

Institution: University College London		
Unit of Assessment: 2 – Public Health, Health Services and Primary Care		
Title of case study: Everyone In: shaping the combined housing and health response to reduce COVID-19 transmission and fatalities among the homeless population.		
Period when the underpinning research was undertaken: 2014 - 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Prof Andrew Hayward	Professor of Infectious Disease Epidemiology and Inclusion Health	2001- Present
Prof Robert Aldridge	Professor of Public Health Data Science	2010 – Present
Serena Luchenski	NIHR Doctoral Research Fellow	2015 – Present
Mr Dan Lewer	NIHR Doctoral Research Fellow	2018 – Present
Dr Binta Sultan	NIHR Doctoral Research Fellow	2019 - Present
Dr Alistair Story	Honorary Associate Professor in Inclusion Health	Honorary appointment since 2005
Period when the claimed impact occurred: 2020		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact		
<p>The Everyone In COVID-19 pandemic programme, launched March 2020, was the largest health-led action on homelessness ever implemented in England, with shared airspace night shelters closed and over 90% of rough sleepers given self-contained, safe accommodation in hotels within its first two weeks. UCL research, and guidance alerted the government to the dangers in rough sleepers, communal night shelter and hostel users, informed every stage of the national response, and was central to homeless COVID-19 surveillance, outreach testing and triage across London. Everyone In is estimated to have prevented 20,000 infections, 338 ICU admissions and 266 deaths during wave one and has housed 33,000 vulnerable people to date.</p>		
2. Underpinning research		
<p>The UCL Collaborative Centre for Inclusion Health (CCIH) is co-directed by UCL Professor Andrew Hayward and UCL Honorary Associate Professor Alistair Story (who also leads the UCLH Find&Treat service, developed in response to UCL research on the high burden of tuberculosis in homeless people [R1]).</p> <p>Although it has long been known that homeless people often die young, excess deaths were often assumed to be dominated by drug related deaths, accidents, violence and suicide. A CCIH systematic literature review and meta-analysis [R2] showed that standardised mortality rates in the homeless were 8-12 fold higher than the general population and were increased across all categories of disease, with most deaths due to cardiovascular, respiratory and other chronic disease. CCIH large-scale surveys of the prevalence of common chronic conditions amongst the</p>		

homeless in London and Birmingham showed prevalence of many chronic diseases was dramatically higher than in the poorest parts of the UK [R3] and that homeless people were more than twice as likely to be eligible for flu vaccination as the general public [R4]. Taken together these analyses provided compelling evidence of the extreme levels of comorbidity in the homeless.

Early evidence showed case fatality rates from COVID-19 were very much higher in those with the same chronic diseases that CCIH had demonstrated to be extremely common in homeless populations. The Department of Health and Social Care (DHSC) recommended that those identified as eligible for flu vaccine were clinically vulnerable and needed to maintain strict social distancing. CCIH researchers were able to use existing research on influenza vaccine eligibility [R4] to immediately show that 41% of homeless people fell into the clinically vulnerable category. Previous UCL research in tuberculosis amongst the homeless [R1] and on influenza in nursing home settings [R5], plus a rapid review of media and published reports showed that outbreaks of respiratory infection in homeless hostels and similar institutional settings were common and that, outside the UK, COVID-19 outbreaks were being seen in hotels, prisons, cruise ships and nursing homes.

CCIH research separately modelled each homeless venue in the UK and incorporated UCL data on comorbidity in homeless populations, plus data from the active surveillance and outreach homeless health inclusion programme established by UCL and Find&Treat. Early iterations of the model indicated that in a “do nothing” scenario as many as 34% of the UK homeless population could get COVID-19 between March and August 2020, with 364 deaths, 4,074 hospital admissions and 572 deaths [R6]. The final iteration of the model [R7] showed the importance of single bedroom accommodation, outreach of testing and rapid isolation of cases in preventing infection, hospitalisation and deaths. It also showed the need to continue the approach and not re-open shared airspace night-shelters beyond the first wave to prevent multiple outbreaks in homeless hostels.

3. References to the research

- [R1] Story, A., Murad, S., Roberts, W., Verheyen, M., Hayward, A. C., & London Tuberculosis Nurses Network (2007). Tuberculosis in London: the importance of homelessness, problem drug use and prison. *Thorax*, 62(8), 667–671. doi: [10.1136/thx.2006.065409](https://doi.org/10.1136/thx.2006.065409)
- [R2] Aldridge, R. W., Story, A., Hwang, S. W., Nordentoft, M., Luchenski, S. A., Hartwell, G., Tweed, E. J., Lewer, D., Vittal Katikireddi, S., & Hayward, A. C. (2018). Morbidity and mortality in homeless individuals, prisoners, sex workers, and individuals with substance use disorders in high-income countries: a systematic review and meta-analysis. *Lancet (London, England)*, 391(10117), 241–250. doi: [10.1016/S0140-6736\(17\)31869-X](https://doi.org/10.1016/S0140-6736(17)31869-X)
- [R3] Lewer, D., Aldridge, R.W., Menezes, D., Sawyer, C., Zaninotto, P., Dedicat, M., Ahmed, I., Luchenski, S., Hayward, A., Story, A. (2019). Health-related quality of life and prevalence of six chronic diseases in homeless and housed people: a cross-sectional study in London and Birmingham, England. *BMJ Open* 2019(9), e025192. doi: 10.1136/bmjopen-2018-025192
- [R4] Story, A., Aldridge, R. W., Gray, T., Burrige, S., & Hayward, A. C. (2014). Influenza vaccination, inverse care and homelessness: cross-sectional survey of eligibility and uptake during the 2011/12 season in London. *BMC public health*, 14(44). doi: [10.1186/1471-2458-14-44](https://doi.org/10.1186/1471-2458-14-44)
- [R5] Harling, R., Hayward, A., & Watson, J. M. (2004). Implications of the incidence of influenza-like illness in nursing homes for influenza chemoprophylaxis: descriptive study. *BMJ (Clinical research ed.)*, 329(7467), 663–664. doi: [10.1136/bmj.38204.674595.AE](https://doi.org/10.1136/bmj.38204.674595.AE)
- [R6] Lewer, D., Braithwaite, I., Bullock, M., Eyre, M.T., Aldridge, R.W., Story, A., Hayward, A. COVID-19 and homelessness in England: a modelling study of the COVID-19 pandemic among people experiencing homelessness, and the impact of a residential intervention to isolate vulnerable people and care for people with symptoms. *medRxiv preprint*. doi: [10.1101/2020.05.04.20079301](https://doi.org/10.1101/2020.05.04.20079301). Posted May 8, 2020.
- [R7] Lewer, D., Braithwaite, I., Bullock, M., Eyre, M. T., White, P. J., Aldridge, R. W., Story, A., & Hayward, A. C. (2020). COVID-19 among people experiencing homelessness in England: a

modelling study. *The Lancet. Respiratory medicine*, 8(12), 1181–1191. doi: [10.1016/S2213-2600\(20\)30396-9](https://doi.org/10.1016/S2213-2600(20)30396-9)

4. Details of the impact

Evidence and advocacy for Everyone In, the UK national response to supporting the homeless community during COVID-19

Hayward and Story's plenary presentation at the Homeless and Inclusion Health Conference in London on 12 March 2020 presented their research showing extreme clinical vulnerability and high risk of outbreaks, warned of the need for immediate action and outlined their proposed "Test-Triage-Cohort-Care" approach to attendees, including senior government advisors and NHS decision-makers [S1].

The following day, they were invited to present their findings and recommendations to the Greater London Authority's Head of Health and began drafting the Homeless Sector COVID-19 plan [S2] in collaboration with NHS England, Public Health England, the GLA and the Ministry for Housing, Communities and Local Government (MCLG). This plan strongly recommended closing shared airspace communal night shelters, providing safe single-room, ensuite accommodation, prioritised to the clinically vulnerable, where they could receive specialist health and care support (COVID-PROTECT), and a comprehensive active surveillance, testing and TRIAGE programme across homeless venues, with isolation of suspected or confirmed cases in dedicated medical care facilities (COVID-CARE) [S3].

The government's lead for rough sleeping Dame (now Baroness) Louise Casey attended the plenary presentation on 12th March and met with Hayward and Story on 23rd March. Baroness Casey said, "[Prof Hayward and Dr Story's] use of emerging information on the transmission of COVID-19 in communal facilities helped me to make the case that everybody needed an opportunity to self-isolate from the virus. Their research therefore helped to make a convincing case for the need for an urgent housing and health response" [S2]. On 26th March the UK Government announced the Everyone In campaign, which brought together the key agencies and services to provide a single, unified response to supporting people experiencing homelessness during lockdown. The Minister's letter to local authorities was circulated with advice on triage and cohorting as per the Hayward and Story UK Homeless Sector Clinical Plan [S4].

Everyone In was the largest single homelessness and rough sleeping initiative ever implemented in the UK. By mid-April 2020, 5,400 people had been offered emergency accommodation (90% of those on the street and in shelters at that time) [S2]. By the end of November 2020, 33,139 people were provided with accommodation through Everyone In (including hotels and more settled accommodation) [S5]. The campaign was highly successful in controlling the spread of COVID. During the first wave of the pandemic the UK recorded only 16 homeless COVID-19 deaths and a UCL model estimated that Everyone In prevented 20,000 COVID-19 infections and 266 deaths of homeless people [R6]. Hayward and Story used this model to advocate to prevent reopening of communal airspace shelters in the second wave [S6]. An NHS Strategy Unit report acknowledges that "this strategy, and the subsequent response from professionals across the homelessness sector, was significantly informed by members of the University College London's (UCL) Institute of Epidemiology and Health Care" [S7].

According to Baroness Casey, "Professor Hayward and Dr Story's work not only saved lives but has shown us what is now possible in terms of ending rough sleeping, especially the importance of including integrated accommodation and health responses" [S2]. A Local Government Association report about the lessons learnt by local authorities from implementing Everyone In reported that it had prompted rapid and beneficial changes to the way homeless support services were delivered across England, noting "the Everyone In response has had a profound short-term effect on homelessness services... To reduce street homelessness by 90% in one week is something which many would have thought impossible, but which was accomplished" [S7]. The report noted the transformative effect of hotel accommodation on homeless people's

sense of safety and dignity, and highlighted practices local authorities identified as crucial to their successful response, including; the systematic use of comprehensive needs assessments; multi-agency teams coming to accommodation facilities and directly encouraging engagement with their services; and the importance of rapid response to accommodating rough sleepers, including those not normally eligible (e.g. due to immigration status).

Everyone In was influential internationally. For example, in Ireland UCL work influenced a similar approach leading to lower levels of COVID-19 than in the general population in stark contrast to high levels of infection in countries that did not adopt the approach [S8].

Surveillance and clinical guidance for the London homelessness sector response

Hayward and Story acted as Academic and Clinical Advisors to the London Homeless Health Emergency Planning Group (EPG). They conducted an Online Preparedness Survey of 173 Homeless Hostels across London published as a real-time online dashboard [S9]. The Healthy London Partnership COVID-19 Homeless Resource Page provided extensive links to guidance, training and policy addressing gaps identified in the preparedness survey [S10]. CCIH conducted modelling of the accommodation and care requirements [R5] supporting the HLP EPG's role as a strategic multi-agency coordinating hub. CCIH carried out daily active surveillance (April-July 2021) of suspected COVID-19 cases across London homeless venues allowing Find&Treat teams of nurses and homeless health peers led by Dr Sultan to outreach testing to suspected cases and contacts [S8]. As of September 2020 approximately 2000 swabs for PCR tests were taken by Find&Treat across London homeless venues [S8] and 48 suspected or positive cases were referred to the London COVID-CARE hotel (April-June 2020) [S11].

COVID-CARE was clinically managed by Find&Treat and staffed in partnership with Mediciens Sans Frontières (their first deployment in the UK). The MSF UK Director explained the unprecedented intervention: "We have decades of experience in working during outbreaks... Here in the UK, the homeless community are among the most marginalised and are more likely to be at risk because of pre-existing health conditions" [S11].

From June the CHRISP Health Needs Assessment tool [S12] developed by Hayward, Story and Sultan based on previous survey tools [R3] underpinned the HLP/ GLA's onward housing placements, registration with primary care and engagement with physical and mental health and addiction services. Over 1500 in-depth surveys have been completed to date [S12]. CHRISP screening showed 20% of people assessed were not registered with a GP and were subsequently registered; a blood-borne virus test administered as part of CHRISP showed an HIV prevalence of 3%, significantly higher than in the general population, and only 55% of those with HIV were receiving antiretroviral therapy. Following assessment 89% entered treatment [S12].

The HLP Director of Transformation, Health Inequalities and Inclusion said, "The strong academic/service partnership that has been developed between CCIH and the pan London Find&Treat Service was critical for the success of the [EPG] response" [S8]. The Director of Public Health for NHS London said, "I want to place on record my thanks to you [Professor Hayward], your team and your colleagues in the Find and Treat team in UCLH, for the work that you have done throughout the COVID-19 pandemic. I know that your work and advice on containing infections and outbreaks, as well as on testing and screening, is really valued and recognised across London - here at PHE regional level, in the GLA and across our boroughs" [S8].

In March 2021 Healthy London Partnership and the GLA's London Homeless Health Response to COVID-19 won the 2020 Health Service Journal Health and Local Government Partnership Award.

5. Sources to corroborate the impact

- [S1] Coronavirus and homelessness plenary presentations by Hayward and Story at Faculty for Homeless and Inclusion Health annual Conference, 12th March 2020. <https://bit.ly/3vwKrD0>
- [S2] Testimonial Letters from national policy leads: a) SRO Adult Social Care Team Coronavirus (COVID-19) Response and National Lead for Health and Justice, Public Health England b) Baroness Louise Casey, UK Government Lead for Rough Sleeping during COVID-19.
- [S3] Clinical Homeless Sector Plan - Triage, Assess, Cohort, Care, 23rd March 2020 <https://www.pathway.org.uk/wp-content/uploads/COVID19-Homeless-Sector-Plan.pdf>. Updated 14th April <https://www.pathway.org.uk/wp-content/uploads/COVID-19-Clinical-homeless-sector-plan-160420-1.pdf>
- [S4] Letter announcing Everyone In from Minister Luke Hall, MHCLG 26th March 2020 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/876466/Letter_from_Minister_Hall_to_Local_Authorities.pdf
- [S5] National Audit Office report, 'Investigation into the housing of rough sleepers during the COVID-19 pandemic', Jan 2021. <https://www.nao.org.uk/report/the-housing-of-rough-sleepers-during-the-covid19-pandemic/>
- [S6] Advocacy to prevent re-opening of communal airspace nightshelters a) UCL-CCIH Faculty for Inclusion Health Position Paper, 'Rationale for not reopening communal airspace sleeping facilities', Aug 2020. <https://www.pathway.org.uk/wp-content/uploads/UCL-CCIH-Faculty-Position-Statement-Aug-2020-Communal-Airspace-Sleeping-Facilities-AS-AH.pdf> b) All Party Parliamentary Group on Ending Homelessness - Emergency meeting on a winter homelessness crisis - Meeting Minutes 22 October 2020. <https://www.crisis.org.uk/media/243819/221020-appgeh-emergency-meeting-minutes.pdf>
- [S7] a) NHS Strategy Unit report, 'Homelessness and the response to COVID-19: learning from lockdown', Feb 2021. <https://www.strategyunitwm.nhs.uk/sites/default/files/2021-02/Homelessness%20and%20the%20response%20to%20COVID-19%20Strategy%20Unit%20Final%20Report%20%20%20%281%29.pdf> b) Local Government Association report, 'Lessons learnt from councils' response to rough sleeping during the COVID-19 pandemic'. 19th Nov 2020. <https://www.local.gov.uk/publications/lessons-learnt-councils-response-rough-sleeping-during-covid-19-pandemic>
- [S8] Testimonials from clinical and policy leads in Dublin and London: a) HSE Clinical Lead for Dublin Covid Homeless Response b) Director of Transformation, Health Inequalities and Inclusion, Healthy London Partnership c) Director of Public Health for NHS London
- [S9] UCL hostel COVID preparedness survey dashboard <https://www.surveymonkey.com/stories/SM-38MSRDG9/>
- [S10] Healthy London Partnership website homeless COVID-19 resources pages https://www.healthy london.org/resource/homeless-health-during-covid-19/?mc_cid=9ac60bd88b&mc_eid=aec9782b4e
- [S11] MSF press release about COVID-CARE hotel: <https://msf.org.uk/article/msf-supports-centre-providing-covid-19-care-homeless-people-uk>
- [S12] a) UCLH Find&Treat CHRISP Health Needs Assessment Tool Overview; b) HLP Webinar, 'Homeless health – next steps for London', 6 Aug 2020 <https://www.youtube.com/watch?v=SLOGIhDXus&feature=youtu.be>; c) Sultan B et al. High prevalence of HIV among people who experience homelessness in London: results of an innovative peer-centred outreach blood-borne virus testing service initiated at the start of the COVID epidemic. *Fifth Joint Conference of the British HIV Association (BHIVA) and the British Association for Sexual Health and HIV (BASSH)*, abstract 10, 2021. <https://www.aidsmap.com/news/apr-2021/testing-homeless-people-during-covid-19-identifies-several-new-hiv-cases-especially>