Preventing outbreaks in forgotten institutional settings

What are we missing?

Surveillance ➔ Delivery ➔ Research

Prepared by UCL Centre for Inclusion Health

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Background

Why enclosed institutions? Such settings have the potential to:

- act as reservoirs of infection – making local elimination challenging
- house vulnerable individuals – giving disproportionate impact on morbidity and mortality
- Act as amplifiers of infection – through staff and connection to healthcare system meaning hidden outbreaks causing less efficacious interventions in general
- Have variable access to healthcare by individuals within them – hard to reach groups, trust issues, inequity
- Have weak data connection/traditional surveillance schemes.

Settings that do one of these may be in scope but priority to those that suffer all 5.

- COVID-19 has demonstrated clear ability to cause explosive outbreaks in institutional settings
    - Cruise Ships
    - Hospital
    - Care Homes
    - Prisons
    - Homeless Hostels
    - Migrant dormitories – Singapore
    - Meat Packing Centres – Germany/USA
    - Long stay mental health

Frequency of COVID-19 in homeless settings

- In US screening programmes in homeless hostels
  - 9% - 36% COVID positive in residents
  - 11-15% in staff

- In Marseille - 9% residents - 8% of staff COVID-19 positive

- In London - Most homeless cases diagnosed early in epidemic – extensive interventions to prevent transmission including
  - Awareness raising and social distancing in hostels (see survey dashboard) https://www.surveymonkey.com/stories/SM-38MSRDG9/
  - Moving rough sleepers and those in communal night-shelters into hotels with single room own bathroom
  - Establishment pan London surveillance project with outreach testing via Find & Treat
  - Establishment of specialist hotel with 24-hour clinical cover for COVID-19 symptomatic cases
  - Most London cases diagnosed early in pandemic
  - After moving street and night shelter homeless into hotel – 4% positive when screening one hotel.
  - No new cases diagnosed through outreach testing in last 2 weeks but hostels now beginning to lift lockdown and ease social distancing

- https://jamanetwork.com/journals/jama/fullarticle/2765378 https://www.medrxiv.org/content/10.1101/2020.04.12.20059618v1 Mosites E, Parker EM, Clarke KEN, Gaeta JM, Baggett TP, Imbert E, et al. COVID-19 Homelessness Team. Assessment of SARS-CoV-2 Infection Prevalence in Homeless Shelters - Four U.S. Cities, March 27-April 15, 2020. MMWR Morb Mortal Wkly Rep. 2020; 69(17):521-522. http://doi.org/10.15585/mmwr.mm6917e1. Tobolowsky FA, Gonzales E, Self JL, Rao CY, Keating R, Marx GE, et al. COVID-19 Outbreak Among Three Affiliated Homeless Service Sites- King County, Washington, 2020. MMWR Morb Mortal Wkly Rep. 2020; 69(17):523-526. https://www.medrxiv.org/content/10.1101/2020.05.05.20091934v2 https://www.medrxiv.org/content/10.1101/2020.05.04.20079301v1

Types of Venue – Inclusion Health Groups

- Homeless
  - Hostels
  - Newly established hotels
  - Night-shelters – formal /informal
  - Pay to sleep
  - Daycentres
  - Streets
  - Moved on to – Houses of Multiple Occupancy – often out of borough

- Migrants
  - Home Office Immigrant Assessment Centres
  - Home Office Hotels
  - Home Office Houses of Multiple Occupancy
  - Migrant workers – dormitory style accommodation

- Criminal Justice
  - Prison
  - Probation Hostels
  - Custody suites

Other institutional settings

- Care Settings
  - Long stay mental health units
  - Dual diagnosis facilities
  - Learning disabilities
  - Looked after children
  - Domiciliary care

- Other communal settings
  - Halls of residence
  - Barracks
  - Boarding schools
  - Ships (naval, merchant and leisure)

Stakeholders

- Home office/MoJ
- MHCLG
- NHSE
- PHE: National and Regional Footprints
- Homeless Link
- Major Commissioned Providers
- e.g. SERCO/SODEXO/CARE UK/Group 4
- DHSC, Testing Centres, Data linkage

Surveillance ➔ Delivery ➔ Research

- Mapping of venues – Local directories and Regional PHE centre knowledge of outbreaks and local awareness.
- Active surveillance – simple & frequent - linked to support - mandated where possible (e.g. through contracts and performance metrics) – feeding into PHE Regional Centres
  - Have residents been ill?
  - Does anyone need testing?
  - Have staff been ill?
  - Is anyone who is symptomatic unable to self isolate?
  - Do you need PPE and PPE training?
- Pillar 2 Testing
  - In-facility clinical staff (e.g. IACs, Custody suites, Care Centres)
  - Trained Outreach testing teams (e.g to homeless venues, other venues with no clinical support)
    - Professionals with expertise in homeless, drug and alcohol services, peers,
    - Environmental Health Officers (3500 workforce), local clinical homeless teams
    - Explore opportunities for self sampling e.g. sputum/saliva
- Sentinel Surveillance – Whole venue swabbing and serology – size of venue – vulnerability
- Data linkage opportunities (burden) – short and long term issues (legacy and lessons learnt)
- Awareness Raising and Guidance – Webinars – Video training – Online accredited training

Research Questions

- Level of COVID-19 in non care home institutional settings– staff and residents - currently unknown
  - Need to measure over time – use to parameterise models – need for ongoing swabbing and serology testing to establish baseline and monitor resurgence
  - Relative role of staff and residents in introducing infection to institutions
  - Insulated from general population vs. Amplifiers and reservoirs of Infection
  - Data to inform modelling parameters to help control and understanding
  - Occupational risks
  - Vulnerability of residents
  - Burden of A&E, Hospitalisation and Death from institutional settings
  - Accuracy of “low threshold” self sampling (e.g. saliva, sputum) to increase capacity
- Effectiveness of control measures
  - Balance between responsive testing and regular screening
  - Limitations of general population measures e.g. contact tracing
  - Role of peers in delivering service
  - Delivering public health interventions in complex groups
  - Effectiveness of harnessing EHOs and non-traditional providers

Resources

- Authority and delegation to team to get on and deliver this
- Needs a small focused multidisciplinary team
  - Protocol, Ethics, Implementation
  - Accountable for delivery (lessons from ONS Survey)
  - Ready to start implementation – 1st July 2020
  - In place for at least 12 months
- Funding
- Access to testing including swabbing, serology and sequence
- Linked Data
- Data dashboard into SAGE and JBC