RCOA
Royal College of Anaesthetists

WINTER SYMPOSIUM
3–4 December 2020

COVID-19 Chair: Dr Jamie Strachan

What Intensive Care Medicine has learned
Dr Alison Pittard OBE

PPE
Professor William Harrop-Griffiths

Risks to healthcare workers
Professor Tim Cook

COVID-19
What ICM has learned

Alison Pittard

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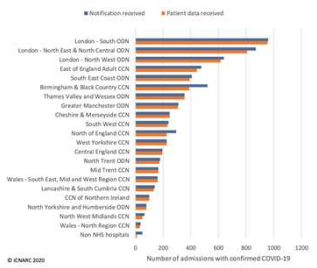
- Easter peak 11/12.4.20
  - 6500 admissions
    - 5800 over a 2week period
  - Geographical variation



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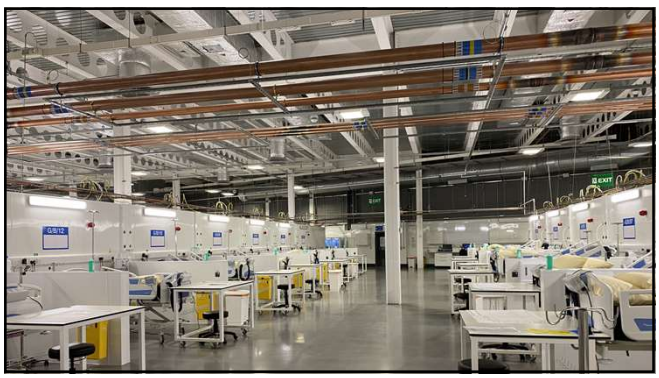
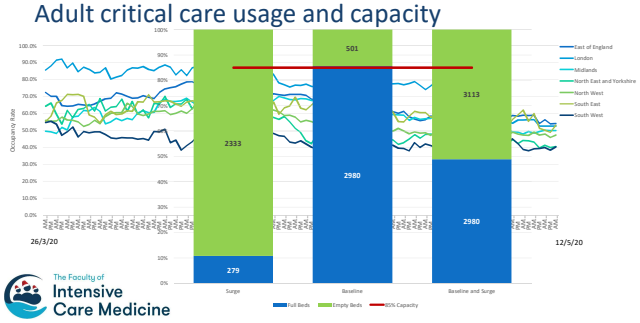


Adult critical care usage and capacity



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AM	Baseline beds	2738	L3	787	L2
Wednesday, 2 December 2020	Bed Numbers	Covid Status	No of Patients	Ventilation	No of Patients
Beds within ACC	3698	Covid+	1278	CV+/Suspected Invasive	837
Surge Beds	840	Suspected	95	Non-Covid Invasive	829
Beds up in 48 hrs	515	Non-Covid	1907	CV+/Suspected Non-Invasive	245
Full Beds	3280			Non-Covid Non-Invasive	150
				CV+/Suspected HFNO	173
Declared available beds	384			Non-Covid HFNO	150
Occupancy	88.7%	Calculate bed occupancy against	Beds within ACC	CV+/Suspected (Other)	118
Amber = > 75%				Non-Covid (Other)	778
Red = > 85%					

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#BetterTogether: The Critical Care Team

This document has been created by the Faculty of Intensive Care Medicine and endorsed by the Royal College of Surgeons of England, to support local providers in identifying the training needs and available resources to support deployment of other medical staff groups (e.g. surgical staff) into critical care areas.

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One million operations delayed by staff shortages

Warning that NHS vacancies will add to lengthy waiting lists

EXCLUSIVE
SHAUN LINTERN
HEALTH CORRESPONDENT

More than 1 million patient operations could be delayed because of widespread shortages of anaesthetists in the NHS – with nine out of 10 hospitals reporting at least one vacancy. More than 140,000 NHS patients have already had their surgery cancelled. The Health Foundation has warned 4.7 million fewer patients have been referred for treatment because of the impact of coronavirus. The Royal College of Anaesthetists told *The Independent* the scale of the vacancies is getting "worse by the month" and a "workforce disaster" that could cost patients' lives and have a widespread impact on hospital services.

NHS patients at risk as ICUs routinely understaffed, doctors warn

Exclusive: Four out of five UK intensive care consultants say their unit is stretched by shortage of doctors and nurses

- Coronavirus - latest updates
- See all our coronavirus coverage

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Initial impact

- Mortality in ARDS = 25-40%
- Mortality in COVID = 50%
  - Advanced resp support = 65%
  - Basic resp support = 18%
- Mortality in non COVID pneumonia
  - Advanced resp support = 34%
  - Basic resp support = 11%

Intubate Early

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A still from footage inside a hospital in Bergamo, Italy, broadcast by Sky News on March 19. Sky News

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- NIV : improves
  - V/Q matching
  - Intrapulmonary shunt
  - Compliance and respiratory load
- HFNO : improves
  - Dead space
  - +ve press reliant upon nasal flow and mouth opening
  - Natural humidification

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2 April 2020

Coronavirus: London hospital almost runs out of oxygen for Covid-19 patients

Incident at major hospital raises fears over pressure on supplies during pandemic

See all our coronavirus coverage

8 Nov 2020

GRASPING FOR AIR Covid – Lincolnshire hospital declares major incident as surge in coronavirus patients hits oxygen supplies

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Table 13. Critical care outcome, duration of critical care and organ support

	Patients with confirmed COVID-19 and outcome received	
Critical care outcome	**Admitted from 1 Sep (N=5773)**	**Admitted up to 31 Aug (N=10,916)**
Outcome at end of critical care, n (%)		
Discharged	2700 (46.8)	6610 (60.6)
Died	1527 (26.5)	4304 (39.4)
Still receiving critical care	1546 (26.8)	2 (0.0)
Duration of critical care	**(N=4220)**	**(N=10,908)**
Duration of critical care (days) †, median (IQR)		
Survivors	5 (3, 9)	12 (5, 28)
Non-survivors	10 (4, 15)	9 (5, 16)
Organ support (Critical Care Minimum Dataset) *	**(N=4176)**	**(N=10,910)**
Receipt of organ support, at any point, n (%)		
Advanced respiratory support	1631 (39.1)	7866 (72.1)
Basic respiratory support only	2368 (56.7)	2779 (25.5)

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These data derive from the ICNARC Case Mix Programme Database. The Case Mix Programme is the national clinical audit of patient outcomes from adult critical care coordinated by the Intensive Care National Audit Research Centre (ICNARC). For more information on the representativeness and quality of these data, please contact ICNARC.

29 May

Critical care outcomes among patients who have been discharged or died	Patients with COVID-19 and outcome reported (N=8062)	Patients with viral pneumonia (non-COVID-19), 2017-19 (N=5626)
Outcome at end of critical care, n (%)		
Discharged	4579 (56.8)	4423 (78.6)
Died	3483 (43.2)	1203 (21.4)
Length of stay		
Length of stay in critical care (days), median (IQR)		
Survivors	11 (4, 22)	6 (3, 13)
Non-survivors	9 (5, 15)	6 (3, 13)
Organ support (Critical Care Minimum Dataset) *		
Receipt of organ support, at any point, n (%)		
Advanced respiratory support	5761 (72.2)	2721 (48.4)
Basic respiratory support	5148 (64.4)	4527 (80.5)
Advanced cardiovascular support	2277 (28.5)	1261 (22.4)
Basic cardiovascular support	7385 (92.4)	5219 (92.8)
Renal support	2011 (25.2)	957 (17.0)
Liver support	68 (0.9)	53 (0.9)
Neurological support	605 (7.6)	320 (5.7)

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Died	1527 (26.5)	4304 (39.4)	1203 (21.4)
Still receiving critical care	1546 (26.8)	2 (0.0)	
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Survivors	5 (3, 9)	12 (5, 28)	6 (3, 13)
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Organ support (Critical Care Minimum Dataset) *	**(N=4176)**	**(N=10,910)**	
Receipt of organ support, at any point, n (%)			
Advanced respiratory support	1631 (39.1)	7866 (72.1)	2721 (48.4)
Basic respiratory support only	2368 (56.7)	2779 (25.5)	4527 (80.5)
No respiratory support	177 (4.2)	265 (2.4)	1261 (22.4)
Advanced cardiovascular support	676 (16.2)	3359 (30.8)	5219 (92.8)
Basic cardiovascular support only	3260 (78.1)	7089 (65.0)	957 (17.0)
No cardiovascular support	240 (5.7)	462 (4.2)	53 (0.9)
Renal support	513 (12.3)	2920 (26.8)	320 (5.7)
Liver support	25 (0.6)	114 (1.0)	
Neurological support	212 (5.1)	993 (9.1)	

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Treatment

- LMWH – 2x normal prophylactic dose
- WHO SOLIDARITY trial
  - Remdesivir – no measurable benefit in mortality or disease course
- RECOVERY trial
  - Dexamethasone – reduced mortality (on O_2/mechanical ventilation)
- RECOVERY/REMAP-CAP
  - Tocilizumab – ?positive benefit
- Vaccine – *Pfizer/AstraZeneca*

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Table 1. Patient characteristics: demographics

Demographics	Patients with confirmed COVID-19	
	Admitted from 1 Sep (N=5773)	Admitted up to 31 Aug (N=10,916)
Age at admission (years) [N=5768]		
Mean (SD)	61.0 (13.7)	58.8 (12.7)
Median (IQR)	62 (53, 71)	60 (51, 68)
Sex, n (%) [N=5768]		
Female	1772 (30.7)	3268 (30.0)
Male	3996 (69.3)	7642 (70.0)

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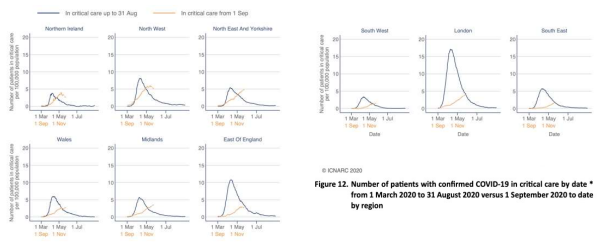

Figure 12. Number of patients with confirmed COVID-19 in critical care by date * from 1 March 2020 to 31 August 2020 versus 1 September 2020 to date by region

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1. Patient expectations
2. Purpose and structure
3. Governance
4. Workforce
5. Training and education
6. Performance and QI
7. Estates
8. Funding

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Sustainability and resilience – the new normal

- Individual
  - Wellbeing
  - Numbers
  - Training
    - Flexibility
    - Teamwork/collaboration
- Clinical
  - Drugs and vaccines
  - Patient and relative comms
  - Mutual aid
    - Transport services

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Sustainability and resilience – the new normal

- Organisation
  - Restoration
    - Covid/non covid pathways
    - Emergency preparedness
    - New ways of working?
- System
  - Digital
  - New clinical delivery model
  - Investment

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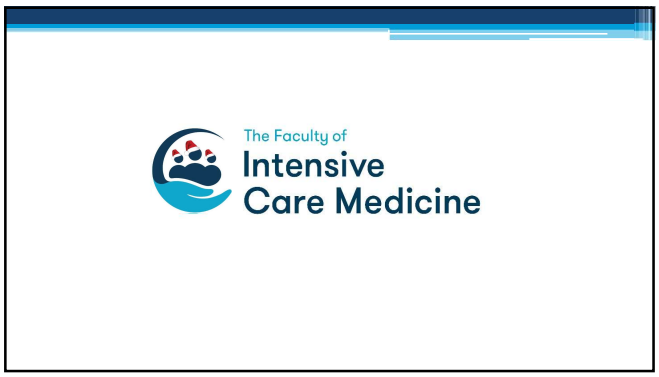
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