



Northumbria Healthcare  
NHS Foundation Trust

THE  
**NORTHUMBRIA WAY**

PEOPLE CARING FOR PEOPLE

# COVID-19 Update

*Sir James Mackey, CEO*

# Introduction

- Reminder re what we were asked to do
- Our preparations
- How Covid:19 impacted on Northumbria
- Some tensions and issues
- Where we are now and what may lie ahead

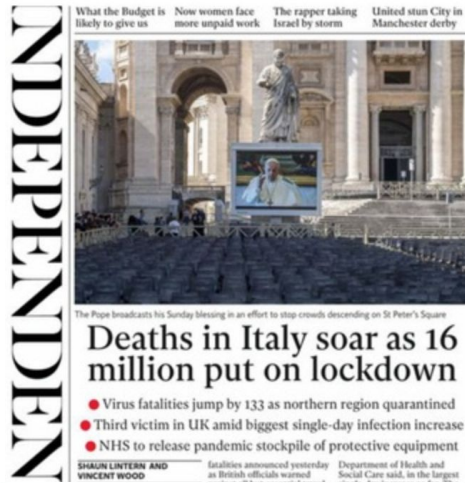
# What we were asked to do

- Reminder, the first objective of a public health incident/pandemic is to prevent health services from being over-run
- Remember, the terrible images and reports from Lombardy

# Reminder re why we had to take the action we took



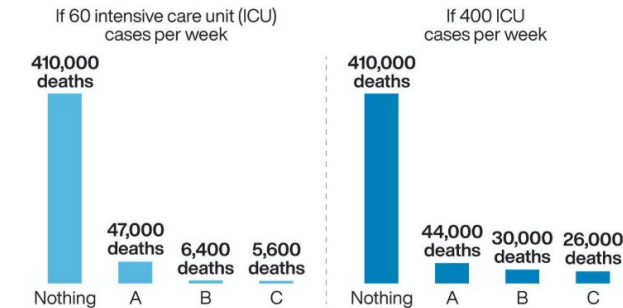
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## Possible coronavirus-related deaths in Great Britain under different suppression strategies

Strategy A: Case isolation + home quarantine + social distancing  
Strategy B: School/university closure + case isolation + social distancing  
Strategy C: Case isolation + home quarantine + social distancing + school/university closure

Transmission rate: two secondary cases per one new case



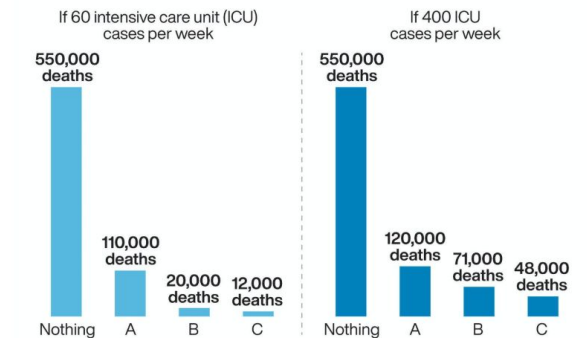
PA graphic. Source: Imperial College Covid-19 response team. Estimated deaths are for two-year period

(PA graphic)

## Possible coronavirus-related deaths in Great Britain under different suppression strategies

Strategy A: Case isolation + home quarantine + social distancing  
Strategy B: School/university closure + case isolation + social distancing  
Strategy C: Case isolation + home quarantine + social distancing + school/university closure

Transmission rate: 2.6 secondary cases per one new case



PA graphic. Source: Imperial College Covid-19 response team. Estimated deaths are for two-year period

(PA graphic)

Imperial College London

**Coronavirus pandemic could have caused 40 million deaths if left ...**

# NHS response letter from NHS E/I

Setting out important actions to put in place to redirect staff and resources as part of the Covid-19 response which will:

- Free-up the maximum possible inpatient and critical care capacity
  - Postponing all non-urgent elective operations from 15 April at the latest so that NHS staff can focus on caring for the most critically ill. Emergency admissions, cancer treatment and other urgent clinical care will remain unaffected
  - Extra support to speed up discharge of patients from hospital who are medically fit so they can return home and free-up beds
  - Refine our plan to increase the space staffing and equipment to at least double the level 3 support available to critically ill patients with respiratory complications

# NHS response letter from NHS E/I

- Prepare for, and respond to, the anticipated large numbers of Covid-19 patients who will need respiratory support
  - Increase the numbers of beds, critical care bays, theatre and recovery areas to be able to administer oxygen
  - National procurement for assisted respiratory support capacity, particularly mechanical ventilation, is well underway
  - Having an adequate supply of personal protective equipment (PPE) nationally
  - Refresher training for all clinical and patient facing staff for those directly supporting patients with respiratory needs
  - Ensure all patients with respiratory problems are cared for separately to other patients



# NHS response letter from NHS E/I

- Support staff, and maximise their availability
  - Support staff to stay well and at work with enhanced health and wellbeing support for frontline staff.
  - Targeted staff testing for symptomatic staff who would otherwise need to self-isolate
  - Adjustments for 'at risk' staff and staff to be support to work at home where appropriate
- Support the wider population measures newly announced by Government
- Stress-test operational readiness
- Remove routine burdens, so as to facilitate these actions such as cancelling all routine Care Quality Commission inspections

# Our Local Preparations

- We had to create capacity, space and staff flexibility to cope with the predicted “surge”
- Lots of services and pathways changed across the organisation and in the community
- Protection of main covid/hot capacity at NSECH
- Covid “light” sites and services elsewhere
- Maintaining access for cancer patients and time sensitive operating
- Big shift to digital and telephone clinics and triage
- Community facing collaborations and partnerships to support shielding etc.
- Intelligence gathering and data...
- Standing ready and waiting for the “peak”



# Our Regional Preparations

- North East Critical Care Network (using their clinical network and data collected daily)
- Chief Executive calls daily to agree any actions to support each other
- Chief Operating Officer, Medical Director & Nurse Director calls daily
- Discussion and collaboration with primary care
- Clinical Commissioning Group & Local Authority support and collaboration

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## Admissions, current inpatients and discharges

18/03/2020 - 05/07/2020



Total

27K

admissions (irrespective of COVID-19 status)

771

admissions with confirmed COVID-19

Daily



Cumulative



5

current inpatients with confirmed COVID-19



589

live discharges of patients with confirmed COVID-19

198

deaths^ of patients with confirmed COVID-19



^ in addition to this there were 3 deaths in ED

*The current figures do not support the calculation of a 'survival rate', due to the number of current inpatients for whom the outcome is undetermined.*

06/07/2020

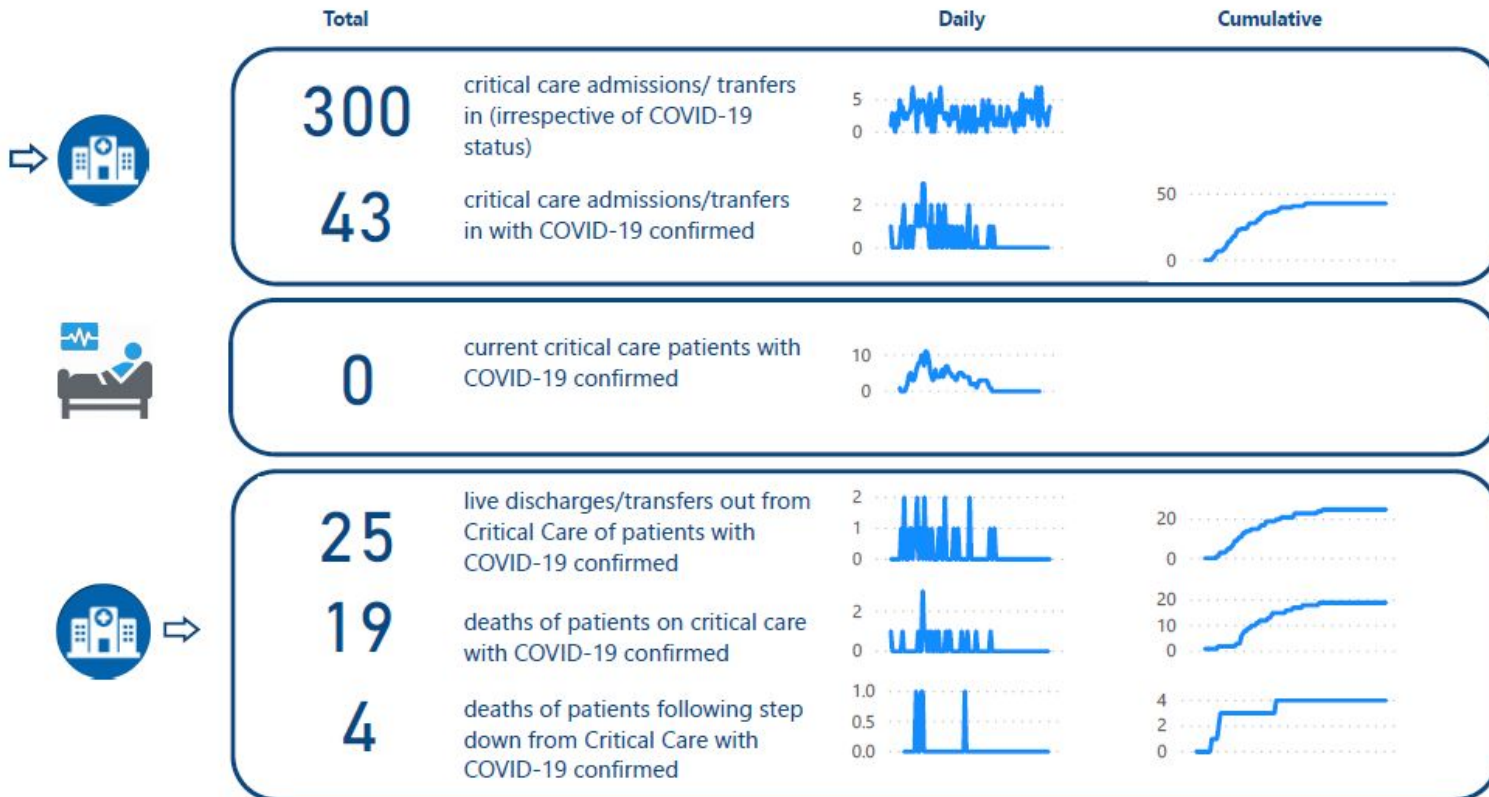
Produced by: Information Services - Analysis & Reporting

Covid-19 Admissions Infographic.pbi

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## Critical care - admissions, current inpatients and discharges

18/03/2020 - 05/07/2020



06/07/2020

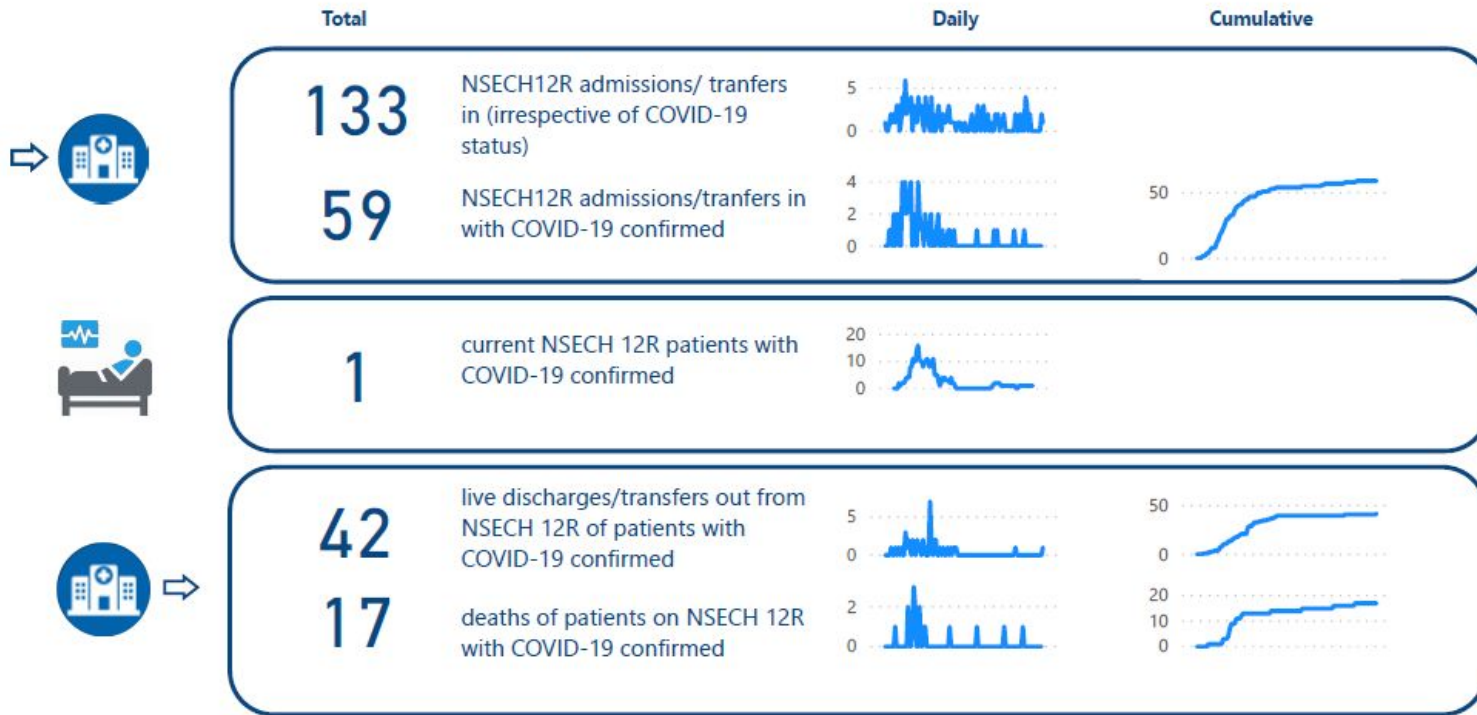
Produced by: Information Services - Analysis & Reporting

Covid-19 Admissions Infographic.pbix

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## NSECH 12R - admissions, current inpatients and discharges

18/03/2020 - 05/07/2020



06/07/2020

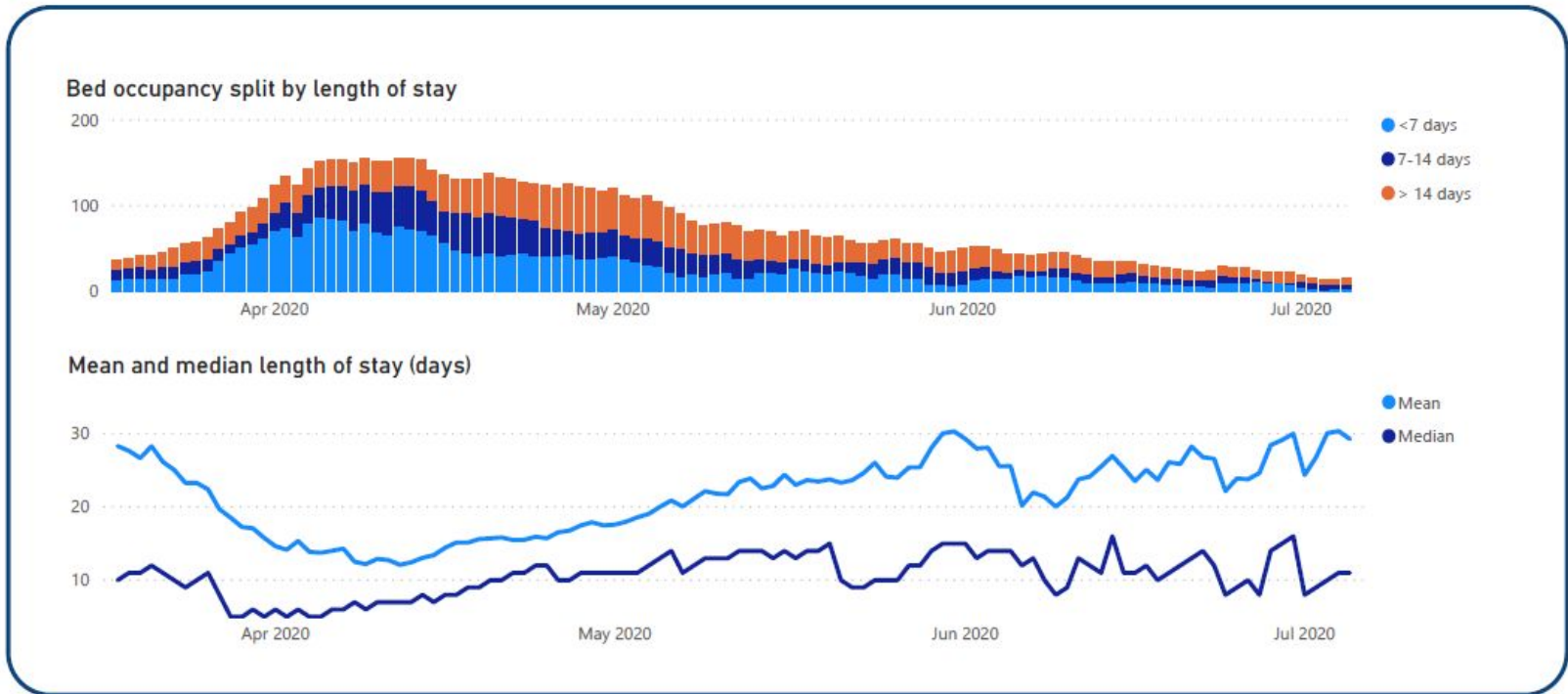
Produced by: Information Services - Analysis & Reporting

Covid-19 Admissions Infographic.pbix

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## Covid-19 positive patients - Daily bed occupancy at 8am and length of stay

18/03/2020 - 05/07/2020



06/07/2020

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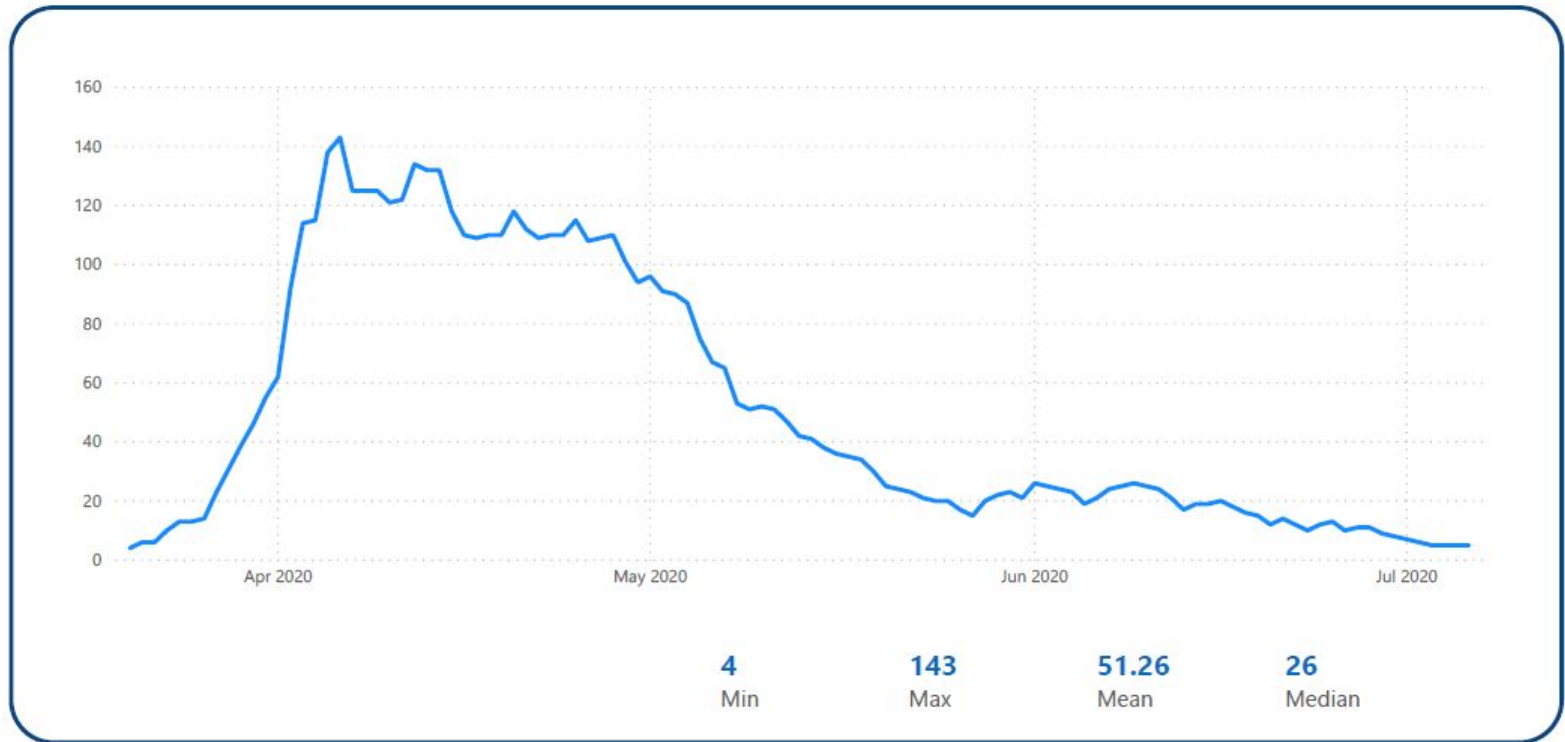
Covid-19 Admissions Infographic.pbix



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## Current inpatients with confirmed Covid 19 - Trust Wide

20/03/2020 - 06/07/2020



06/07/2020

Produced by: Information Services - Analysis & Reporting

Covid-19 Current Inpatients.pbix



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## A&E Attendances - Trust wide

01/04/2019 - 06/07/2020



08/07/2020

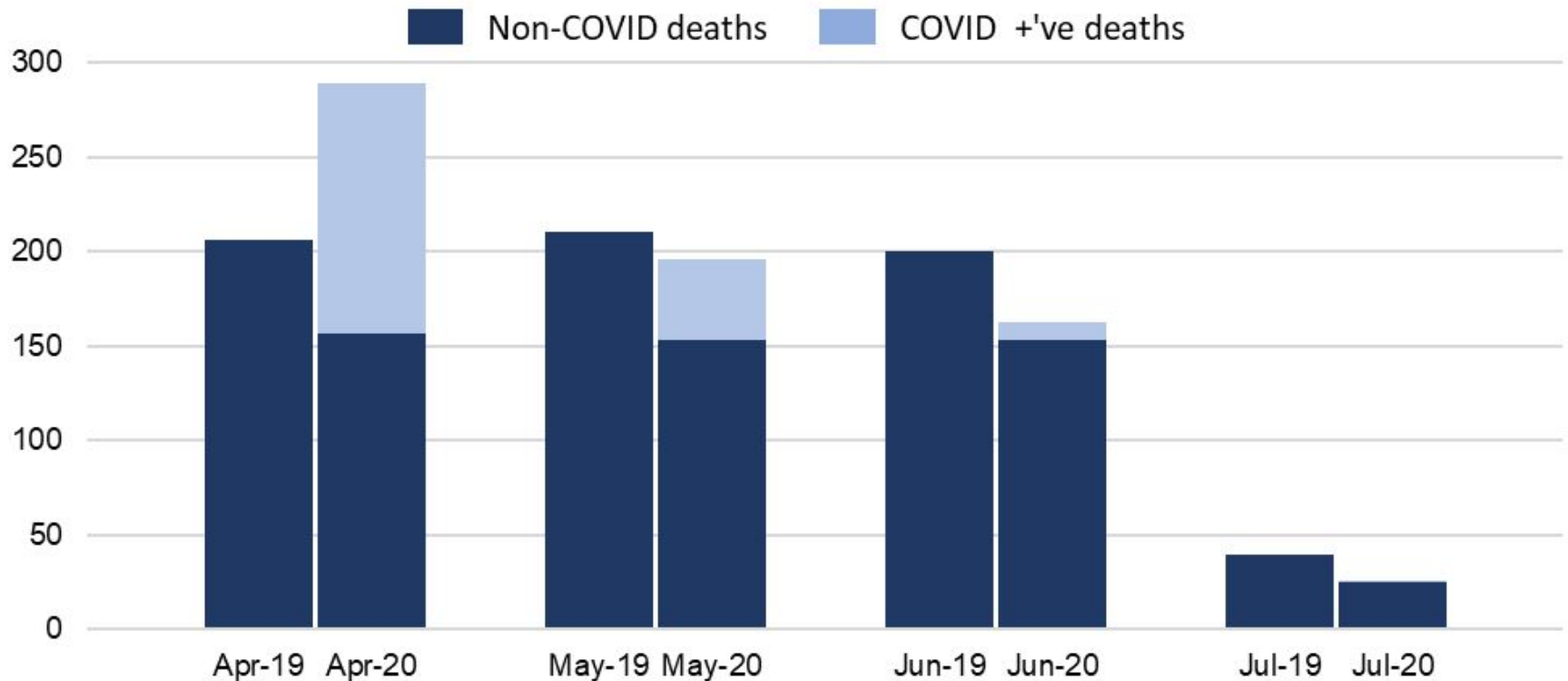
Produced by: Information Services - Analysis & Reporting (RV)

Covid-19 Adm and ED Infographic.pbi

- Pre covid – Trust wide ED attends approx. 600 per day
- During covid – lowest ED attends 226 per day

## Number of in hospital deaths in April - July 2019 v 2020

July deaths only include 1st to 5th of the month



Deaths with a high clinical suspicion of COVID but without a lab-confirmed COVID +ve test are classed as 'Non-COVID' deaths (this will include those where the death certificate states COVID but where there is no lab-confirmed test)

# Nursing/Care Homes

- Reminder re guidance issued by NHSE/I
- Perceived risk at that time for these patients
- Work with, and support from, LA's and 1°Care – and active, daily discussions
- Tracking post discharge

**For all patients with a Covid-19 positive test:**

|                               |       |
|-------------------------------|-------|
| Total number of discharges    | 1109  |
| Discharges to care homes      | 168   |
| % of discharges to care homes | 15.1% |

**For Covid-19 patients discharged to care homes:**

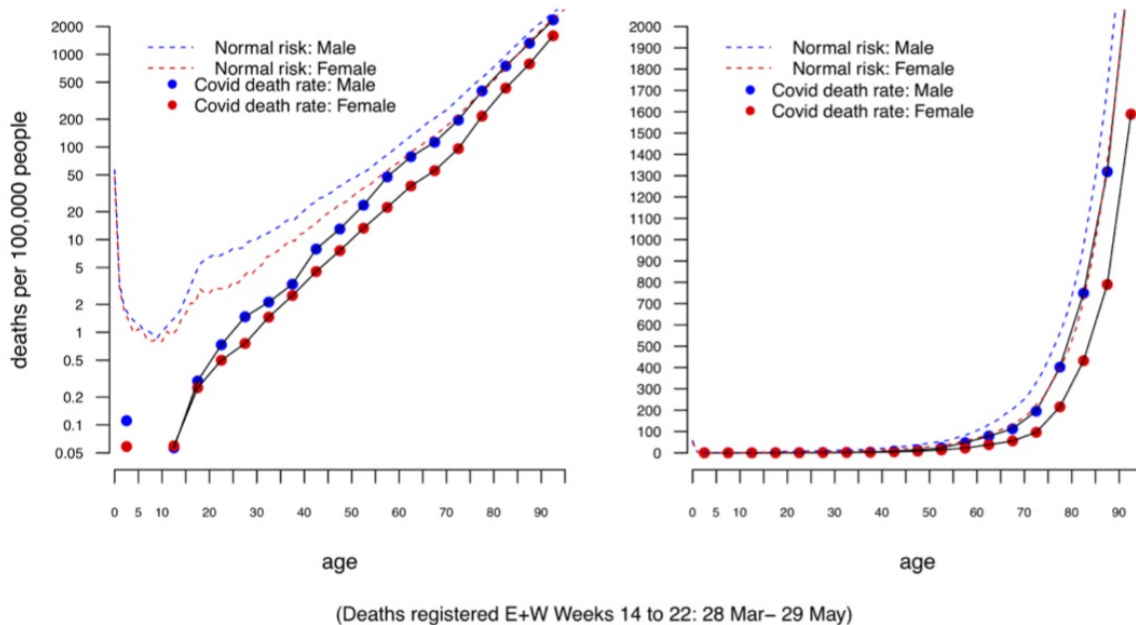
|                                   |      |
|-----------------------------------|------|
| Mean LOS                          | 14.2 |
| Median LOS                        | 8.0  |
| Number with LOS less than 7 days  | 70   |
| Number with LOS less than 14 days | 124  |
| Number that have died             | 29   |

\* Data from mid March to end June

This means

For the highest risk group, male and 80+ it is an equivalent additional risk of living 36 days

*COVID death rates in population around 12–13% higher for each year older, double every 5–6 years.  
> 10,000-fold variation in risk  
Men have around double risk of women the same age.  
Covid risk is for uninfected people, and is IN ADDITION to normal risk*



Covid population death rates for females and males on a logarithmic scale — data from ONS. 'Normal risk' is from ONS actuarial life tables, expressed as risk over a nine-week period.

This slide is the risk of dying of Covid for whole population

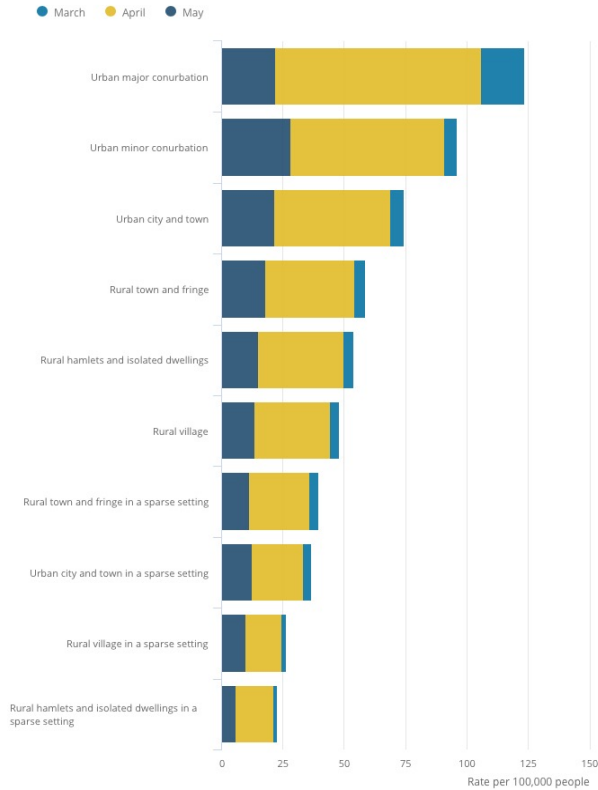
This shows that the highest risk group, male and 80+

Expressed as a multiplier of 'everyday risk' Covid 19 is the equivalent of 36 days worth of risk of death for an 80 year old man (of living with the risk of 10% of a year)

# Urban/Rural and Deprivation

**Figure 7: Urban major conurbation had a significantly higher age-standardised mortality rate of deaths involving the coronavirus (COVID-19) than any other Rural Urban Classification**

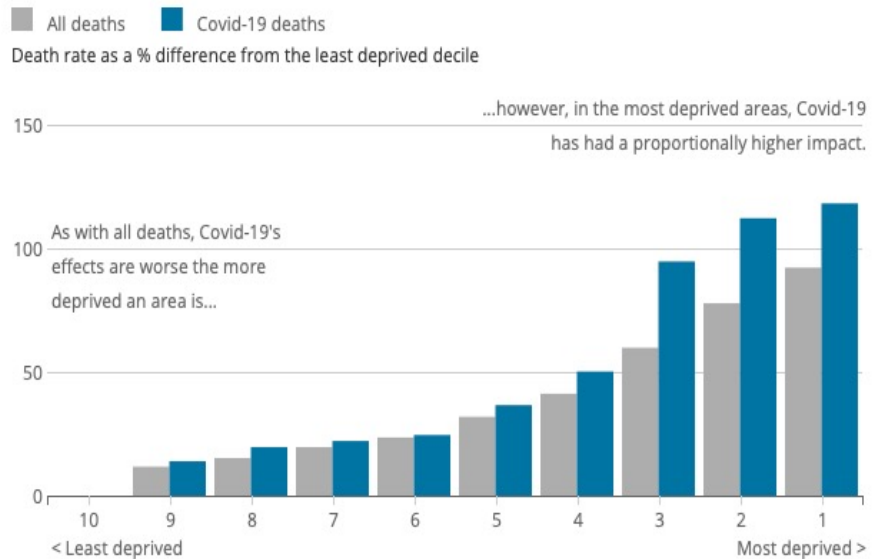
Age-standardised mortality rate of deaths involving the coronavirus (COVID-19), Urban Rural Classification, deaths occurring between 1 March and 31 May 2020



Source: Office for National Statistics – Deaths involving COVID-19

**Figure 8: The coronavirus (COVID-19) has had a proportionally higher impact on the most deprived areas of England**

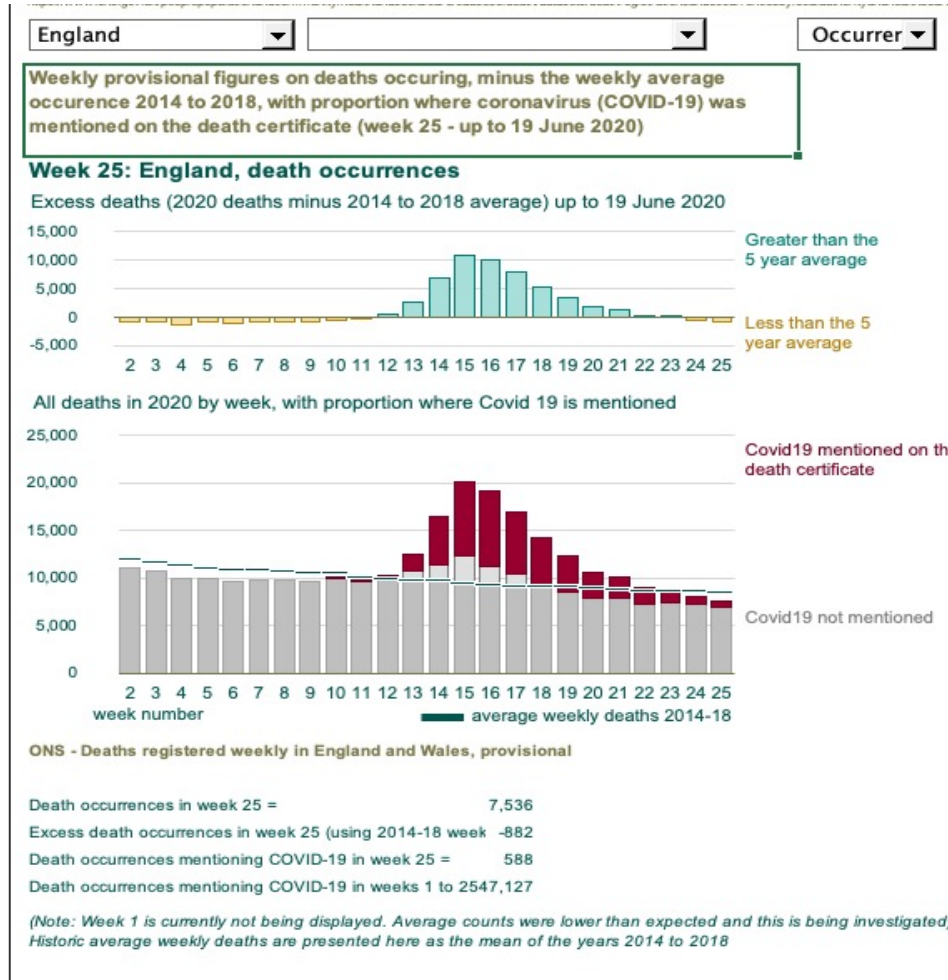
Age-standardised mortality rates, all deaths and deaths involving the coronavirus (COVID-19), Index of Multiple Deprivation, England, deaths occurring between 1 March and 31 May 2020



Source: Office for National Statistics – Deaths involving COVID-19



England – pre Covid had 11,000 fewer deaths than average and rates are now below average again



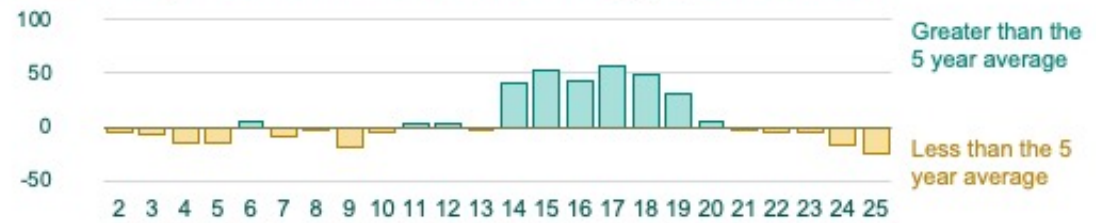


North East ONS region  Northumberland  Occurrer

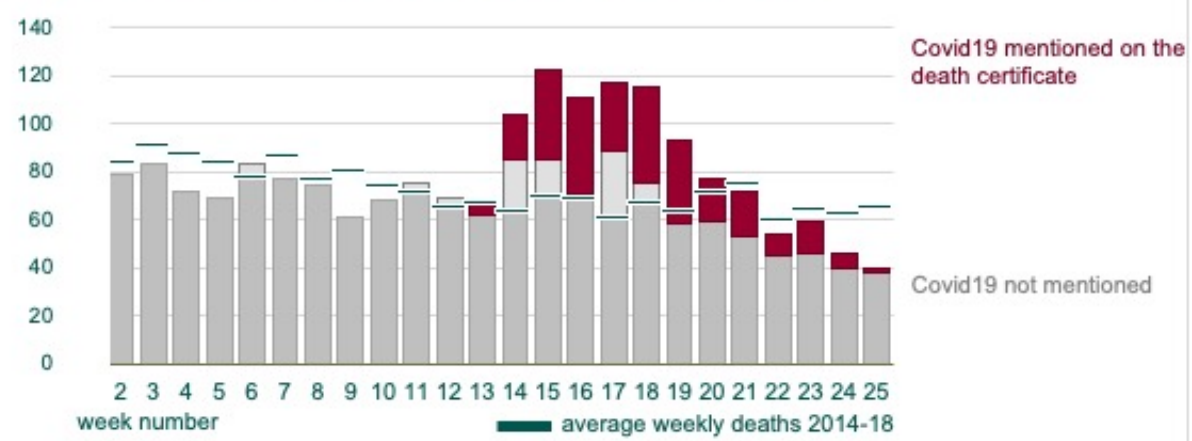
Weekly provisional figures on deaths occurring, minus the weekly average occurrence 2014 to 2018, with proportion where coronavirus (COVID-19) was mentioned on the death certificate (week 25 - up to 19 June 2020)

## Week 25: Northumberland, death occurrences

Excess deaths (2020 deaths minus 2014 to 2018 average) up to 19 June 2020



All deaths in 2020 by week, with proportion where Covid 19 is mentioned



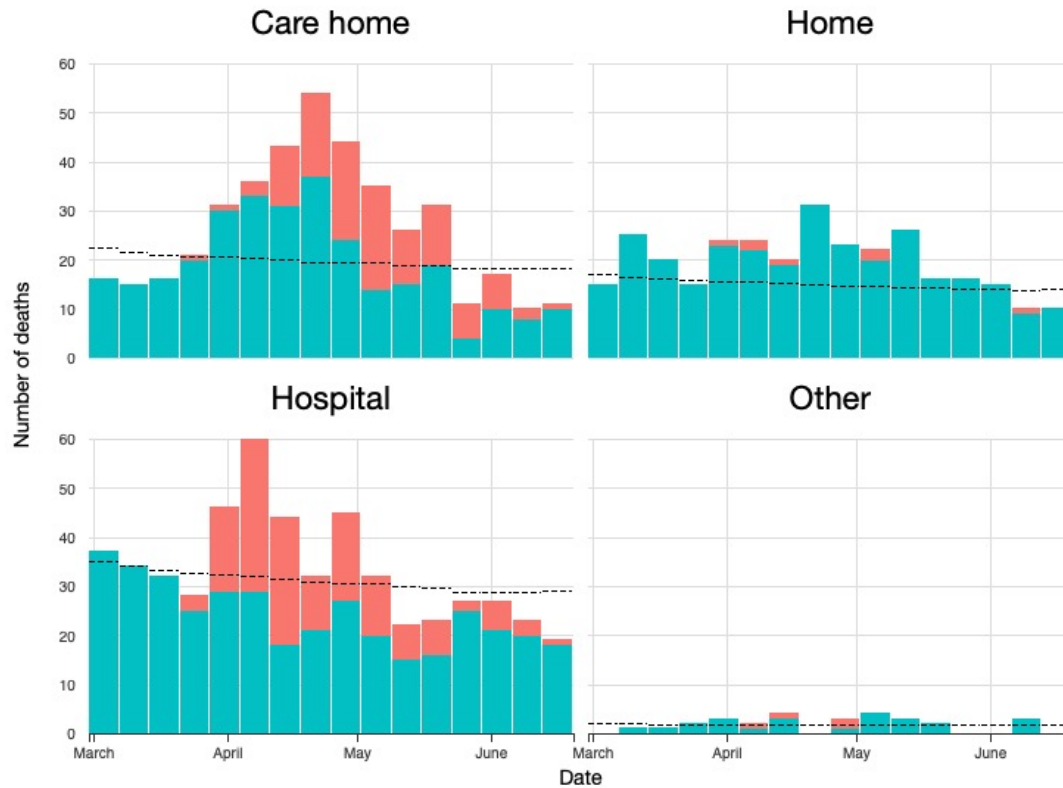
Northumberland's pattern mirrors that of England's: 2020 precovid, less than average numbers than 7 weeks of excess deaths, largely with Covid mentioned on death certificate.

Currently lower than average deaths, reducing numbers due to Covid.

# Northumberland – week 24 by place. Note rise in community and decrease in hospital of non Covid deaths

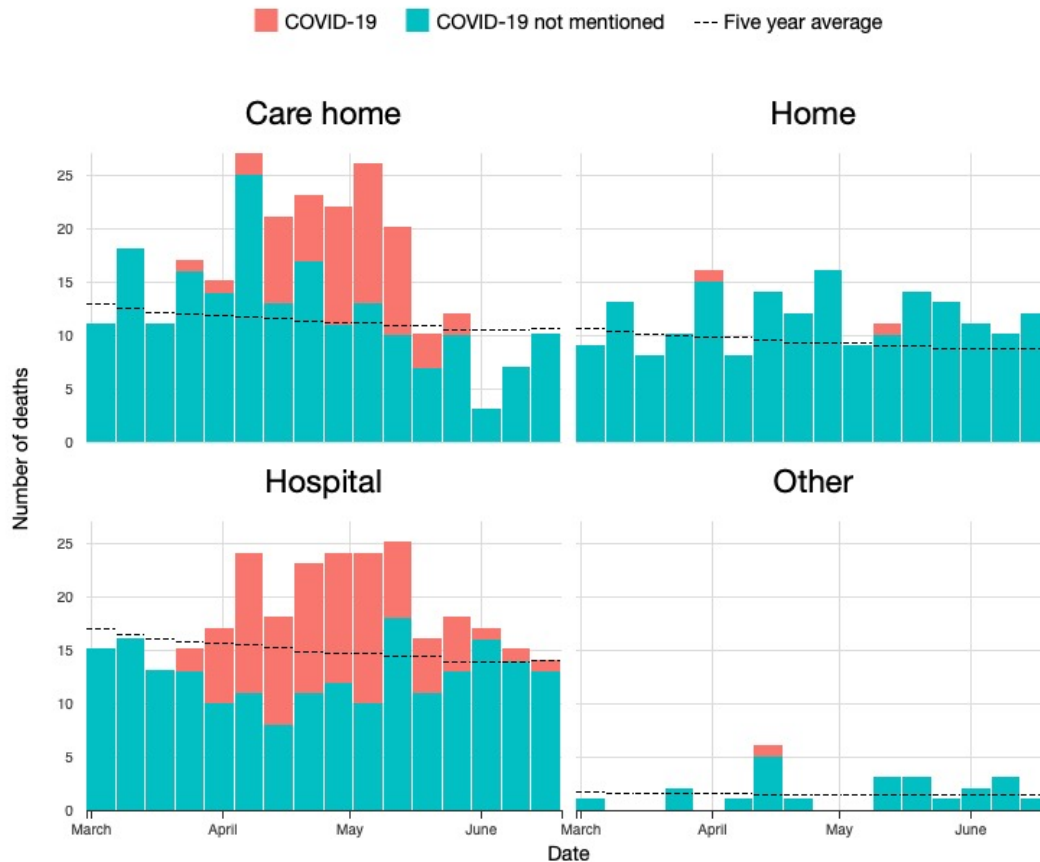
## Northumberland

COVID-19 COVID-19 not mentioned --- Five year average



# North Tyneside week 24 by place- scale is smaller than Northumberland, fewer excess non Covid in the community

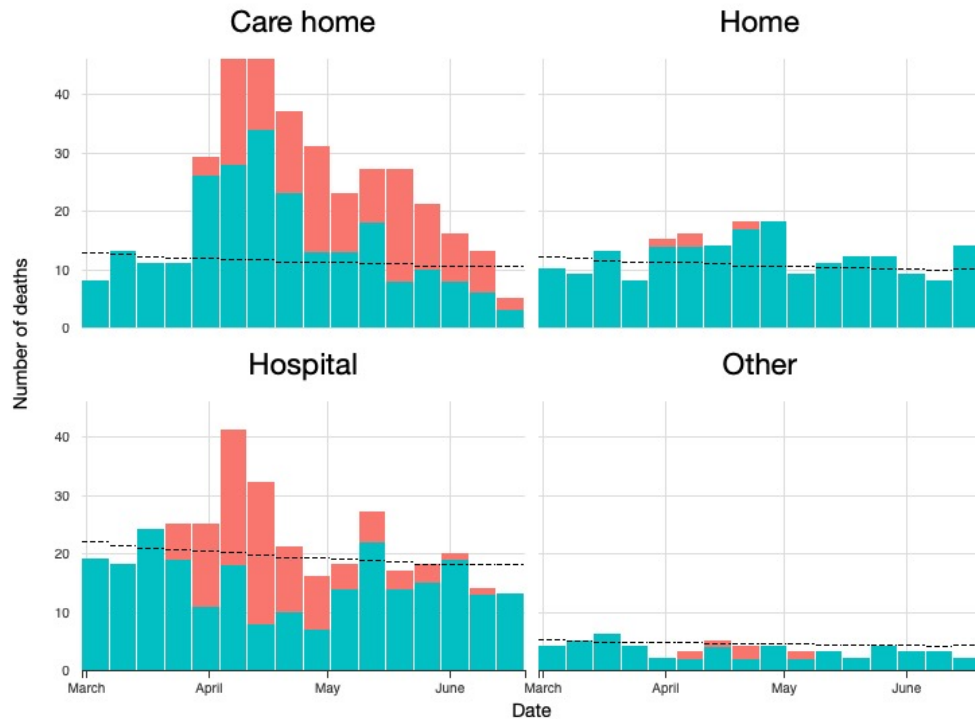
## North Tyneside



# Newcastle – age related lower overall figures but significant care home skew

## Newcastle upon Tyne

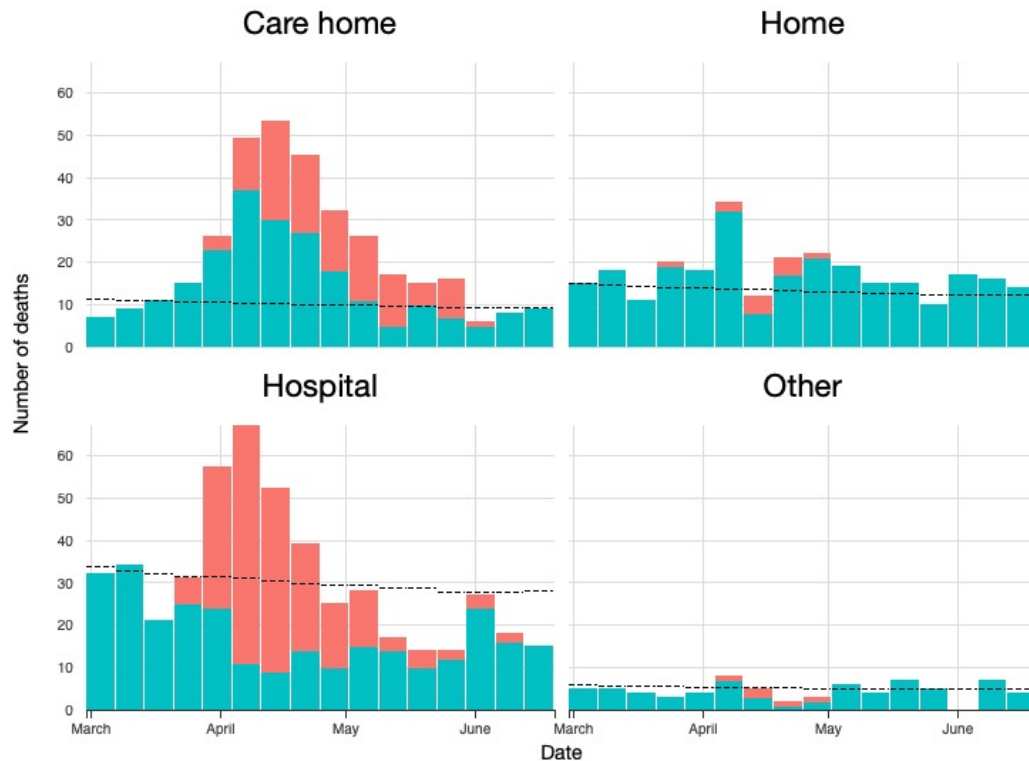
■ COVID-19 
 ■ COVID-19 not mentioned 
  Five year average



# Sunderland – possible Coincidental diagnosis affecting death certifications?

## Sunderland

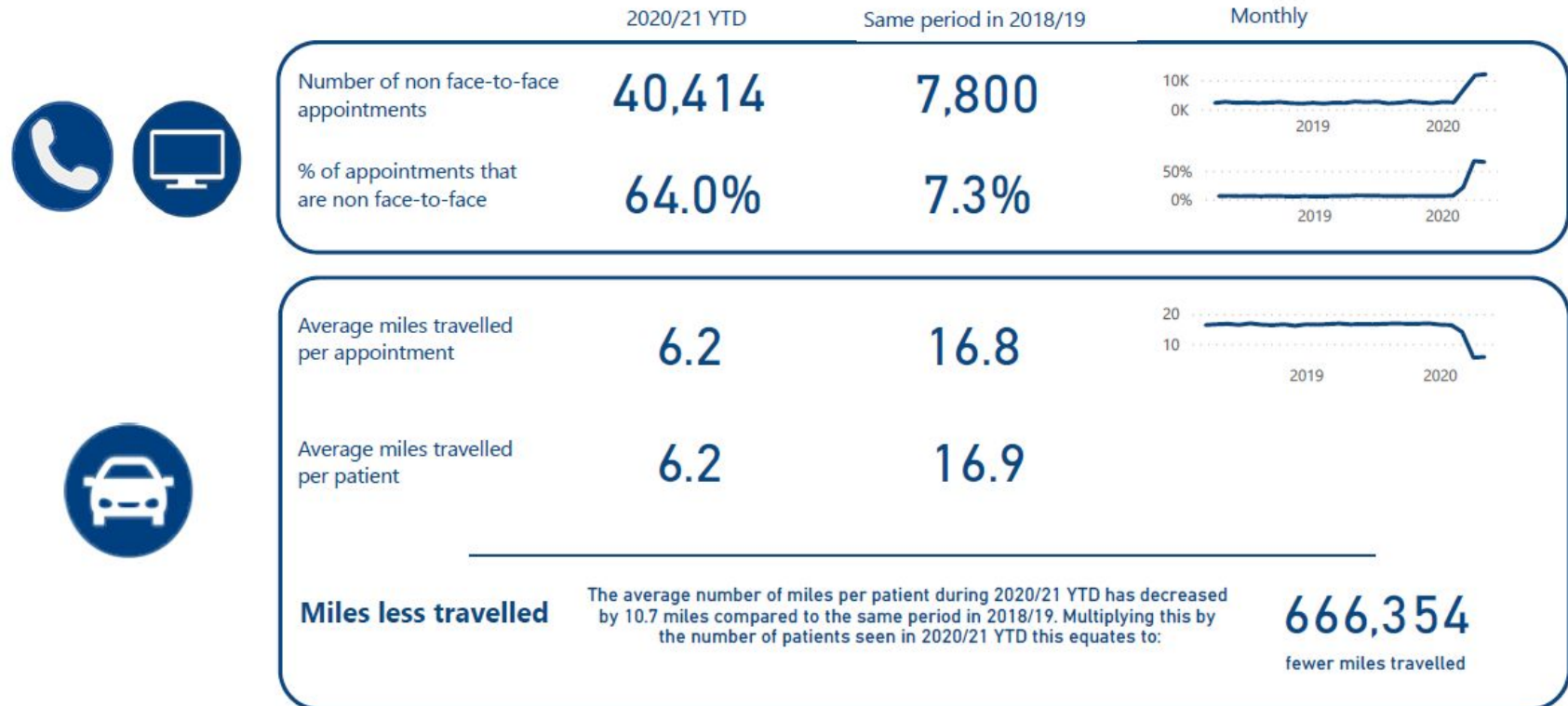
■ COVID-19 
 ■ COVID-19 not mentioned 
  Five year average



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## Miles Less Travelled

Comparison of April - June 2020 to same period in 2018/19



07/07/2020

Produced by: Information Services - Analysis & Reporting

MLT.pbix



# Tensions

- The modelling
- The Science
- Reduced access
  - 50% daily ED attendances throughout
  - 62% reduction in admissions (all)
- Concerns for those not accessing services
- PPE
- Testing
- Confusion
- Anxiety and confidence

# Testing

- All respiratory cases / suspected covid – to be screened pre admission – 12<sup>th</sup> March
- Subsequently changed to All ED admissions to be screened – End April
- All discharges to care homes to be screened – 16<sup>th</sup> April
- All patients to be screened at 7 days and 7 day intervals thereafter – 5<sup>th</sup> June
- All internal transfers to be screened – 5<sup>th</sup> June
- Staff testing - 18<sup>th</sup> March
  
- Pressure on testing ability – initially no in house testing available
- Use NUTH / QE – externa testing – March and April
- Limit on numbers – 600 tests/day for NUTH and NHCT and QE at start – 24/48 hour turnaround
  - Only allowed 15 staff tests/day
- Cepheid test in house testing – May
  - 300 tests per week – 1 hour turnaround
- Panther test in house testing – June
  - 3000 tests per week – 4-5 hour turnaround

## Some Headlines

- c75% of those admitted have gone home well
- 65% survival rate in critical care (including non ventilated)
- Around 5 covid positive patients in beds today, on a bed base in excess of 900
- Finding 3-5 positive cases per day currently
- Worked together with LA colleagues to support social care
- We have continued cancer and urgent operating throughout
- Starting to build up access to services again, and reaching out for those who have been afraid/unwilling to come in

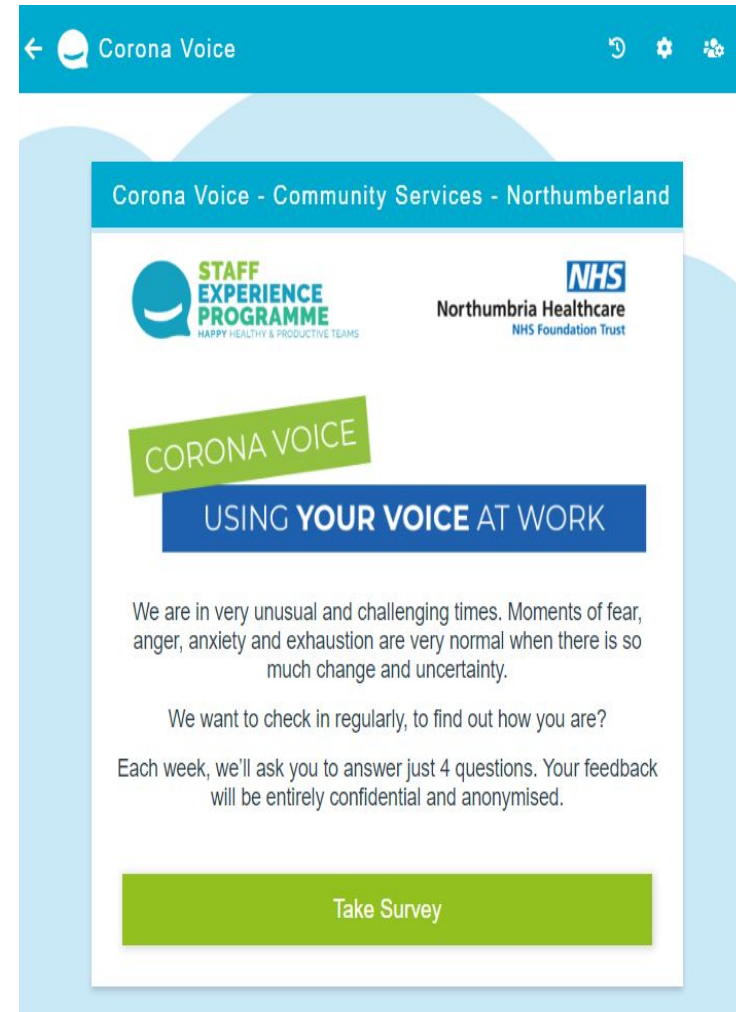
# Successes

- National and international comparisons hard to find and unreliable but...
- Regular commentary re 1/3<sup>rd</sup> of critical care patients surviving (our survival rates = 70-80%)
- Mortality per head of population
  - North East does relatively well compared to other regions
  - Northumbria does relatively well on this analysis
- Managed the preparation and surge well – we didn't get over run
- Maintained access for cancer patients and urgent operations
- Transformation and change – including the use of new technology
- Focus on the whole health and care system
- Commercial innovation – PPE factory
- Support from the public and local businesses
- Staff and public confidence and engagement



# Our Staff - Corona Voice

- The real time staff experience platform has been available for our teams for 13 weeks now.
- Engagement has been very good, with 10,000 responses enabling a helpful understanding of site-based issues.
- Our intention was to provide staff with a very quick and easy way of sharing information with the trust.
- We chose motivation at work for our single indicator of staff engagement



# Regional position: A&E



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| Trust   | 2019/20      | Apr-20       | May-20       | Qtr 1<br>2020/21<br>(Apr - May only) |
|---|--------------|--------------|--------------|--------------------------------------|
| Northumbria Healthcare                              | 94.2%        | 99.7%        | 99.7%        | 99.7%                                |
| Gateshead Health                                    | 89.6%        | 91.7%        | 94.6%        | 93.4%                                |
| North Cumbria                                       | 82.0%        | 91.6%        | 92.6%        | 92.2%                                |
| Newcastle upon Tyne Hospitals                       | 94.3%        | 96.1%        | 94.9%        | 95.4%                                |
| South Tyneside & Sunderland                         | 83.0%        | 93.5%        | 96.0%        | 94.9%                                |
| County Durham & Darlington                          | 78.7%        | 95.3%        | 96.6%        | 96.1%                                |
| North Tees and Hartlepool                           | -            | -            | -            | -                                    |
| South Tees  | 88.4%        | 91.9%        | 94.6%        | 93.5%                                |
| <b>All England:<br/>(includes non-acute trusts)</b> | <b>84.2%</b> | <b>92.5%</b> | <b>93.5%</b> | <b>93.4%</b>                         |

## Notes:

- North Tees is part of A&E pilot: 4 hour target monitoring has been suspended for this group
- Oct-19 North Cumbria University Hospitals NHS Trust merged into North Cumbria Integrated Care NHS Foundation Trust



# National Performance metrics



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| TRUST                         | Accident & Emergency |        | 18 weeks RTT | Diagnostics | Cancer  |                        |
|-------------------------------|----------------------|--------|--------------|-------------|---|------------------------|
|                               | All                  | Type 1 | Incomplete   | All         | 62 day  |                        |
|                               |                      |        |              |             | Referral to treatment                           | From screening service |
| North Cumbria                 | 92.2%                | 91.2%  | 62.9%        | 36.5%       | 67.3%   | 33.3%                  |
| New castle                    | 95.4%                | 93.9%  | 74.1%        | 34.7%       | 71.7%   | 79.3%                  |
| Morecambe Bay                 | 91.3%                | 89.6%  | 70.5%        | 53.2%       | Data not available from Northern Cancer Network |                        |
| Northumbria                   | 99.7%                | 99.6%  | 86.6%        | 28.3%       | 86.2%   | 11.1%                  |
| Gateshead                     | 93.4%                | 93.4%  | 70.5%        | 35.7%       | 71.8%   | 71.4%                  |
| South Tees                    | 93.5%                | 91.4%  | 66.0%        | 33.8%       | 68.1%   | 50.0%                  |
| North Tees & Hartlepool       | -                    | -      | 88.4%        | 43.3%       | 85.0%   | 90.0%                  |
| South Tyneside & Sunderland   | 94.9%                | 93.0%  | 77.4%        | 46.3%       | 82.5%   | 100.0%                 |
| County Durham & Darlington    | 96.1%                | 94.7%  | 74.3%        | 56.0%       | 85.0%   | 75.0%                  |
| Royal Free London             | 88.1%                | 86.5%  | -            | 42.7%       | Data not available from Northern Cancer Network |                        |
| Frimley                       | -                    | -      | 71.0%        | 44.0%       |   |                        |
| Salford Royal                 | 92.3%                | 91.9%  | 71.6%        | 43.4%       |   |                        |
| Wrightington, Wigan and Leigh | 95.5%                | 93.9%  | 74.7%        | 29.3%       |   |                        |

Accident & Emergency: year to date, to May 2020

Diagnostics: April 2020 (NHS England)

18 weeks RTT: April 2020 (NHS England)

Cancer: April 2020 (NHS England)

A&E: North Tees and Frimley are in pilot group of 14 trusts; therefore 4 hour wait data not available

18w RTT: Royal Free still not still not reporting

N Cumbria trust changed from North Cumbria University Hospitals NHS Trust to North Cumbria Integrated Care NHS Foundation Trust, October 2019

# Recovery and Restoration

- Business Units, Clinical Commissioning Groups and other partners
- National conversations and Phase 3
- Part of recovery is reliant on testing and PPE availability
- Pre-op testing and isolation
- Prepare for potential growth in Emergency Department attendances – Control and sealing
- Test and trace and local flare ups
- Care homes and community risk
- Communications and confidence

# Recognition and Thank You

- Staff have been magnificent
- Partners have been excellent – privileged working position
- Public support has been humbling and hugely appreciated
- Business and individual support has been out of this world – donations and volunteering etc.,
- We have learnt a lot, and will build on this
- We need now to be trying to restore access for all patients, across the whole system
- We will do this with care, as always, and be ready to respond and adapt if necessary



# Thank – you... everyone

