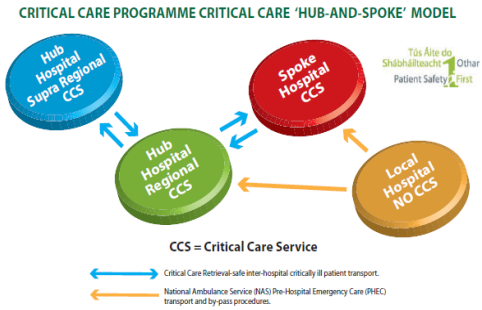
Dr Tony O Connell, National Director, Acute Hospitals Division added "this model of care is a clear pathway for patients who are critically ill. It clearly sets out the model of service delivery for the hospital groups. This will improve access for patients who require critical care services."

Mr Fintan Foy, CEO of the College of Anaesthetists of Ireland added " this is an excellent piece of work from the programme and will benefit all patients who are critically ill"

The Critical Care Programme is endorsed by the Joint Faculty of Intensive Care Medicine of Ireland (JFICMI) and acknowledges and is grateful for the strong administration support given by the College of Anaesthetists of Ireland (CAI) and by Ms Una Quill CCP Programme Manager in particular.

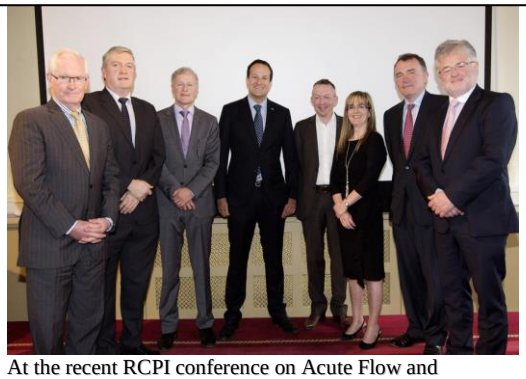
For more information the National Clinical Programme for Critical care and for the Model of Care for Adult Critical Care please visit www.hse.ie/criticalcare

Pictured at the launch of the Model of Care in the College of Anaesthetists, Merrion Square, Dr. Rory Dwyer, Dr. Michael Power, Mr. Fintan Foy, Ms. Sarah MacCormack, Dr. Brian Marsh, Ms. Una Quill, Dr. Aine Carroll, Dr. Tony O'Connell and Dr. Dermot Phelan



ALIGNMENT WITH THE ACUTE HOSPITAL MODELS

Acute Hospital Models	Levels of Critical Care National Standards JFICMI	Critical Care Service National Standards JFICMI	Medical, surgical multispecialty services	2003 Hanly Report	2009 HSE/ Prospectus Report Critical Care Model
Model 1 Hospital	Long-term care	No	No		
Model 2 Hospital Smaller Hospital Emergency Medicine Programme (EMP) / Local Injury Units'	'Low-risk, differentiated' admissions Level 0,1	No	No	'Local' Hospital	'Local' Hospital
Model 3 Hospital: ED, AMU, ASU	Level 0,1,2,3	Yes	No	'Major' Hospital	Spoke' Hospital
Model 4 Hospital (regional): ED, AMU, ASU	Level 0,1,2,3	Yes	Regional specialties	'University' Hospital	'Hub' Hospital
Model 4 Hospital (supraregional): ED, AMU, ASU	Level 0,1,2,3,3S	Yes	Supra-regional/ National specialties	'University' Hospital	'Hub' Hospital



At the recent RCPI conference on Acute Flow and Emergency Ambulatory Care, Minister Leo Varadkar meets Prof Frank Keane, Dr. Diarmuid O'Shea, Prof Garry Courtney, Dr. Colm Henry, Dr. Aine Carroll, Dr Michael Power and Dr. Gerry McCarthy

National Critical Care Audit under Way

ICU Audit Programme – Update April 2015

R Dwyer, Clinical Lead

The ICU Audit Programme has been implemented in two hospitals; the Mater in Dublin and the Mid-Western University Hospital in Limerick.

Mary Baggot (National ICU Audit Coordinator) and the NOCA (National Office of Clinical Audit) IT specialists worked with the ICU team in the Mater on the configuration of the Audit database and of the local Clinical Information System (CIS) and on interfacing these two systems. This turned out to be much more time-consuming that anticipated (as happens with most IT implementations!) and we must acknowledge the huge input from the Mater team: Medical, Nursing, IT and Audit Nurses. In March 2015 the system finally went live and comprehensive data are now being collected on activity and outcomes in ICU.

The project has also been implemented in Limerick; this was far less painful - we were up and running within 6 weeks of visiting Limerick. Limerick was easier firstly because the development work undertaken in the Mater did not need to be duplicated and secondly there was no requirement to interface with a CIS.

Our experience in Limerick has led us to prioritise the implementation in hospitals without a CIS, while also proceeding with implementation in CIS hospitals simultaneously.

We hope to have completed implementation in all 10 hospitals in Phase 1 of the project within 12 months. This will provide comprehensive ICU audit in the 10 largest Units in the country enabling them to benchmark their activity and outcomes against other Units in Ireland and in the UK.

Each Unit will have full access to their own data only; any other release of data will have to be sanctioned by the ICU Audit Governance Committee.

We are currently preparing a proposal for funding for Phase 2 of the Audit Programme in 2016. This will extend the Programme to the remaining 12 hospitals with 4 or more Level 3 Critical Care beds. These hospitals have a relatively small requirement for staffing for Audit and implementation could be achieved very quickly because most do not have a CIS. We are hopeful this will be funded, providing comprehensive audit of Critical Care across the country.

For more information of other audit projects visit the National Office of Clinical Audit site at

www.noca.ie

Major Contribution by Critical Care and Anaesthesia Programmes to the development of National Guidelines

A feature of the work of the National Clinical Programmes since they were established in 2010 is the multidisciplinary approach adopted when devising strategies and drawing up national guidelines for the better management of a range of acute clinical conditions. Anaesthesia and Critical Care medicine often play a vital role in management of patients who become suddenly and seriously ill, regardless of the admitting specialty. The importance of Anaesthesia and Critical Care in this regard is evident in a number of recently published sets of guidelines, to which the CCP, the NCPA and individual anaesthetists made major contributions.

Guideline for the Critically Ill Woman in Obstetrics
www.hse.ie/obsgynae/ and click on Programme Guidelines
For pregnant or recently pregnant women, level 3 critical care utilisation rate is reliably given as 0.2% to 0.3%. but the need for lever 2 care is difficult to assess and may be as high as 5%. Level 2 care is often provided on site at the maternity unit and clear minimum standards have now been set down. The Guidelines emphasise the importance of early detection of illness (I-MEWS) clear communication of information (ISBAR), a multidisciplinary care plan and minimum standards for the safe transfer to level 3 care.

Resuscitation of the Pregnant Woman
www.hse.ie/obsgynae/ and click on Programme Guidelines
Cardiac arrest in the pregnant woman is thankfully a rare event, estimated at 1:20,000 to 1:30,000 pregnancies. The annual birth rate in Ireland is just over 70,000. CPR in the pregnant woman is almost identical to the non pregnant including the defibrillation energy requirement but should be performed with the mother in a left tilt position or with left uterine displacement (LUD) to avoid caval compression by the gravid uterus. Delivery of the foetus should be performed as soon as possible if return of spontaneous circulation has not occurred 4 minutes after the onset of cardiac arrest. If vaginal delivery is not possible, perimortem caesarean delivery is required. In one large US study 58.9% of those who suffered maternal cardiopulmonary arrest survived to hospital discharge.

Sepsis Management: National Clinical Guideline No 6.
www.hse.ie/sepsis/
This Guideline was commissioned by the National Clinical Effectiveness Committee at the request of the minister for Health and its Guideline Development Group was chaired by Dr. Vida Hamilton, National Sepsis Lead. Using the ADAPTE process, the Guideline Development Group recommends the Surviving Sepsis Campaign Guideline and the Sepsis 6 bundle as the guide to the management of sepsis in Ireland. HIPE data for 2013 indicate that almost 9,000 hospital patients had a diagnosis of sepsis and accounted for over 220,000 bed days. The Guideline contains numerous flow charts and algorithms and deals with all aspects of sepsis including Screening, Resuscitation and special considerations in Paediatrics and there is a YouTube link to a Question & Answer session given by Dr. Hamilton.

Transport Medicine Update

The Report of a Working Sub Group of the Critical Care and the Anaesthesia Programmes on the provision of Inter Hospital Retrieval/Transport of Critically Ill Adult Patients was completed and delivered to the HSE in 2012. The remit of the report was to assess ways of providing a National service for inter hospital transfer and retrieval of critically ill adult patients and to support the development of the new Model 2 Hospitals. The report set out four options for providing a National Retrieval Service, declared its preference, discussed staffing, funding, projected activity, the type of patients that would require the service and support measures that would enhance the safety of Model 2 Hospitals. The report also dealt with Governance, Training, Standardisation of Equipment and a National Critical Care Bed Bureau. On foot of the report a substantial sum of money was made available (€4.5M) by Government and a steering group was set up, chaired by Dr. Jeff Perring to oversee the development of Retrieval for neonatal, paediatric and adult patients.

A significant change to the original report is that that adult retrieval teams will be based at just three locations (Cork, Galway and Dublin) instead of the Hub hospitals of the Hospital Groups. Sadly however we also report the passing of Dr. Geoff King, Clinical Lead of the NTMP, who died late last year after a short illness. The current interim Lead for the NTMP is Dr. John McAdoo and Dr. Rory Dwyer is the interim Clinical Lead for Adult Retrieval. Despite availability of funding, (0.5WTEs) this post has not yet been filled.

The retrieval service for critically ill neonates is leading the way with **The National Neonatal Transport Programme** , **NNTP,** now providing a 24/7 service based on the three Dublin maternity hospitals, the Coombe, National Maternity and Rotunda Hospitals. The service is for critically ill neonates and infants up to six weeks of age and the retrieval team includes a neonatal nurse, neonatal registrar, ambulance driver, para medics as well as an NNTP engineer and air crew when required. The service is supported by a fulltime NNTP consultant, Dr.Jan Franta, a consultant neonatologist. Last year the programme carried out 546 retrievals of critically ill infants. 60% of these were from outside Dublin and all of the paediatric and maternity units in the Country availed of the service with a minimum of 5 calls per unit. 98% of the retrievals were by road using the dedicated and specially equipped ambulance. The programme has a hotline number 0818 300 188 and its web site, www.nntp.ie carries extensive information about the programme, how it operates and how to access the services.
As Ann Bowden, the National Coordinator of the programme points out, the service begins immediately the phone call requesting a retrieval is received with expert advice and assistance about treatment, stabilisation and preparation for transport. The NNTP also has a long established Outreach Education Programme.

The National Paediatric Critical Care Retrieval Service commenced last October on a pilot phased basis. The service will be known as the Irish Paediatric Acute Transport Service, **IPATS**, and the initial pilot phase will last for six months at which point the feasibility of expanding the service to 7 days per week and then a full 24/7 will be assessed.

The service is for critically ill infants and children aged between six weeks and 16 years and currently operate Monday to Friday between the hours of 10am and 8pm
The IPATS retrieval team is supported by an IPATS consultant and includes a paediatric intensive care nurse, a paediatric anaesthetic registrar and a dedicated and specially equipped ambulance. The service supports the transfer of critically ill infants and children to the paediatric intensive care units at Temple Street Children's University Hospital and Our Lady's Children's Hospital, Crumlin. The National Clinical Lead for IPATS is Dr. Dermot Doherty, Consultant Intensivist at Temple Street and Crumlin hospitals, and the National Paediatric Retrieval Coordinator is Ms Ann McCabe. The IPATS phone number for advice and referral information is 1890 213 213 and the web site www.picu.ie includes a link to the paediatric critical care network. Since the service began, it has undertaken 45 retrievals. As with the NNTP, discussions about a referral take place on a consultant to consultant level and commence with advice and assistance about stabilisation and preparation for transfer. The service also provides an Outreach Programme of Education and Training for all staff who may be involved in the transfer of critically ill infants and children. The programme has been delivered at a number of hospitals around the Country and has been hugely successful.

The Mobile Intensive Care Ambulance, MICAS, which commenced operating in 1996, remains the corner stone of transfer and retrieval services for critically ill adult patients. The service is based in four Dublin hospitals, (Beaumont, Tallaght, St Vincent's University Hospital and the Mater University hospital) and operates on a weekly rotational basis between the hours of 8am and 5pm, Monday to Friday. Every year the MICAS conducts approximately 70 transfers. From 2011 to 2014, 39% of MICAS transfers were from Regional hospitals to the Dublin University hospitals, 30% Dublin to Dublin and 28% Dublin to Regional centres with a small number of Regional to Regional transfers. It has been difficult to expand the adult service beyond the existing MICAS service, primarily because of the difficulties with staff recruitment being experienced throughout all disciplines in Critical Care. Beaumont and the Mater Hospitals have agreed to expand the existing MICAS services to the weekends and this will be implemented in July subject to recruitment of Registrars. The callout mechanism for the MICAS service has recently been simplified to a single phone number in Ambulance Control **021 4640094.**
Discussions continue with Cork and Galway and with other centres in relation to formal implementation of Adult Retrieval Programmes in these centres. Obviously a large volume of adult transfers take place already; our aim is to reduce the pressure on Anaesthesia and Critical Care Departments who provide this and to provide a service with standardised training, SOPs and audit. A Multidisciplinary Training Day is planned for July 2015 and work is proceeding on the drafting of national standards for equipment, procedures, protocols and governance structures.
The recently appointed National Coordinator, Anna Marie Murphy is optimistic for the future and points to the enthusiasm with which a planned series of study days has been received. Ms Murphy has also started a prospective audit of transfers from Model 2 to Model 3 and Model 4 hospitals. Initial impressions suggest that the numbers may not be very high as a result of appropriate patient selection at the new Model 2 hospitals. An audit of transfers from Model 3 to Model4 hospitals is also planned.

National Clinical Strategy and Programmes Directorate:
Critical Care Programme: What about Nutrition?

Carmel O'Hanlon, Clinical Specialist Dietitian, Beaumont Hospital.

Introduction:

There Critical Care National Clinical Programme launched a Model of Care for Adult Critical Care in October 2014. This programme defines the critical care delivery, training and education, workforce planning, audit, clinical guidelines and the clinical governance structures needed to improve critical care service quality and safety in Ireland.[1] Nutrition support is a key element of this care. Evidence-based nutrition support guidelines and individualised care plans play a significant role in optimising the nutritional management of each patient who requires nutrition support in ICU, thus improving patient outcomes and reducing health care costs[2].

Critical Care Programme (CCP) Nutrition Support Guidelines:

A multidisciplinary group worked on developing guidelines for Irish ICUs bringing together International evidence-based and best practice guidelines and succinctly presenting these in a guideline document, with a reference document to support this.

A subgroup of DATHS ICU dietitians worked together to formulate initial drafts of guidelines. **See figure 1 for process used to develop guidelines.**

Stakeholders consulted during this process include:

- ICU dietitians nationally through the Irish Nutrition and Dietetic Institute (INDI).
- Pharmacy CCP representative, and the Pharmacy Society of Ireland (PSI).
- Speech and Language Therapy CCP liaison, and the Irish Association of Speech and Language Therapists (IASLT).
- CCP Clinical Lead and the Intensive Care Society of Ireland (ICSI).
- Nursing members of CCP Working Group.
- Therapy Managers Advisory Group (TMAG); Irish Nutrition and Dietetics Institute (INDI); INDI Workforce Planning Committee; Therapy Professions Committee (TPC); Therapy Professions Advisor.

The guidelines consist of two process algorithms for nutrition support:

- Process 1: Enteral Guideline.
- Process 2: Potential Nutrition Guideline.
- Notes section:
    1. Nutritional screening.
    2. Referral to die titian.
    3. Confirming enteral feeding tube position.
    4. Feed type and administration guidelines.
    5. Post-pyloric feeding.
    6. Inform Pharmacist.
    7. Refeeding syndrome.
    8. Recommended macronutrient requirements.

These guidelines are supported by a reference document – **see table 1 for contents**

Conclusion: Critically ill patients are at high risk of experiencing complications of nutrition support. An integrated approach is therefore essential.[2] The CCP Nutrition Support guidelines outline a pathway for optimal nutritional management of critically ill adult patients in Ireland. Clinical judgement and multidisciplinary discussion of individual cases is essential. These guidelines do not replace, but encourage, the use of local evidence-based guidelines and protocols. The nutrition support algorithms and reference document are now fully approved and are available on the CCP, INDI and IrSPEN (Irish Society for Clinical Nutrition and Metabolism) websites for ICU staff nationwide to support development of local guidelines and protocols, and to guide practice.

References:

1. National Clinical Programme for Critical Care, 2014: *Model of Care for Adult Critical Care*. Dublin: Health Service Executive.

2. O'Hanlon C, Dowsett J, Smyth N. Nutrition assessment of the intensive care unit patient. *Top Clin Nutr* 2015: 30:47-70.

Figure 1: Process used for CCP Nutrition Support Guideline development

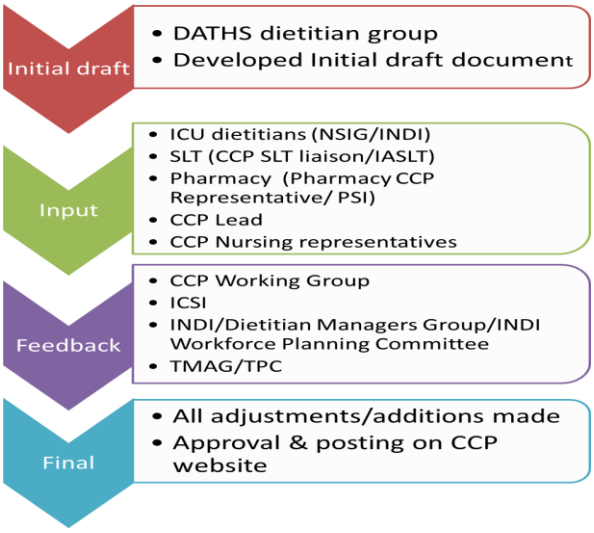


Table 1: Contents of CCP Nutrition Support Guideline Reference document

Introduction	Rationale for nutrition support Goals of nutrition support
Impact of an intensive care dietitian	Better achievement of nutritional targets Better ICU performance with nutrition
Assessment and requirements	Screening Assessment Requirements
Feeding the malnourished patient	Refeeding syndrome definition and effects Identifying refeeding risk Strategies to use when refeeding
Nutrition support provision: Enteral nutrition	Enteral feeds Glutamine Bowel sounds Gastric aspirate volumes Confirming feeding tube position Feed administration Feed rate Strategies to improve tolerance Post-pyloric feeding
Nutrition support provision: Parenteral nutrition	Access Glutamine Fish oils
Other considerations	Glycaemic control Feeding the obese Additional micronutrients Common infusions: nutritional implications Monitoring Swallow assessment and SLT input
References	86 references

Acknowledgements:

DATHS ICU dietitians: Nicola Dervan, Deirdre McCormack, Lisa Shanahan, Niamh Smyth; Dr. Michael Power, Clinical Lead, & ICSI; Damodar Solanki, Pharmacist Representative on CCP, & PSI; Maeve Murphy, SLT liaison for CCP, & IASLT; CCP Working Group; Irish intensive care dietitians; INDI Senior Management Team; Dietitian Managers Group; Nutrition Support Interest Group (NSIG) of INDI; INDI Workforce Planning Committee; Emma Benton (Therapy Professions Advisor); TPC; TMAG; Beaumont's Department of Nutrition and Dietetics; Beaumont's ICU Team.

National Adult Critical Care Bed Capacity- 2014 Census

On the behalf of HSE operations, Marian Wyer, Nursing & Midwifery Planning & Development Officer (NMPD) and Una Quill, Programme Manager for Critical Care Programme complete an annual Census and collate each hospital's critical care (ICU and HDU) bed capacity and staffing (medical and nursing) establishment. The Census, tabulated below, reports critical care bed capacity (bed stock), as at 30th April 2014.

As part of Census procedure, each hospital's Census return is verified locally and countersigned by the hospital's CEO, Director of Nursing, Clinical Director and ICU Director. This co-signed individual hospital critical care capacity report is collated centrally on behalf of operations by CCP. Each return is reconciled with existing figures and thus validated by CCP's Census Working Group and subsequently forwarded to Acute Hospitals' Directorate, Operations, HSE Management and Leadership Teams and the Director General for final approval and dissemination. Thus the annual adult national critical care (ICU and HDU) commissioned bed capacity is ascertained.

National Standards for Adult Critical Care Services 2011
Joint Faculty of Intensive Care Medicine of Ireland (JFICMI)

The *National Standards*, the Office of Nursing and Midwifery Services Directorate (ONMSD), HSE and the Therapy Professionals Group, HSE define the medical, nursing and therapy professional staff requirements to commission a Critical Care Service. Accordingly, ONMSD has advised the critical care nursing staff workforce requirement to commission a Level 3 ICU bed and a Level 2 HDU bed is 5.6 x WTE and 2.8 x WTE, respectively, at the least.

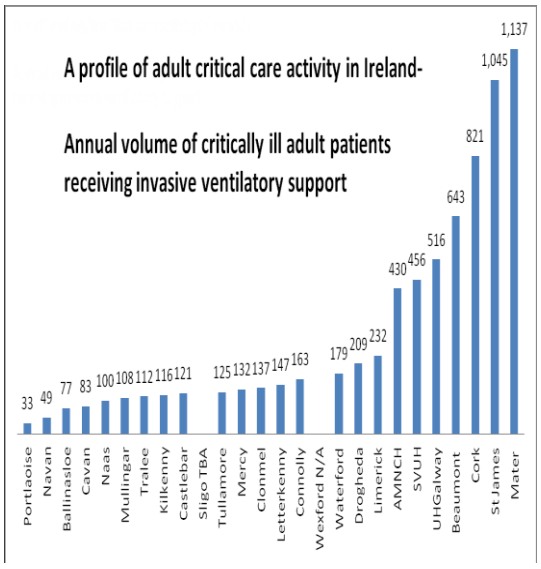
** "Critical care bed capacity variance from 2012- 2014". Following the Employment Control Framework (ECF) set out in the employment Moratorium Circular in 2009, a HSE acute hospital capacity benchmark was set in 2012. In June 2014, critical care staffing was exempted from ECF by Dr T O'Connell, Acute Hospitals Director in correspondence. The variance measure reported here refers to commissioned critical care bed capacity which was in place in 2012 but is currently not now ordinarily available to admit a critically ill patient. Accordingly this variance measure refers to critical care capacity- commissioned, not available.

*** '8(+1)'. On 30/4/14 Richmond ICU at Beaumont Hospital had 8 commissioned neurocritical ICU beds available. Subsequently in Q2 2014 a 9th commissioned ICU bed became again available resulting currently in a complement of 9 neurocritical ICU beds, commissioned and available.

**** 'Decommissioned critical care capacity (since 2008)'. In 2009 the HSE/*Prospectus* Report was published. The Report proposed a 'hub-and-spoke' critical care delivery framework subsequently adopted by the Critical Care Programme as its Critical Care Model. In line with the subsequent HIQA 'Ennis', 'Mallow', 'Tallaght' and 'Galway' Reports and in line with DH *Smaller Hospital Framework* and the 'Higgins' Report, the Critical Care Programme has supported the decommissioning of the ICUs at Dundalk, Monaghan, Roscommon, Merlin Park Galway, St John's Limerick, Ennis, Nenagh, Bantry, Mallow, South Infirmary Victoria Hospital, St Columcille's Loughlinstown and the redeployment of critical care staff resources to the corresponding central or 'hub' hospitals. Thus, in line with the many ongoing HSE acute healthcare sector reforms, critical care service delivery reorganisation has improved the overall quality and safety of critical care service provision for critically ill patients and has contributed to the overall transformation of acute healthcare delivery in Ireland.

Critical Care Activity Profile, requested by Acute Hospitals Directorate, June 2014

In 2014, the Acute Hospitals Directorate requested a profile of critical care activity in all adult ICUs in Ireland using the comparator- invasive ventilatory support. This estimate reports approximately 6,876 critically ill adult patients receive invasive ventilatory support in Ireland each year. It should be noted the measure is a crude comparator as non-invasive ventilatory support and other invasive organ supports (e.g. continuous renal replacement therapy, pharmacologic and mechanical circulatory supports, nutritional supports etc.) are also delivered to critically ill patients and for long durations in ICUs in Ireland. The National Critical Care Audit, National Office of Clinical Audit (NOCA) will, on commencement in due course, provide accurate and comprehensive critical care activity and outcome data and information. In summary, the 10 central hospitals deliver 79% of critical care activity in Ireland with the remaining 14 hospitals delivering 21% of activity (with no activity data available for 2 hospitals). There is a thirty five-fold variance in the range of activity across hospitals. However, the same resource input is required out-of-hours for a critical care activity output of either 33 patients or 1,137 patients (iso-resource). In other words, 5-7 Junior Doctor WTE posts are required to provide one on-site 24/7/52 service roster in an acute hospital. Assuming at least as many critically ill patients (or more) require Level 2 Critical Care support, an estimate of between 10,000 and 15,000 critically ill adult patients require critical care each year in Ireland. This activity finding contrasts with the HSE/*PA Consulting* 2007 report *Acute Hospital Bed Capacity Review: A Preferred Health System in Ireland to 2020* (p87) that projected a demand for 3,703 critically ill patients for the year 2014- a just under 50% underestimate.



Critical Care Bed Capacity Census 30th April 2014	*Level 3s ICU Beds 2014	*Level 3 ICU beds 2014	*Level 2 HDU beds 2014	Critical Care Bed Capacity 2014	**Critical care capacity variance from 2012 to 2014	Critical Care Bed Capacity 2013	Critical Care Bed Capacity 2012	Critical Care Bed Capacity 2011	Critical Care Bed Capacity 2008	Critical Care Capacity variance Plus Since 2008	Critical Care Capacity variance Minus Since 2008
Dublin North-East											
Cavan Hospital ICU		2	2	4		4	4	4	5		-1
Drogheda ICU		5	4	9	+1 bed	8	8	8	6	3	
Beaumont General ICU		8		8	-1 bed	8	9	9	10		-2
Beaumont Neuro ICU	8			8(+1)***	-1 bed	9	10	10	10		-2
Connolly ICU		4		4	-1 bed	4	5	5	5		-1
Dublin East											
Mater ICU/HDU	16		11	27	-2 beds	28	29	28	30		-3
Navan ICU		2	2	4		4	4	4	4		
Mullingar ICU		4	2	6		6	6	4	2	2	
St Vincents ICU/HDU		9	6	15	+4 beds	15	11	13	8	7	
Wexford ICU		5		5		5	5	5	5		
Kilkenny ICU		4		4	- -3 beds	4	7	4	4		
Dublin Midland											
Naas ICU		4		4		4	4	4	4		
Portlaoise ICU		2		2		2	2	2	4		-2
Tullamore ICU		4		4		4	4	4	4		
AMNCH Tallaght ICU		9		9		9	9	9	9		
AMNCH Tallaght PACU/ICU/HDU			5	5	+2 beds	2	3	2	0	5	
St James Burns ICU	1			1		1	1	4	4		-3
St James Cardiothoracic ICU/HDU	6			6		10	6	4	4	2	
St James HDU/ICU		17	4	21	+1 bed	21	20	20	19	2	
South South-West											
Cork Cardiothoracic ICU	6		0	6		6	6	5	6		
Cork General ICU		9	0	9		8	9	9	10		-1
Mercy ICU		5		5		5	5	5	6		-1
Clonmel ICU		4	3	7	-1 bed	4	8	8	5	2	
Waterford ICU/HDU		5	0	5	-1 bed	6	5	6	6		-1
West North-West Hospital Group											
Letterkenny ICU		5		5		5	5	5	5		
Mayo ICU		2	2	4		4	4	4	4		
Sligo ICU		5		5		5	5	5	5		
Galway Cardiothoracic ICU	3			3	-1 bed	2	4	4	6		-3
Galway General ICU/HDU		10	6	16	+1 bed	15	15	14	12	4	
Ballinasloe ICU		2	2	4		4	4	4	4		
Mid-West Hospital Group											
Mid-West Regional Hospital Limerick General ICU/HDU		7	6	13	No beds	13	13	7	13		20
****Decommissioned critical care bed capacity (since 2008)											
St. John's / Ennis / Nenagh					-11 beds				11		-11
Roscommon/Merlin Pk					-5 beds				5		-5
Bantry/Mallow /South - VicUH					-13 beds				13		-13
Dundalk/Monaghan					-3 beds				3		-3
SCH Loughlinstown					-3 beds				3		-3
Totals				**234**				**POS 27**	**NEG 55**		