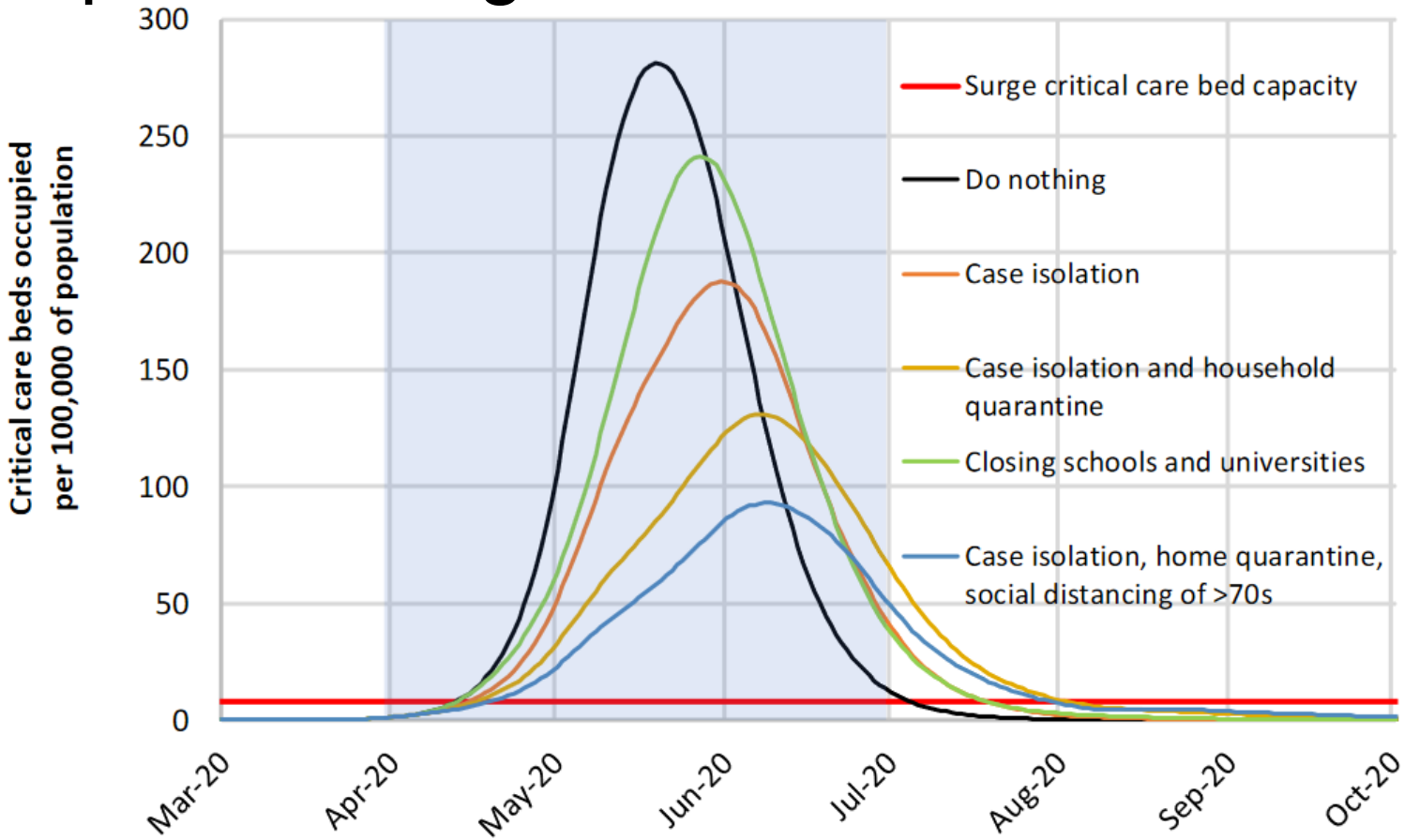
Background - ICU

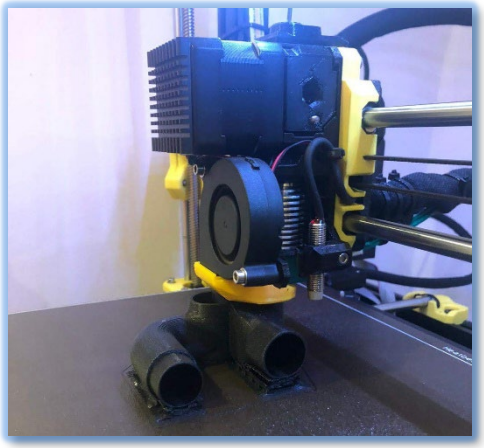
Bradford Teaching Hospitals
NHS Foundation Trust

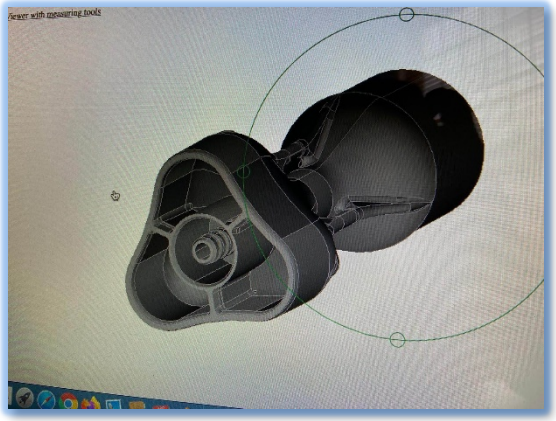
- Imperial College Model – ICUs overwhelmed



Innovation

Bradford Teaching Hospitals
NHS Foundation Trust





Background - CPAP

Bradford Teaching Hospitals
NHS Foundation Trust

- CPAP to improve outcomes
  - Qin Sun et al.
- Oxygen use

Lower mortality of COVID-19 by early recognition and intervention: experience from Jiangsu Province

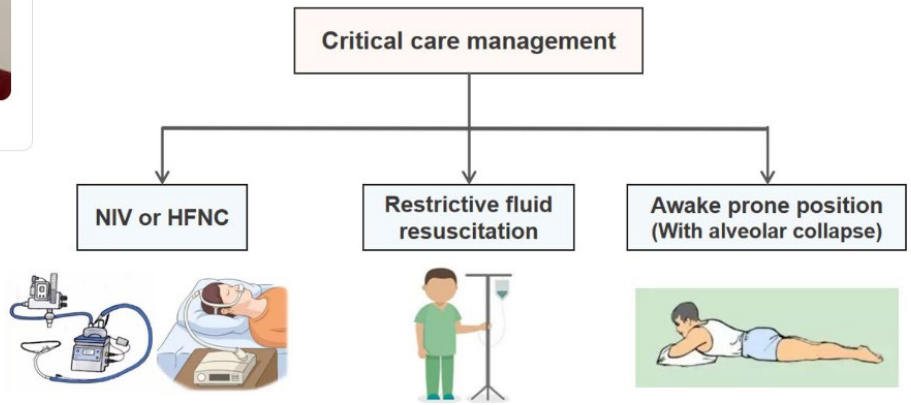
Qin Sun[1], Haibo Qiu[1], Mao Huang[2*] and Yi Yang[1*]

BBC

Coronavirus doctor's diary: 'Our hospitals weren't made to use this much oxygen'

And Dr Tom Lawton, one of our ingenious intensive care consultants, ... Airway Pressure (CPAP) but some of the hospital's CPAP machines ...

7 Apr 2020



Physiotherapists

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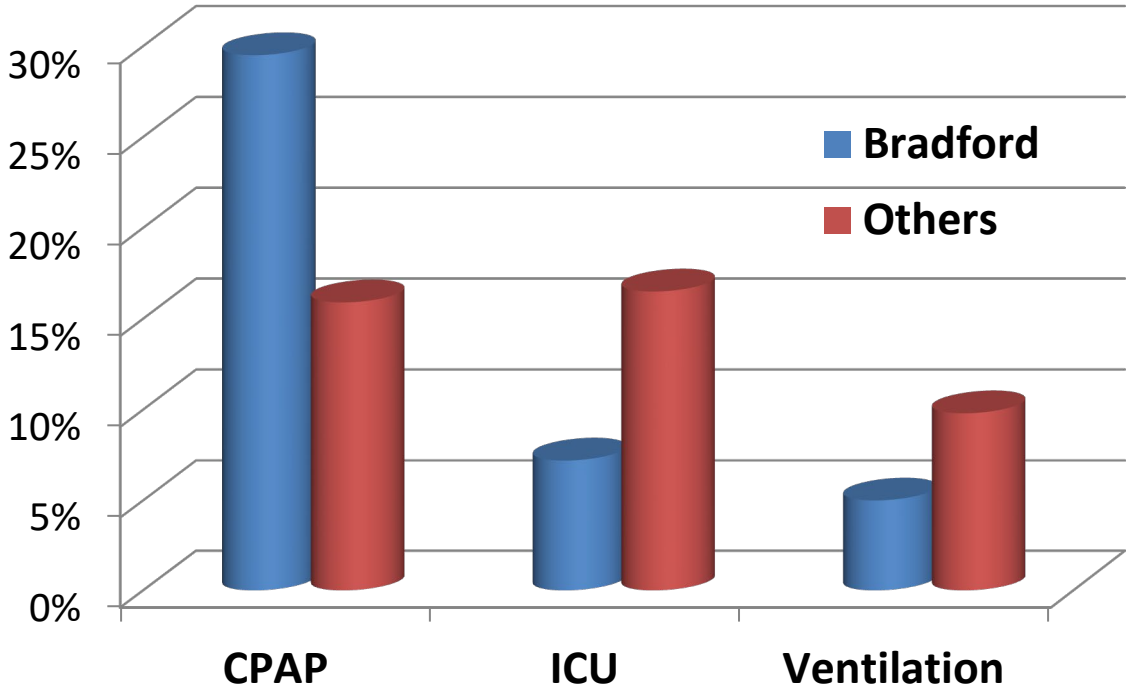
- Building “Team CPAP”
- Training and Support
- Managing Equipment

Outcomes

Bradford Teaching Hospitals
NHS Foundation Trust



- 2x as much CPAP
- Nobody who could benefit was denied it
- Less than ½ the use of ICU & ventilators

- ICU not overwhelmed!

Outcomes

Bradford Teaching Hospitals
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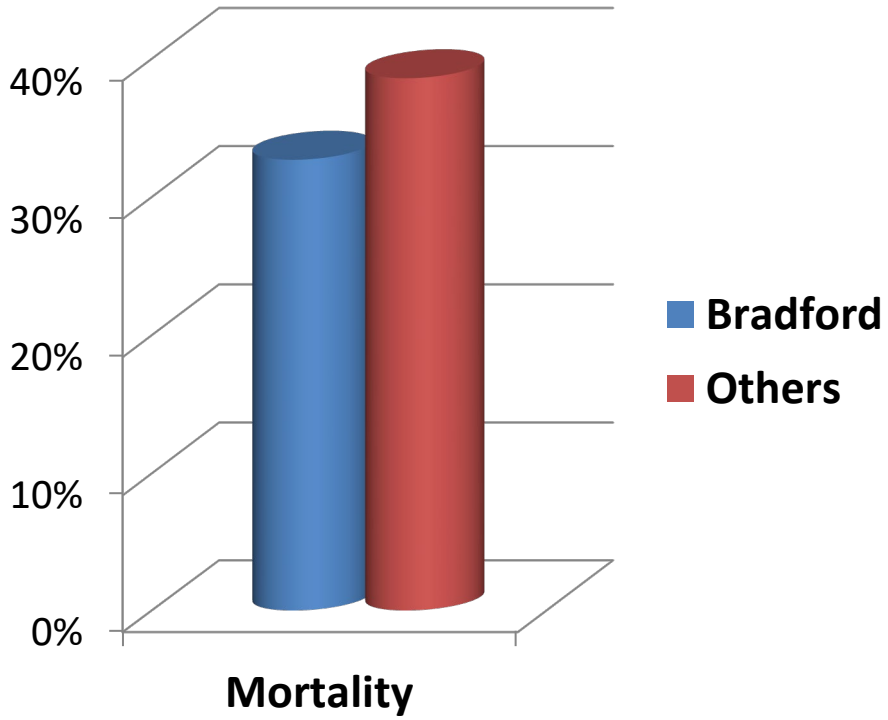

- Lower mortality despite a sicker population
- Successful transfer of Jiangsu's promise into an NHS model of care

After Wave 1

Bradford Teaching Hospitals
NHS Foundation Trust

- Promotion around the NHS
  - Contact from other hospitals around the world!
  - BBC & other press interest
  - Research paper read over 6,000 times

The BMJ
Cite this as: *BMJ* 2021;374:n1950
http://dx.doi.org/10.1136/bmj.n1950
Published: 4 August 2021

Covid-19: CPAP reduces need for invasive mechanical ventilation in patients requiring oxygen, study finds

Elisabeth Mahase

Continuous positive airway pressure (CPAP) reduced the need for invasive mechanical ventilation in adults admitted to hospital with acute respiratory failure due to covid-19, a trial has found.[1]

He said that the findings may be beneficial in systems with limited resources, such as oxygen.

The researchers noted a number of limitations to the

	Bradford patients	ISARIC patients	p
NIV use	29.5% (165 of 559)	15.9% (2670 of 16,805)	<0.0001
Critical care admission	7.2% (40 of 559)	16.5% (3001 of 18,183)	<0.0001
Intubation	5.0% (28 of 559)	9.8% (1658 of 16,866)	<0.0001
Hospital mortality	32.7% (183 of 559)	38.6% (5165 of 13,364)	0.005
Mortality for critical care patients	50% (20 of 40)	53.7% (958 of 1784)	NS
Median length of stay (IQR)	7 (3–14)	7 (unreported IQR)[36]	NS