

## Special considerations in the management of COVID-19 in rural and remote areas

Singapore Med J 2022; 63(3): 172 <https://doi.org/10.11622/smedj.2020112>

Dear Sir,

The outbreak of COVID-19, which arises from severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, is a global health threat.<sup>(1)</sup> Efforts to prevent COVID-19 are required worldwide while awaiting specific drugs and vaccines to be made available. A recent report has summarised key community mitigation strategies against COVID-19, including cancellation of events, use of social distancing measures, travel restrictions, home quarantine, changes to funeral services and communication with precise information.<sup>(1)</sup> These actions are all considered important in general communities.

In rural and remote areas, some special considerations are needed to manage COVID-19, as these areas have specific lifestyles and environments. We can gain valuable insight from a recent study that reported a high mortality rate among rural patients who contracted the influenza virus.<sup>(2)</sup> Once infection appears in rural areas, it might spread with a devastating effect, even though the long geographical distances between rural areas and the surrounding urban/suburban areas are thought to act as a protective barrier against the introduction of viral infections. The activation of community mitigation strategies should, thus, be particularly promoted in rural areas.

Further consideration is needed, based on the fact that besides close human relationships, residents in rural and remote areas are generally older than those living in urban areas. Older people with underlying comorbidities, such as diabetes mellitus and chronic lung diseases, tend to have a severe COVID-19 course.<sup>(3)</sup> A researcher<sup>(4)</sup> has suggested that respiratory and cardiovascular adverse effects may be related to the use of non-steroidal anti-inflammatory drugs, which are occasionally prescribed for underlying comorbidities such as musculoskeletal disorders, among older people. While social distancing is indeed effective in preventing COVID-19,<sup>(1)</sup> given that rural and remote areas have dense human networks, isolation in combination with imbalanced networks may result in the new development of depression, cognitive impairment/decline and/or frailty among older people.<sup>(5)</sup> Obtaining the latest official guidance quickly is often difficult for older people, who are not necessarily familiar with how to obtain such information or use information technology. Sociomedical support for older people should, therefore, be considered.

Furthermore, the medical institutions and staff in rural and remote areas are typically underserved. In preparing for the possible development of an outbreak and encountering patients with a severe COVID-19 status, construction of medical systems in cooperation with the surrounding areas is an urgent issue of health policy in rural and remote areas. We must pay close attention to efforts to manage COVID-19 while considering the characteristics of rural and remote medicine.

Yours sincerely,

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