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IMPACT OF COVID-19 ON LONG-TERM CARE IN MINNESOTA

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STATE LONG-TERM CARE SETTING

GENERAL (PRE-COVID) SETTING AND CONTEXT

Minnesota is located in the upper mid-west United States, with its sparsely populated northern region bordering Canada. Approximately 65% of the state's 5.6 million population is in the Minneapolis and St. Paul (Twin Cities) metropolitan area. Sixteen percent of Minnesota's population is age 65 or older, while 4% is age 80 or older. [1]

Long-Term Care Expenditures and Care Quality

The state's percentage of Medicaid expenditure for long-term services and supports (LTSS) has been shifting steadily away from institutions and into home and community-based services (HCBS) [2]. In 2017, expenditures for nursing facilities comprised only about 17% of the Medicaid LTSS budget. Minnesota is consistently ranked as one of the top 2 states overall in AARP's LTSS State Report Card [3].

Characteristics of Nursing Facilities

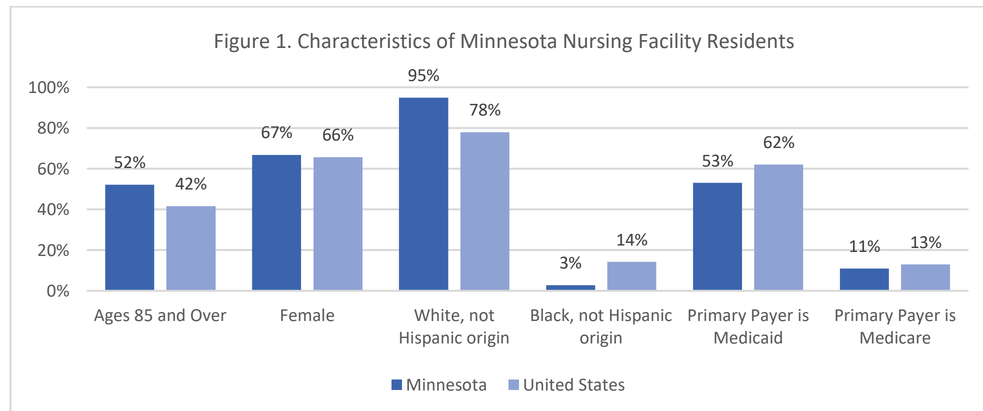
Minnesota has 368 nursing facilities, 35% of which are located in the Twin Cities, 30% in other metropolitan areas, 27% in micropolitan or small towns, and 8% in areas classified as rural. Unlike most other US states where the majority of facilities are for-profit, 60% of Minnesota's nursing facilities are non-profit, 32% are for-profit, and 8% are governmental. In 2019, facilities averaged 67 residents per day and average occupancy (residents/bed) of 85%. The number of residents per day and occupancy rates have dropped by 5% over the last 5 years. Medicaid was the primary payer for 57% of resident days, 9% were Medicare, 25% were private pay, and 10% were other pay sources. [4].

Transitions Between Nursing Facility, Hospital, and Community Settings

Minnesota nursing facilities have a considerable number of transfers between nursing facility, hospital, the community. The daily average number of Minnesota nursing facility residents in 2019 was 24,755. However, the number of individuals residing in a nursing facility at any time during the year was far greater. There were 63,433 new admissions to nursing facilities. Eighty-eight percent of new admissions came from acute care hospitals. Of the 63,683 discharges during the year, 53% returned to the community and 27% died either in the facility or an acute care setting, and the remainder transferred to another facility.[5]

Nursing Facility Resident Characteristics

Characteristics of nursing facility residents in Minnesota differ from national averages in important respects (Figure 1). Minnesota nursing facility residents tend to be older (52% vs. 42% age 85 or older), predominately white (95% vs. 78%), and less likely to have a Medicaid pay source (53% vs. 62%) [6].



Assisted living Facilities

Minnesota has a large number of assisted living facilities, which provide housing and certain supportive services, such as meals, laundry, housekeeping, and arranging for medical services, social services, or transportation. Some facilities specialize in dementia care. They may be referred to as memory centers, or they may have a dementia unit within the assisted living facility. In contrast to nursing facilities, assisted living facilities are not required to provide 24-hour nursing care. Compared to nursing facilities, assisted living facilities have less stringent licensing requirements, they are subject to few regulations, and they are populated by a wide range of income groups. Less information is publicly available on their residents or services.

STATE COVID-19 OUTBREAK AND POPULATION LEVEL MEASURES

STATE COVID-19 CONTEXT

COVID-19 cases began in March 2020 and reached their peak in mid-May, while deaths peaked in June.

The COVID-19 outbreak in Minnesota began in mid-March, but spread of the disease occurred later than states in the West and Northeast. By July 12, Minnesota had a cumulative total of 41,609 COVID-19 cases and 1,537 deaths. The average number of new cases reached its peak at 840 on May 23 and deaths peaked at 39 on June 10. The daily new case count held steady in Mid-June; however, by the end of June it was trending upward again. [7]

Executive Orders were issued shortly after the COVID-19 outbreak.

The Governor of Minnesota issued a series of Emergency Executive Orders beginning with a Peacetime Emergency Declaration on March 13, closure of public accommodations on March 16, and a stay-at-home order on March 25. The Executive Order for re-opening the economy was issued on May 13 and the re-opening is still in process. Other Executive Orders dealt with economic relief, consumer and worker protection, education, healthcare services and supplies, and healthcare workforce. See the Appendix for Executive Order details.

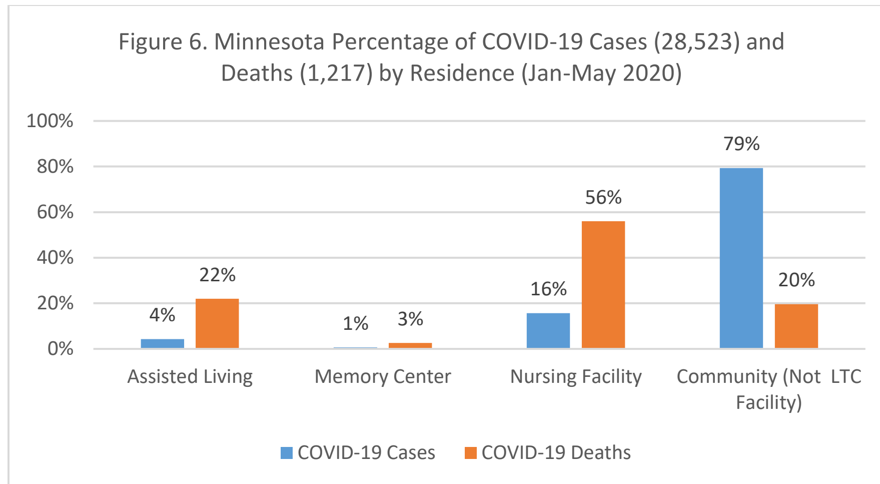
POPULATION LEVEL MEASURES

COVID-19 case and death rates were strongly related to long-term care setting

In the period January through May 2020, 78% of Minnesota's 28,523 COVID-19 cases were recorded for individuals younger than age 60. In contrast, 93% of 1,217 deaths were recorded for people 60 or older, and 62% of deaths were of people 80 and older. The prevalence of cases per 1,000 persons in each age group was .51 cases for ages 1-59, .49 cases for age 60 and older, and .98 cases for age 80 and older. Mortality per 1,000 persons was .002 deaths for age 1-59, .009 deaths for age 60 and older, and .34 for age 80 and older [8]. Among nursing facility residents, on the other hand, we estimated a prevalence of 143 cases per 1,000 residents and 28 deaths per 1,000 residents [9].

Residents in long-term care settings accounted for only 21% of Minnesota's total COVID-19 cases, yet they experienced 81% of total COVID-19 deaths.

There were striking differences in the distribution of resident cases and deaths by the setting in which people resided (Figure 6). Of Minnesota's total COVID-19 cases though May 2020, 22,625 (79%) were among people residing in community settings (private residences), while 2,973 (16%) of cases were nursing facility residents or staff, 1,243 (4%) were assisted living residents or staff, and 179 (1%) were memory center residents or staff. In sharp contrast, only 238 (19%) of deaths were among individuals in the community. Among the 913 deaths in long-term care, 615 (56%) were of residents of nursing facilities, 267 (22%) were residents of assisted living facilities, and 31 (3%) were residents of memory centers. [9].



The number of COVID-19 cases among facility staff was highly correlated with resident cases in long-term care facilities

One of the major sources of COVID-19 transmission to facility residents is through the facility staff. A large number of cases, both confirmed and suspected, were reported among the staff of LTC facilities from January through May. Of the 1,449 reported staff cases, 942 were in nursing facilities, 444 in assisted living facilities, and 63 in memory centers. From analysis of our data, we found that the number of cases among staff in a facility was highly correlated with cases among its residents: r=.828 for nursing facilities, r= .750 for assisted living facilities, and r= .578 for memory centers. [5]

Some facilities had large numbers of COVID-19 cases or deaths, but most facilities had relatively small numbers of cases and deaths.

A total of 424 long-term care facilities reported one or more resident or staff cases through May 2020. Cases were recorded for 255 out of a total of 356 certified nursing facilities and 154 out of a total of 1,786 licensed assisted living facilities or dementia units. The majority of facilities had only 1 to 9 cases. However, 28 facilities experienced large numbers of cases: 5 with more than 100 cases and 23 with 50-99 cases. A total of 154 long-term care facilities had resident deaths. Deaths were reported in 78 nursing facilities, 66 assisted living facilities, and 8 memory centers. The majority of facilities had 1 to 9 deaths, while 4 facilities, all nursing facilities, had 30 or more deaths. [5]

COVID-19 cases and deaths were concentrated in Twin Cities area, particularly Hennepin, Ramsey and surrounding counties.

Through May of 2029, four counties in the Twin Cities metropolitan area (Hennepin, Ramsey, Anoka, and Dakota) had a majority of Minnesota's COVID-19 cases. The counties totaled 11,416 community and 4,452 long-term care cases, and 143 community and 835 long term care deaths. [5]

Racial and ethnic minorities in Twin City counties had dramatically higher rates of COVID-19 cases than did whites; however, the rates of COVID 19 cases and deaths did not differ significantly between nursing facilities having high and low percentages of minority group residents.

The same four counties in Twin Cities have the largest number of minority group members. Based on figures from the NY Times [10] and US Census [1], we estimated that the prevalence of COVID-19 cases in these counties was more than 5 times higher for Black/African Americans and more than 4 times higher for Latinos than for Whites. [5] After grouping nursing facilities in these counties according to their percentage of minority group residents (< 5%, 5-10%, 10-20%, and > 20%), we found no significant differences between these groupings in facility rates of COViD-19 cases or deaths. Facilities with >20%

minority residents were no more likely to have a COVID-19 case or death than facilities with < 5% minority residents. We found similar results when we expanded the analysis to include facilities statewide and when we compared facilities according to the number of case or deaths. [5]

RISK MITIGATION STRATEGIES

Minnesota's Strategy to Address COVID-19

The Minnesota Department of Health (MDH) has taken the lead in Minnesota in strategies against COVID-19 in long-term care settings. The MDH has followed a Five-Point Battle Plan [11]. The goals of Battle Plan are to: preserve hospital bed capacity by ensuring long-term care facilities can safely accept and care for residents who don't need to be in the hospital; reduce COVID-19 transmission among residents and staff; quickly identifying facilities needing special support; and help facilities plan for and manage COVID-19 infections The 5 points of the Battle Plan are to: expand testing for residents and workers in long-term care facilities; Provide testing support and troubleshooting to clear barriers faster; Get personal protective equipment to facilities when needed; Ensure adequate staffing levels for even the hardest-hit facilities; leverage local and regional public health partnerships to better apply their skills and talents.

Helping Long-Term Care Facilities Prevent and Address COVID-19

Facility Collaboration and Support

The MDH, in collaboration with long-term care facilities, has taken many concrete steps to implement the mitigation strategy. These steps have included outreach and education, case managers assigned to facilities with COVID-9 cases, response guidance, and investigations [12].

Regulatory Action

The MDH has also taken regulatory action through nursing facility surveys focused on infection control or stand-alone complaints [13]. Thirty-nine percent of these surveys resulted in findings that the facility was not in compliance with infection prevention and control practices required by the CMS. The facilities were issued 163 deficiency citations for infection control, each of which necessitated corrective action by the facility.

Testing

The MDH's guidance on testing is directed to facilities with one or more COVID-19 positive test or symptoms among residents or staff [14]. Facilities receive support in testing from MDH if they have a positive or symptomatic COVID-19 case (resident or staff), have had an infection-related deficiency, or are considered high risk by the MDH case manager. In order to expand testing capacity, the MDH is establishing contracts with health systems to deploy a swabbing team to perform tests in congregate settings in each region of the state. Testing costs not covered by Medicare or private insurance will be covered by the state [13]. Nearly all (99%) of Minnesota's nursing facilities reported having access to resident testing in the facility according to the CMS/CDC COVID-19 data system through June 14 [15].

Cohorting, Personal Protective Equipment (PPE) and Infection Control

The MDH Toolkit offers guidelines for grouping of residents, or "cohorting," to separate COVID-19-positive residents from residents who are not affected [14]; and guidelines for personal protective equipment (e.g., facemask, eye protection, gown, and gloves). By June 3 the MDH had fulfilled 868 requests for PPE [13]. Nonetheless, as late as the middle of June, almost a fourth (24%) of Minnesota nursing facilities reported having less than a week's supply of one or more PPE items [15]. The percentage

of nursing facilities with a week's supply was 84% for N95 masks, 95% for surgical masks, 94% for eye protection, 89% for gloves, 89% for gowns, 94% for hand sanitizer.

Worker Policies and Staffing

The MDH and the Minnesota Department of Human Services (MDHS) has attempted to shore up nursing facility staff, while at the same time screening for COVID-19 and making sure staff with a positive test or symptoms did not work in the facility. Most of the support has come from the lifting of regulatory requirements, such as physician task delegation, expanded telehealth, waived training and certification requirements for nursing assistants [16]. An Emergency Executive Order expanded the flexibility of nursing facilities to employ pool staff, including staff from other health care settings [17]. Despite these efforts, on June 14, 26% of Minnesota's nursing facilities reported a shortage of nursing staff, 3% a shortage of clinical staff, 29% a shortage of aides, and 16% a shortage of other staff [15].

Resident Life

COVID-19's biggest impact on resident life is restrictions on visitors imposed through Federal and state guidelines. At the end of March, visitors and volunteers, including family members and friends, were not allowed to visit residents of long-term care facilities except under compassionate care such as end-of-life situations [18]. On June 16, restrictions were eased somewhat with allowances for window visits, including open windows when both parties wear masks. Then on June 19, restrictions were further eased by allowing supervised outdoor visits in designated areas. On June 6, beauty shop services also resumed under controlled conditions [19].

FINANCIAL SHOCKS AND STRATEGIES FOR RESILIENCE / REPORTING

The state and Federal governments provided payments to nursing homes and other long-term care facilities for emergency expenses incurred because of COVID-19. Minnesota's COVID-19 payment programs were administered mainly by the Minnesota Department of Human Services (MDHS) and MDH [14]. The MDHS offered expedited reimbursement for nursing facility incremental COVID-19 costs for staffing, PPE, and other necessary supplies because of COVID-19. Staffing costs included staff hours, staff wages, over-time pay, and sick leave. The state also appropriated $150 million for health care response expenses by health and long-term care facilities through a rolling program of competitive grants. By the end of May, 162 assisted living facilities had received $9.6 million out of a total of $97 million awarded [20]. Almost all nursing facilities in Minnesota also received funds under the Federal government's CARES Act through Provider Relief Fund and expansion of the Accelerated and Advance Payment Program. [14].

TRANSPARENCY

Minnesota Department of Health maintains a comprehensive public reporting system that has daily updates on COVID-19 cases and mortality. [8] This site has tables and graphs showing testing, cumulative cases and deaths, hospitalizations, case demographics, race/ethnicity, and geographic location. The site contains a list of long-term care facilities with one or more resident or staff cases.

The only facility-specific information on number of COVID-19 cases and deaths was released by MDH on June 7 in response to an inquiry by a Legislative Committee. [13] The MDH has not updated figures on long-term care COVID-19 cases and deaths since May.

Under CMS requirements issued in May, nursing facilities must inform residents and their representatives within 12 hours of the occurrence of confirmed or suspected resident or staff COVOD-19 infection. Updates to residents and their representatives must be provided weekly. Facilities must include information on mitigating actions implemented to prevent or reduce the risk of transmission, including if normal operations in the nursing home will be altered.

CHANGES, NEEDS, AND CALLS FOR ACTION

Progress to Date

Minnesota has made substantial progress in its response to COVID-19 in nursing homes and other long-term care facilities. Facilities appear to be far better prepared now to address the pandemic than they were in March when it began. Due in large part to tragic news stories, the public and state officials have become aware of toll that COVID-19 has taken on long-term care facility residents. The Minnesota Department of Health has developed and at least partially implemented a strategic plan, including its Five-Point Battle Plan, for COVID-19 prevention and support of long-term care facilities. The Minnesota Department of Human Services has channeled financial resources into nursing facilities to cover their staffing and other emergency costs due to the COVID-19. Faced with another surge in COVID-19 this fall and winter, facilities should be in a much better position to protect their residents. Despite progress in combatting COVID-19, Minnesota faces continued challenges.

Policy and Programmatic Challenges

- Ensuring access to personal protective equipment and infection control support for staff and residents. As recently as mid-June a small but significant number of long-term care facilities reported an inadequate supply of PPE.
- Expanded and reliable testing. COVID-19 testing, although generally available to facilities, is prioritized for situations where a facility has a documented or suspected case. This strategy may be ineffective in preventing the introduction of COVID-19 cases by individuals who are asymptomatic or pre-symptomatic.
- Balancing social distancing policies with patient rights and family visitation. The extended period of physical and social isolation of nursing home residents is taking a psychological toll on residents and family members. Communication devices and opening up for supervised outdoor visits is probably helping with this situation. More might be done with comprehensive resident and family member testing or dedicated indoor spaces for visits.
- Returning to “normal” once the COVID-19 pandemic subsides. A one-time infusion of financial or other resources by the state may be accompanied by problems in winding down and return to an earlier resource level. COVID-19 related resource needs may continue beyond the point that the epidemic, itself, is under control.
- Reinstating and perhaps strengthening regulatory standards. The lifting of regulations on nursing staff, particularly greater flexibility to employ pool staff and waiver of training and certification requirements for nursing assistants, was intended to be temporary in order to deal with COVID-19. These regulations need to be reinstated when feasible. These regulations promote care quality by ensuring proper training of direct care staff and providing for a permanent, stable workforce.

Structural Challenges

- Addressing ongoing staffing challenges. Long-term care facilities will probably continue to experience chronic staffing shortages and instability due to historically low wages, inadequate sick leave or health insurance, and unfavorable working conditions. Fear of infection may discourage workers from taking jobs in nursing or other long-term care facilities.
- Eliminating racial disparities. Rates of COVID-19 are dramatically higher among minority groups in the Twin Cities and other parts of the state. Although we found no evidence that facilities serving a higher percentage of racial or ethnic minorities had higher COVID-19 cases or deaths, this issue warrants further study with more recent, resident-specific data.

- Achieving financial stability. The long-term care system is likely to experience financial instability from occupancy declines combined with strained Medicaid budgets. Utilization of nursing and other long-term care facilities could decline, at least in the short run, because of higher resident mortality; fear of entering a facility; fewer hospital discharges for post-acute care; and inability to hire and retain staff. At the same time, reimbursement rates by Medicaid or other pay sources may remain flat or decline because of strains on state budgets.
- Mitigating against indirect COVID-19 effects. Much of the effort to deal with COVID-19 has focused on direct effects, such as COVID-19 incidence, hospitalizations, and death. Yet, COVID-19 can have substantial indirect effects in exacerbating other pre-existing health conditions or leaving the surviving individual with ongoing health problems. Other negative effects can come from delays in care, psychological distress, or breakdowns in care quality as facilities respond to the pandemic. An important component of a strategy toward COVID-19 (or other future epidemic) is addressing its full range of effects.
- Improving care quality. A facility's effectiveness in dealing with COVID-19 will likely be influenced overall care quality and it will depend in part on the facility's history of care quality, expenditure patterns, acuity, and profit/non-profit status.
- Enhancing facility capacity to deal with high acuity residents. Nursing facilities are being called upon increasingly for provision of post-acute care. Yet, greater resident acuity in nursing facilities has not been accompanied by enhanced skilled nursing and medical care capacity.
- Greater integration between the acute and long-term care systems. Infection control and management of COVID-19 and other conditions require active involvement of medical providers (medical directors, community physicians, and nurse practitioners). Similarly, stronger relationships with hospitals are necessary to improve care transitions.

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