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Letter to the Editor

Time to Strategically Position Nursing Homes to Effectively Manage Emerging Infections



To the Editor:

In response to the coronavirus disease 2019 (COVID-19) pandemic, United States nursing homes (NHs) implemented protocols to protect NH residents from contracting the virus. However, protocol implementation and effectiveness varied across regions. The restrictions included in these protocols, such as halting visitation and communal activities, resulted in NH resident isolation and disruption of many programs designed to promote healthy aging. Prior to the COVID-19 pandemic, NHs had already been struggling with high acuity, limited resources, and a uniquely high risk for emerging infections.¹ The response to the COVID-19 pandemic in NHs was further complicated by lack of access to surveillance, strategic data-informed decision-making, limited testing and access to protective personal equipment, asymptomatic transmission by residents and staff, lack of consistent infection prevention and control (IP/IC) and antimicrobial stewardship (AMS) practices, and varying local, state, and federal guidance. In an effort to support early risk mitigation and emergency preparedness in response to severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) and other emerging infections, we urge the Federal Government response to consider the following:

Provide Adequate Funding, Training, and Guidance to NHs to Develop, Implement, and Adopt Robust Certified NH Health Information Technology Designed for, and with, NHs

Payers and accreditation bodies have promoted adoption of Health Information Technology (HIT), including electronic health records (EHRs), data integration, and interoperability across NHs. However, the degree and extent of EHR adoption across NHs in 2020 is largely unknown because NHs were not included in Federal Government incentive programs (Meaningful Use or Promoting Interoperability Legislation).^{2,3} To date, based on a literature review and our anecdotal experience, there are very few examples of how EHRs have meaningfully supported NH clinical operations and patient outcomes.⁴ Meanwhile, when thoughtfully implemented, EHRs drive a culture of quality improvement, including AMS, disease surveillance and management, medication reconciliation, syndromic surveillance (identifying potential disease spread based on monitoring symptoms among a population at risk), and transfers in care. The lack of National government investment and guidance in HIT among NHs means missed opportunities to practice data-driven

population health and strategic data-informed decision-making. We urge Federal investment in (1) development of a Federal NH HIT infrastructure that is interoperable with current certified EHR architecture; (2) identification of a finite number of NH EHR systems selected by consensus and in collaboration with NH owners, providers, staff, and families; and (3) Federal incentives for NHs to adopt and implement EHRs to support high-quality patient care.

Invest in and Bridge IP/IC and AMS within NHs with Technology Platforms

HIT is an important foundation and bridge to support, evaluate, and improve the effectiveness of IP/IC and AMS. An integral component of AMS is diagnostics, which should always be considered in conjunction with careful clinical evaluation of symptoms, patient status, and risk for severity of illness, and, optimally, in consultation with a clinical microbiologist⁵ or infectious disease personnel (if possible) who has in-depth knowledge of the true specificity and clinical relevance of the diagnostic tests being ordered for the patient population.

A study of multidrug resistant organism (MDRO) infections among United States NHs revealed that 57% of the NH residents infected with an MDRO were infected in the NH, while 41% were infected in acute care settings.⁶ Another study found transmission of MDROs among residents in a single NH and also between 22 NHs within the study.⁷ With the increased need for acute care in this population, there is scope for introduction of MDROs from NHs to acute-care facilities, and vice versa.^{6,8} These facilities had a low adherence to basic IP, possibly a result of inadequate staff education, high staff turnover, and a lack of internal monitoring processes. Incorporating technology and interventional strategies (educational sessions, academic detailing, prescription feedback, provision of guidelines, algorithms, pocket cards, posters, toolkits, and establishing use of antibiograms) in IP/IC efforts may improve compliance monitoring and reduce transmission risk within, to, and from NHs.⁹ Centers for Medicare and Medicaid Services and Centers for Disease Control and Prevention have comprehensive educational tools for IP/IC and AMS. In addition to guiding facilities to these resources, clinician educators can work with, mentor, and follow-up with interdisciplinary teams, as well as establish partnerships between NHs and academic institutions to help reduce infections, improve patient outcomes, and evaluate IP/IC and AMS effectiveness within NHs. Instituting facility-tailored IP/IC practices and capacity building will facilitate the capture of objective, electronic input of data on infections, diagnostic approaches used, and treatments prescribed; analysis of that data in the context of AMS practices; and delivery of ongoing education on all aspects of AMS through robust quality improvement planning.

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