



**CRITICAL
CARE**



Building a Better Health Service

CARE COMPASSION TRUST LEARNING



**National Clinical &
Integrated Care Programmes**

Person-centred, co-ordinated care

NATIONAL ADULT CRITICAL CARE CAPACITY AND ACTIVITY CENSUS 2016,

HSE Acute Hospitals Division

Critical Care Programme

Saolta Hospital Group					5			
Letterkenny Hospital ICU		5		5			5	5
Ballinasloe Hospital ICU		2	2	4		1		
Castlebar Hospital ICU		2	2	4			4	4
Sligo Hospital ICU		5		5	1	1	5	5
University Hospital Galway Cardiothoracic ICU	4			4	2		4	6
University Hospital Galway General ICU/HDU		9	8	17	2		17	12
University of Limerick Hospital Group								
University Hospital Limerick ICU/HDU		8	8	16	0	12	16	13
TOTAL				237	22*	72	234	255
Decommissioned Critical Care Bed Capacity since 2008 **								
St. Johns/Ennis/Nenagh								11
Roscommon/Merlin Park								5
Bantry/Mallow/SouthVicUH								13
Dundalk/Monaghan								3
Loughlinstown								3
								Total ICU Capacity De-commissioned 35

Table. CRITICAL CARE BED CAPACITY CENSUS AT 30TH SEPTEMBER 2016

*** ‘Commissioned Critical Care Beds (funding allocated, not operational) 2016’**

The Hospitals and the Hospital Groups in their Census returns report there are 22 adult critical care beds in Ireland- fully funded, not operational. The Hospital Group CEOs have approved an integrated Critical Care Nursing Workforce Planning Education and Training initiative, *Career Pathway*, currently operated by Hospital Groups and facilitated by CCP.

**** ‘Decommissioned critical care capacity (since 2008)’**

The HSE/*Prospectus* Report was published in 2009. The Report proposed a ‘hub-and-spoke’ critical care delivery framework subsequently adopted by the Critical Care Programme as its Critical Care Model of Care. In line with the subsequent HIQA ‘Ennis’, ‘Mallow’, ‘Tallaght’, ‘Galway’ and ‘Portlaoise’ Reports and in line with DH *Smaller Hospital Framework* and the ‘Higgins’ Report, Critical Care Programme has supported the HSE decommissioning of the ICUs at Dundalk, Monaghan, Roscommon, Merlin Park Galway, St John’s Limerick, Ennis, Nenagh, Bantry, Mallow, South Infirmary Victoria Hospital, St. Columille’s Loughlinstown- 11 ICUs- conditional on redeployment of critical care staff resources to the corresponding receiving central or ‘hub’ hospitals. Thus, in line with the ongoing HSE acute hospital system transformation, there has been centralization of critical care service provision for critically ill patients. However there remains a capacity gap of 22 adult critical care beds in Ireland- fully funded, not operational.

Critical Care Capacity Census 2016- methodology note

On the behalf of HSE Acute Hospitals Division, Critical Care Programme completes an annual Census and collates each Hospital’s critical care (ICU and HDU) bed capacity and staffing (medical and nursing) establishment as well as critical care activity profile measurement. Thus, the Census reports critical care bed capacity or bed stock (see table above) and critical care activity profile (see figure below), both as at 30th September 2016.

As part of Census procedure, each hospital’s Census return is verified locally and countersigned by the Hospital’s CEO, Clinical Director, Director of Nursing, ICU Director, ICU CNMIII, Hospital Group CEO, Chief Clinical Director and CDoN- eight signature verifications. This co-signed individual Hospital critical care capacity and activity profile report is collated, reconciled and validated centrally on behalf of AHD by CCP Census Working Group and subsequently approved by AHD for circulation. Thus the annual adult national critical care (ICU and HDU) commissioned bed capacity and activity profile is ascertained by Critical Care Census.

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

2. Critical Care Activity Census 2016

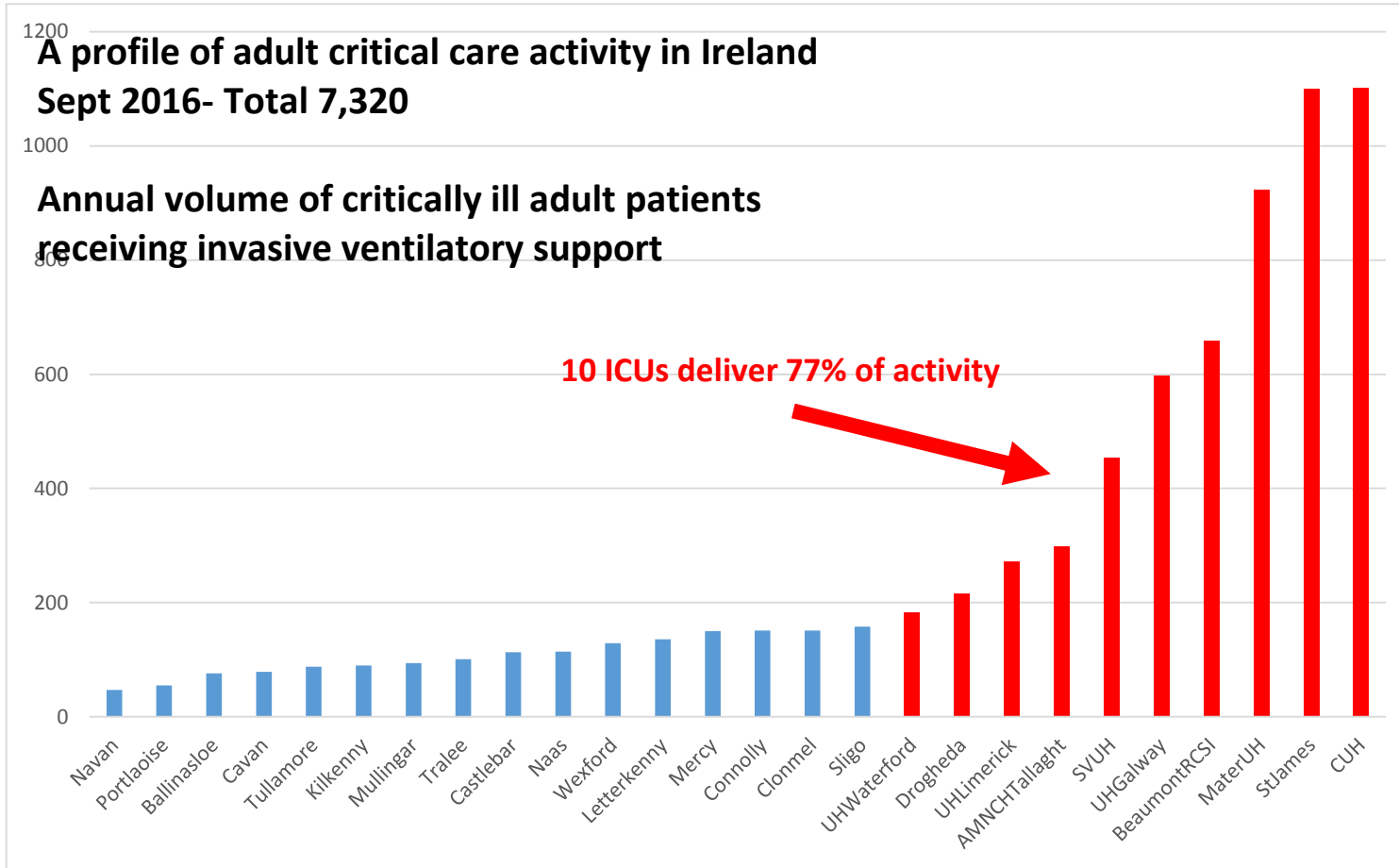


Fig. Critical Care Activity- A profile of adult critical care activity as at Ireland 30th Sept 2016- Annual volume of critically ill adult patients receiving invasive ventilatory support.

Annual critical care activity profile in Ireland

HSE Acute Hospitals Directorate requests an annual profile of critical care activity in all adult ICUs in Ireland using the comparator-invasive ventilatory support. CCP Census repeated this survey as part of Census 2016. This estimate reports just over 7,320 critically ill adult patients received invasive ventilatory support in Ireland in 2016. (It should be noted the measure is a crude comparator as noninvasive 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.) In summary, the 10 central hospitals deliver 79% of critical care activity in Ireland with the remaining 14 hospitals delivering 21% of activity.

Implication of the burden of adult critically ill patients with confirmed influenza

HSE/Health Protection and Surveillance Centre (HPSC) completes the annual ICU Influenza Surveillance Programme (adults and children) and has issued the report- *Brief Summary Report on the Enhanced Surveillance of Confirmed Influenza Cases in Critical Care–2015/2016 season*. In this past influenza season (2015/16), a total of 127 critically ill adults were admitted to ICU with confirmed influenza. Several patients were transferred to Mater Hospital for Extra-Corporeal Life Support (ECLS). The volume of 127 adult critically ill patients was a significant 133% increase over the previous years (2014/15) ICU volume. Of all these critically ill patients, adults and children, 47 patients died- all-cause mortality (29%). Of the adults, 89 (70%) were confirmed Influenza A(H1N1)pdm09. The late-season surge of Influenza A(H1N1) placed a burden on ICU capacity, a fact recorded in Ireland and UK. The late surge of Influenza A(H1N1) cases had an implication for all critically ill patients in Ireland at this time with access delays for critically ill patients arising from known ICU capacity deficits with the known implication that access delay adversely affects the outcome of the critically ill patient. This Influenza A(H1N1) surge confirms the need for increased ICU capacity provision.

Evidence iso-resource inefficiency

There is a twenty three (x23)-fold variance in iso-resource activity across the ICUs- the same resource input (iso-resource) is required out-of-hours for a critical care activity output of either 47 patients or for 1,101 patients pa. 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 ICU. Such high iso-resource consumption and very low activity output variance is inefficient. Similarly, comparison of the activity output and resource input of the 16 lower volume ICUs with the 10 higher volume ICUs shows an activity-resource disparity. The lower volume ICUs deliver 23% activity with 29% of resource while the higher volume ICUs deliver 77% activity with 71% of resource. Of note 6% of the workforce equates to approx. 81 WTE critical care staff nurse posts.

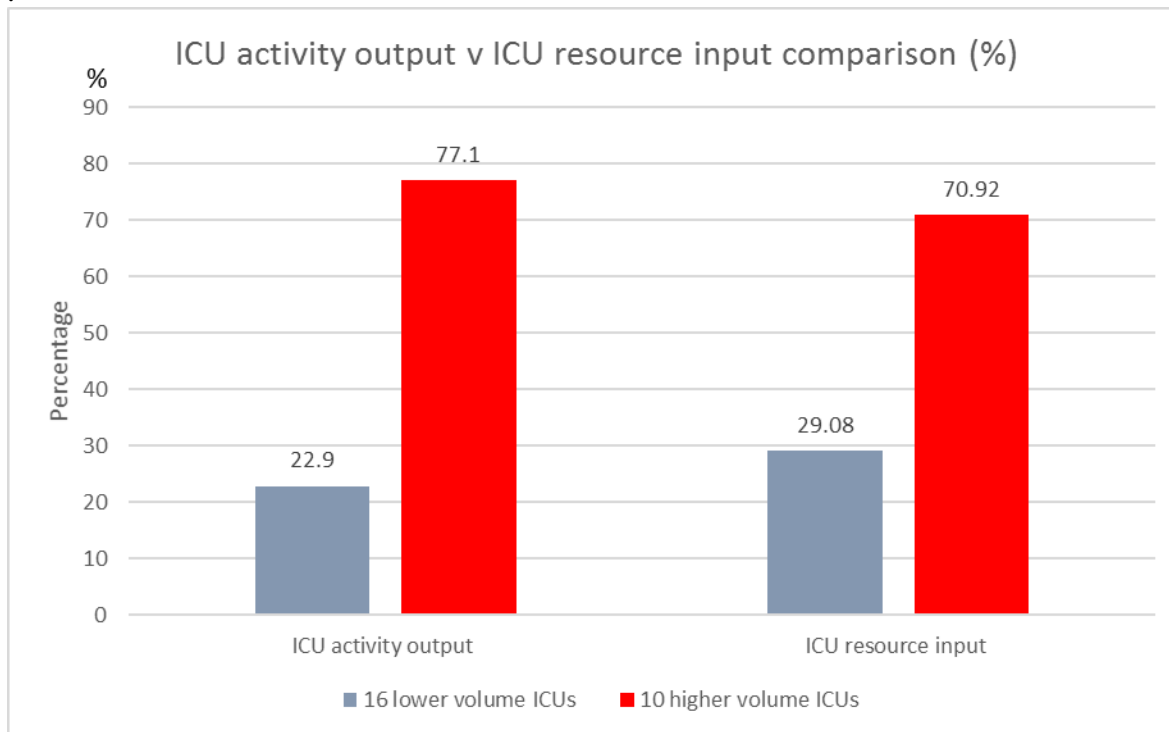


Table. Activity output v. resource input comparison.

Overall critical care activity in Ireland

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 in ICUs and HDUs each year in Ireland. In addition to outcome information, the National Critical Care Audit, National Office of Clinical Audit (NOCA) has the capability to provide critical care activity information. Critical Care Programme V1.2 8/2/17.