

Centers for Medicare and Medicaid's Qin-Qio Targeted Response Intervention Associated with Reductions in COVID-19 Incidence in Nursing Homes

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Research Objective: In 2020 COVID-19 became the leading cause of death in the United States,[1] with nursing home (NH) residents accounting for approximately 40% of all COVID-19 deaths.[2] To help NHs combat COVID-19, the Centers for Medicare and Medicaid Services (CMS) directed targeted response (TR) interventions through its twelve Quality Improvement Network – Quality Improvement Organization (QIN-QIOs) contractors. TR involves focused onsite and/or virtual one-on-one technical assistance to nursing homes. For COVID-19 TR, the most common QIN-QIO-reported activities include: assistance with developing and implementing policies and improved processes for hand hygiene, ensuring availability and proper use of personal protective equipment, and general infection control. CMS' criteria to refer NHs for QIN-QIO assistance varied over the entire study period as the program evolved. At various times, these criteria included: infection control-related health inspection deficiencies, NHs located in counties designated as geographic hot spots, having 30 or more new COVID-19 cases in the past week. NH participation in TR is voluntary and free-of-charge. The objective of this study was to assess TR impact on COVID-19 incidence in NHs.

Study Design: We used a quasi-experimental observational design. NHs may have started receiving TR any time between April 24, and October 28, 2020. COVID-19 incidence data were obtained for May 31 through November 29, 2020 from the National Healthcare Safety Network. Each program NH was matched at the time of first QIN-QIO interaction with a similar non-TR NH. Matching characteristics were: overall NH star rating, health inspections star rating, bed size, state, area deprivation index, and county-level COVID incidence in the month of and the month prior to first receipt of TR. We used longitudinal regression models in the period following first QIN-QIO interaction to compare COVID-19 incidence between NHs that received TR to matched controls that did not. Generalized estimating equations with a Poisson distribution and log-link were used to model COVID-19 incidence, TR status and a full set of covariates.

Population Studied: CMS-certified NHs providing short-stay, long-stay, or both types of care.

Principal Findings: Among the 2474 NHs that received TR in the study period, 2013 were matched to 2013 similar NHs that did not. Depending on the month, COVID-19 incidence after matching was similar or higher in the TR group at baseline, but all other covariates

were balanced. In this preliminary analysis, NHs receiving TR had 27.7% (p-value <0.0001, 95% CI: 17.2%–36.9%) lowered COVID-19 incidence compared to similar NHs that did not receive TR. Effect estimates withstood early sensitivity analyses.

Conclusions: The TR intervention was associated with a decline in COVID-19 incidence in TR NHs relative to non-TR NHs. Future analyses will explore which aspects of TR and QIN-QIOs may have been most effective and the attributes of nursing homes that demonstrated improvement.

Implications for Policy or Practice: Deploying TR for quality improvement in NHs in real-time demonstrated a relative improvement in infection control. CMS should consider expanding TR to a broader range of outcomes. In addition, we must continue to conduct real-time evaluation of the QIN-QIO program as the tools and technologies evolve to prevent infections and other negative outcomes in facilities.

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Improving Diagnostic Testing Decisions for Pediatric Minor Head Trauma in the Emergency Department: A Two-Year Prospective Implementation Study

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Research Objective: The risk of serious intracranial injury in pediatric patients with minor head trauma (MHT) is less than 5%; most computerized tomography (CT) scans in MHT are normal or contribute little to management, yet expose children to unnecessary radiation. Despite evidence-based risk classification criteria from the Pediatric Emergency Care Applied Research Network (PECARN) for assessing appropriate CT use during emergency department (ED) visits, barriers persist to replacing unnecessary scans with structured observation. Field readiness assessments at Intermountain Healthcare suggest that physicians often believe they know the risk factors for traumatic brain injury (TBI) but sometimes misremember elements. Information retrieval when delivering ED care can be cumbersome. Many physicians also perceive ordering CT scans is the safest course of action despite a lack of significant symptoms. We theorized that targeting evidence-based education at the individual scan decision point, coupled with timely performance feedback, would increase cognitive support for assessing risk of clinically-important TBI (ciTBI), reducing potentially unnecessary scans.

Study Design: We conducted a prospective pre-post comparison implementation study. The primary implementation strategies were