COVID-19 in long-term care facilities in South Africa: No time for complacency

COVID-19 cases and deaths continue to increase daily across the world. By 24 August 2020, South Africa (SA) was ranked fifth globally in the number of positive cases and had reported 611 450 cases and 13 159 deaths.[1] The true number of deaths attributed to COVID-19 is likely to be higher than this. The South African Medical Research Council has been tracking mortality for decades in SA and estimated 36 587 excess deaths in persons aged ≥1 year by 11 August 2020, compared with deaths in previous years.[2]

According to estimates from countries in Europe and North America,[3,4] up to half of those who died from COVID-19 were residents in long-term care facilities. In Europe it was realised some weeks into the pandemic that care facilities' data had not been routinely reported alongside statistics for COVID-19 deaths from hospitals.[5] High-income countries were focused on hospitals at the start of the pandemic, lacked guidelines and protocols for care facilities, and were unprepared for 'catastrophic events' unfolding in care facilities that resulted in significant mortality.[3,6,7]

Residents of long-term care facilities are at risk for acquiring COVID-19 and for severe outcomes. COVID-19 appears to present an increased risk to people with neurocognitive deficits or intellectual and physical disabilities.[8] The exact nature of the causal link is unclear at present and may be due to a variety of biological and environmental factors. Difficulties with adhering to frequent handwashing and physical distancing as well as poor insight and judgement regarding the risk of infection put them at increased risk of disease transmission.[6] Being older and having multiple comorbidities is a leading indicator of poor outcomes from infection with COVID-19.[2] In addition, the physical environment in long-term care facilities often requires performance of activities in communal spaces in close proximity that further complicates the management of outbreaks.[9] Staff working in multiple homes with lack of training and inadequate personal protective equipment (PPE) have also been described as contributing factors.[2] High risk for introduction of COVID-19 transmission in the care home setting includes: (*i*) residents hospitalised and then discharged back to the care home; and (*ii*) care home employees who may have acquired COVID-19 in the community.

Much work has already been done in SA to develop guidelines for preventing and managing COVID-19 in long-term care facilities,[10] and to describe the impact of COVID-19 on long-term care facilities.[7] In addition, the National Institute for Communicable Diseases (NICD) established an in-hospital surveillance platform on 1 April 2020,[11,12] which was expanded on 11 June 2020 to include surveillance for COVID-19 in care facilities.

There are estimated to be 1 150 residential care homes for the elderly and 1 000 private long-term care facilities for older persons in SA.[7] The availability of long-term care facilities reflects urban-rural and historical racial divides, most are managed by non-governmental and faith-based organisations, and the standard of care in these facilities is highly variable.[7] In collaboration with the national departments of Health and Social Development, a cohort of care facilities was identified to be enrolled across the country, to represent different types of care facilities in each province, in rural and urban settings, and in both affluent and impoverished communities.

In respect of the surveillance process, the data are submitted by an administrator or healthcare worker of the care facility into DATCOV, the NICD's online platform for COVID-19. Data are captured for both residents and care facility employees who test positive for COVID-19, on demographics and comorbid conditions, and on outcomes (recovered, admitted to hospital or death). Deaths are reported on all individuals who had a COVID-19 laboratory-confirmed diagnosis and exclude deaths obviously attributed to other causes.

A preliminary analysis of data submitted by 19 long-term care facilities was conducted on 25 August 2020. These facilities included old-age homes and mental healthcare, rehabilitation and frail care facilities in Eastern Cape, Free State, Gauteng, Western Cape, Limpopo, Mpumalanga and KwaZulu-Natal provinces.

A combined total of 837 individuals tested positive for COVID-19. These included 502 residents (representing 10% of the 4 825 residents) and 335 staff (representing 12% of the 2 657 staff) in those facilities. The median (interquartile range) age of residents diagnosed with COVID-19 was 58 (42 - 71) years and that of staff 42 (35 - 50) years. There were 447 females reported as COVID-19 cases (53%). Among the 770 cases with comorbid conditions (92%), the most common were hypertension (*n*=163; 21%) and diabetes (*n*=60; 8%). Of the 502 residents, 375 (75%) recovered, 53 (10%) died and 74 (15%) remained active cases as of 25 August 2020. Of the 335 staff, 318 (95%) recovered, 4 (1%) died and 13 (4%) remained active cases as of the same date.

The residents and staff of care facilities are a vulnerable group in the COVID-19 pandemic, and surveillance has revealed that 10% of residents and 12% of staff have acquired the disease in 19 facilities. Expanding the NICD sentinel hospital surveillance for COVID-19 to a spectrum of care facility types has provided valuable information in high-risk groups around risk factors for disease and outcomes. This surveillance will serve to alert managers from the departments of Health and Social Development of possible outbreaks in care home settings, so that resources may be targeted where they are required and effective, co-ordinated responses from both departments can be ensured.

The following urgent recommendations are proposed around three key areas:

Infection prevention and control

- Develop comprehensive plans for infection prevention and control that include training and protocols around environmental cleaning and disinfection, personal hygiene and respiratory etiquette, PPE, waste disposal, staff travel, physical distancing, risk identification and family visits.
- Acquire essential equipment and resources such as PPE, digital thermometers, pulse oximeters, glucometers and medicine stocks.
- Determine advance human resources planning to ensure continuity of services.

Early identification of cases

- Test residents and staff who display symptoms and ensure rapid turnaround times (<24 hours) for laboratory results. (Owing to low test capacity and long turnaround times, regular testing for asymptomatic individuals without known or suspected SARS-CoV-2 exposure for early identification in special settings is not feasible at this time.)
- Report positive cases to authorities, including the NICD care home surveillance system.
- Postmortem confirmatory testing for suspected COVID-19 should be sought wherever possible to determine the cause of death in residents.

Clinical management and early referral where required

- Review of the facility structure with creation of isolation and quarantine 'zone' spaces or wards.
- Early isolation of positive cases and quarantine of close contacts.
- Ensure sufficient supplies of chronic medications for residents with comorbid conditions.
- Ensure that residents have basic monitoring of glucose, blood pressure and other measures, and prompt clinical management if they are confirmed with COVID-19.
- Ensure that referral systems are known in advance, as patients can decompensate rapidly and may need to be transferred to hospital to receive the required medical or surgical attention.
- Determine advance care plans and palliative care requirements and maintain ongoing communication with families. Advance care planning is a process that enables individuals to make plans about their future healthcare. Advance care plans provide direction to healthcare professionals when a person is not in a position to make and/or communicate their own healthcare choices.
- Support residents and staff within the facilities to manage stress.

It is not too late to recognise the risks in long-term care facilities and to provide these vulnerable settings with the support and resources that they require.

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