Written evidence submitted by Benjamin Black, Samuel T. Boland, Susannah H. Mayhew and Gillian McKay (DEL0218)

Four individuals (full details at the end of this submission) who worked in, and conducted research on, the Ebola outbreak response in Sierra Leone and the Democratic Republic of Congo (DRC), have joined together because we feel it is critically important that the UK learns outbreak-response lessons from experiences of low-income countries. Three individuals are from the London School of Hygiene & Tropical Medicine, and one is from The Whittington Hospital in London. We are submitting this in our individual capacities, to share our expertise in outbreak-response.

This document contains hyperlinks to references.

Pandemics constrain resources even of wealthy nations

The scale of the COVID-19 pandemic outstrips the capacities of almost all nations, including the wealthiest. As standard outbreak response tools like mass-testing and contact tracing are hugely labour intensive, the UK requires substantial numbers of personnel and equipment to respond to this outbreak with acuity. Concurrently, so does almost every other country so it is not possible to draw on significant additional resources from elsewhere. In effect, we are operating in a resource-constrained setting.

In the UK, we struggle to maintain supplies of personal protective equipment, are still not adequately testing, and abandoned labour-intensive surveillance and contact tracing methods early on in favour of inexact but straightforward strategies like broad social lockdown measures. These lockdown measures are themselves problematic. They do not reach every community and there is mounting evidence of a disproportionate negative impact on certain populations who are not reached by government messaging campaigns, struggling with severe social and economic hardship, and are significantly over-represented in fatality rates.

We know what to do well in resource-constrained settings, but the UK seems not to be learning from global experience. Tangible examples of low-cost high-impact strategies can be drawn from countries that have recently experienced large epidemics – and which UK experts helped to mitigate. Crucially, they employed an expert-driven top-down response *alongside* a ground-up strategy of locally driven and owned interventions.

Key lessons from Ebola-affected countries

Comprehensive community engagement. In Sierra Leone's Ebola outbreak, a *massive* community engagement effort was established. Many thousands of locally hired and trained individuals were employed (or volunteered) to work within their own areas with local leaders, families, and youth networks to develop locally appropriate response plans. This included placing and maintaining handwashing stations at every street and outside every business, hotel, and restaurant (a strategy also used in cholera), the identification of local isolation spaces, helping oversee compliance of emergency bylaws like restrictions on movement, and helping collate information on rumours and myths about the disease. This was complemented by mass-media outreach including presidential press releases, no-contact door-to-door visits, as well as educational radio programming, murals, and music.

Decentralised service delivery. In the Democratic Republic of Congo (DRC) and Sierra Leone Ebola outbreaks, many services were explicitly decentralised to move them as close to affected populations as possible. For example, despite the availability of and consideration for digital mobile-

based contact tracing applications in both outbreaks, the decision was made to keep case investigations and contact tracing *human* and *local*. Thousands of people (often unemployed college graduates) were hired. Short trainings and regular oversight were more than sufficient to ensure robust and effective surveillance using this localised design. Hiring local people not only provided sustainable employment, but actually *improved* surveillance in many ways, as affected people trusted their community surveillance officers and contact tracers more than someone from the capital or abroad. Response coordinating offices were highly decentralised to ensure oversight of these networks, and to ensure the response was sensitive to local demographics and needs.

Recognition of 'all of government' and 'whole of society' approaches. In both Sierra Leone and DRC, there was recognition that disease outbreaks affect all parts of a society and the responses reflect this: community engagement, risk communication, psychosocial and survivor care, quarantine support (including food delivery and financial aid), logistics, planning, and partnerships were equally central to testing, surveillance, quarantine-compliance, and case management. Coordinating bodies included *all* of these functions for harmonised and complementary responses by including each function as a 'pillar' or 'commission'. Central coordinating bodies with each of these functions were mirrored at the local level to ensure efficient and targeted efforts, and a consistent message that was disseminated through multiple channels.

These efforts helped mobilise communities to take control of their own health decision making and behaviour, in a time when central capacities were in short supply. Experts from the UK government, academic institutions, and NGOs advocated for and supported these interventions in Sierra Leone and DRC. On this basis, these are not foreign concepts, proposals, or methodologies to British disease outbreak specialists, and should not be dismissed as 'cheap and cheerful' interventions only suited for low-income countries.

Challenges on the NHS Frontline

First-hand experience in the NHS highlights a range of challenges that could be addressed by learning lessons from low-income settings.

Communication and engagement with frontline health workers. *This is critical for successful roll-out of mass-testing and for maintaining trust in the health system and credibility of government and PHE.*

The lack of consistency and transparency in the government and PHE's communication to the public and NHS has led to a loss of credibility in the eyes of many professionals. Furthermore, this has allowed a platform for other voices. Health workers with credibility from related disciplines filled the void in authority and were able to create their own version of guidance. This often led to conflicting messages and confused approaches to key issues such as infection prevention and control (including the hot topic of PPE).

The government and PHE should have invested in a strong communication strategy from the outset. Engaging with all levels of the NHS, explaining (rather than dictating) decisions to an intelligent workforce and creating space to listen and respond to the concerns and challenges at the coalface. Not doing this has been a huge lost opportunity – and a lesson that should have been learned from West Africa – but it is not too late to improve.

Government targets should not be handed down to the NHS without adequate explanation for the rationale – and mitigation of negative effects. For example, the recent declaration for universal testing of all hospital admissions which was imposed with immediate effect. No guidance was issued

on the consenting of a screening test in an asymptomatic/presymptomatic population. The result of which could have huge social and economic impacts for the individual and their family. The implications of individuals declining the test were not outlined, neither were the contact tracing responsibilities made clear.

Infection Prevention and Control needs to include broader measures. *This is critical for controlling infection spread, but also for ensuring non-Covid-19 patients can safely use health services.*

In infectious disease outbreaks it is imperative hospitals and clinics do not become amplification points of transmission, as was seen in West Africa's and DRC's Ebola outbreaks. It remains disappointing that handwashing or sanitising stations with observation are not commonplace across the NHS at entrances and other access points within the facilities – this was the case not only outside health facilities in West Africa and DRC but outside nearly all businesses and many private homes, from very early in the epidemic. Furthermore, while a huge amount of attention has been placed on PPE, ensuring basic infection control understanding is in place for all those working inside facilities has not had sufficient attention. Investing in gloves and face-masks is not useful if they are worn inappropriately and contaminate areas expected to be clean. This continues to be a daily challenge within the NHS and will cause increased nosocomial infections.

Dealing with stigma and hard to reach populations. *This is critical to minimise fear of seeking care, promote trust and therefore compliance of all population groups.*

Stigmatisation of patients with infectious diseases is not new and should have been anticipated. Health worker and community education has lacked in helping reassure the public on what is safe alongside necessary risk mitigations. In hospitals it has been observed that staff will avoid treating a patient suspected of COVID-19, and also that following discharge from ITU (long after infectivity has ended) patients that have recovered from COVID-19 continue to be cohorted away from other "normal" patients. This should not happen and will only increase anxiety among the public and feed the stigmatisation which is already taking root.

If individuals fear being stigmatised they will be less likely to engage with public health measures, as has been seen in other epidemics. This could take the form of hiding illness, not giving contact information crucial to case investigations, or evading authorities. A collaborative community engagement strategy is required that recognises the diversity of UK communities and utilises local providers who are known and trusted by local communities, for example by working closely with religious groups, shared interest groups, and employers to reach populations in ways other than an evening news broadcast in English language. Successes of such grassroots approaches are evident from previous disease epidemics including Ebola, HIV, Lassa and TB.

Back to basics

Some high-resource settings have already engaged these back-to-basics concepts: Massachusetts (one of the wealthiest US states per capita and home to academic and tech giants like Harvard and MIT) has eschewed mobile contact tracing apps, electing to hire 1,000 local contact tracers instead. France has elected to use a similar contact tracing strategy. The director of the WHO's Health Emergencies Programme, Dr. Mike Ryan, put it clearly: "We are very keen to stress that IT tools do not replace the basic public health workforce that is going to be needed to trace, test, isolate and quarantine".

The UK has also engaged with some of these ideas by encouraging and providing guidance for home care for mild cases. The NHS Volunteer Responder network (more than 750,000 individuals to date) is also a promising start, but is hugely underutilised: in addition to valuable services like food and medicine deliveries, volunteers could perform contact tracing, community engagement and education, health assistant functions, and more.

In conclusion, the UK should substantially increase consideration for, investment in, and validation of community-level interventions and meaningful engagement with frontline health-workers. This is not only for financial viability, but also for epidemiological effectiveness. Community participation is crucial in a pandemic. Further, we must also acknowledge that COVID-19 has highlighted a lack of sufficient resilience in the UK's public health emergency response capacity. As we consider how to better prepare the UK for future health crises, better funding for the NHS is clearly necessary to build a stronger health system, but this alone is not sufficient. We need strengthening of integrated and harmonised community-level *public* health systems that are not beholden to centralized bodies but rather, are locally engaged and technically able to implement locally appropriate interventions like the ones proposed here. If this can be achieved through the ongoing response to COVID-19, and subsequently maintained as part of future commitment to build stronger health systems, the UK will be far better prepared to tackle future outbreaks.

Evidence submitted by:

Benjamin Black, Obstetrician and Gynaecologist, The Whittington Hospital, London, who worked in the Sierra Leone and DRC Ebola responses and advises on maintaining reproductive health care during epidemics.

Samuel T. Boland, Researcher, London School of Hygiene & Tropical Medicine, who worked in the Sierra Leone and DRC Ebola responses and runs a research project studying disease outbreak coordination mechanisms and best-practice.

Susannah H. Mayhew, Professor, Department of Global Health and Development, London School of Hygiene & Tropical Medicine, who led a Medical Research Council funded research programme on the Ebola response in Sierra Leone.

Gillian McKay, Nurse & Researcher, London School of Hygiene & Tropical Medicine, who worked in clinical and research spaces in the Sierra Leone and DRC Ebola responses, and advises low-income countries on maintenance of primary health care during outbreaks.

May 2020