Support for self-isolation is critical in covid-19 response

Government action needed now to reduce infections and deaths

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The resurgence of covid-19 in the autumn of 2020 in many northern countries, including the UK, has been associated with tremendous morbidity and mortality. Before vaccination, the public health response focused on testing and population-wide restrictions, with the goal of decreasing contact between susceptible and contagious individuals. Striking and widening disparities in covid-19 related outcomes have highlighted the intersection of socioeconomic disadvantage and health inequalities, enhanced by structural racism.¹⁻⁴ Socioeconomically disadvantaged and many ethnic minority groups have been disproportionately affected, with increased risk of infection, hospital admission, and death.⁵⁻⁸

Despite the vaccine rollout, many younger people, particularly those working in high exposure occupations, living in overcrowded housing, or without a home will remain subject to an ongoing burden of quarantine orders, along with a disproportionate risk of infection and onward transmission for the foreseeable future.^{15 9} An equitable and effective public health response requires the integration of supportive services to effectively decrease their contact rates and subsequently risk of infection.⁹

Most countries have used testing as a tool to interrupt transmission chains by encouraging isolation of contacts. However, the ability to quarantine until test results are available, and to isolate if positive, depends on people having the space and resources to do so.¹⁰ Survey data from the UK suggest that less than one in five people are able to adhere to isolation protocols.¹¹ Notably, lower rates of adherence have been reported among men, younger people, key workers, those living with dependent children, and those in lower socioeconomic groups.¹¹ Although willingness to self-isolate was high across all respondents, the self-reported ability to isolate was three times lower among those earning less than £20 000 (£23 000; \$27 000) a year or who had less than £100 saved.¹² This finding is consistent with reports that lost wages are the primary reason for not following isolation guidelines.¹⁰

The risk of household transmission within crowded and otherwise inadequate housing intersects with financial barriers to isolation and inability to work from home. Office of National Statistics data show those living in six person households were three times more likely than two person households to be infected.⁵ Furthermore, crowded households are often multigenerational family groups, including people in high exposure occupations and vulnerable older people.^{5 8 13} A large proportion of people living in socioeconomically deprived areas have unpaid caring

responsibilities, linking households and enhancing transmission risk.¹³

The highest covid-19 mortality has been observed in facility based outbreaks, including in long term care facilities, retirement homes, and homeless shelters.^{1 14 15} Staff in long term care and similar occupations are low paid, often on zero hours contracts, and typically share the prevalence patterns of the communities at greatest risk of covid-19.¹⁵

Since the landmark principles of a population screening test were first set out by Wilson and Jungner in 1968, it has been accepted that the usefulness of screening tests is determined by the effectiveness of the intervention they trigger.¹⁶ What interventions can justify covid-19 screening tests, given the barriers to self-isolation faced by those at highest risk of a positive result?

Appropriate support

Several well described models have been shown to enhance compliance with quarantine and isolation. Fundamental components include ensuring financial security and compensation as well as practical support. A test-and-care model in San Francisco, US, addressed many of the logistical and financial barriers to self-isolation faced by socioeconomically vulnerable populations through provision of information about community resources, home deliveries of material goods (groceries, personal protective equipment, and cleaning supplies), and clinical and social support for people with positive results.¹⁷

Not only was the intervention feasible and acceptable, with 67% of participants requesting support to self-isolate, but trust in the scheme improved over time. This resulted in 11% of participants disclosing a larger number of contacts than at first reported, and 7% requesting temporary relocation to a hotel room for isolation despite initially declining this service.

A similar scheme in New York City offers people with positive results a menu of supportive services to help them quarantine either at home or in free hotel accommodation.¹⁸ The service includes free deliveries of food and medicines, transport, and even dog walking. Vermont designed a response with the needs of high risk groups in mind and has generally had low community spread compared with other US states. Its community and public health led scheme includes protection from eviction, state supported housing for homeless people, hazard pay, meal deliveries, and free pop-up testing in high risk communities.¹⁹ These interventions have led to high rates of test uptake, number of contacts identified, and adherence to self-isolation, contributing to

reducing total household and community transmission.¹⁰

As vaccines are rolled out, even small improvements in people's ability to quarantine and isolate can have an important effect on slowing transmission, hospital admission, and death, especially among those most at risk of covid-19.^{10 20} The next phase of the public health response must align testing strategies with people's lived realities and establish a readily accessible scheme that provides free and safe accommodation for those in need as well as adequate income support, job protection, and replacement of caring responsibilities.

Ultimately, people need to be able to isolate without fear of a substantial damage to their work, income, family, or caring responsibilities. We can't wait for vaccine mediated decreases in morbidity and mortality to manifest. Too many lives have been lost or destroyed. Integrating equitable support services for those most at risk for covid-19 is a national emergency and governments should act accordingly.

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