

ASSESSMENT OF TARGETED RESPONSE FOR COVID-19 VACCINATION

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BACKGROUND

The Independent Evaluation Contractor (IEC) supports the Centers for Medicare & Medicaid Services' (CMS) Network of Quality Improvement and Innovation Contractors (NQIIC) by designing and conducting formative and impact evaluations to monitor Quality Improvement Network – Quality Improvement Organization (QIN-QIO) contractors' progress toward NQIIC goals.

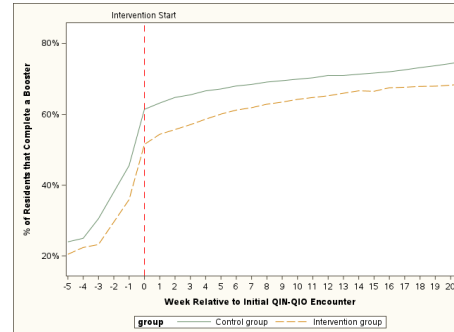
The Targeted Response-Quality Improvement Initiative (TR-QII) for COVID-19 vaccination is an initiative designed to support nursing homes with low COVID-19 vaccination rates. CMS refers nursing homes to QIN-QIO contractors, which then implement TR-QII in the referred nursing homes. Since December 2021, the initiative has focused on resident vaccination rates. To implement TR-QII, QIN-QIOs used a variety of interventions which targeted several issues including but not limited to vaccine access, vaccine hesitancy, health equity, staff turnover, leadership, and data reporting.

OBJECTIVE

The IEC assessed QIN-QIO contractors' attributable impact on increasing nursing home resident COVID-19 vaccination rates through utilization of tailored, customized interventions designed to mitigate issues of vaccine access and hesitancy and improve data reporting among QIN-QIOs.

KEY FINDINGS

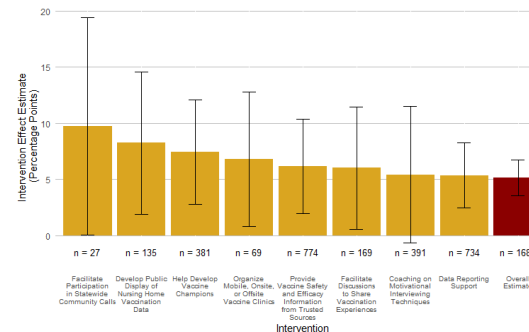
Trend in Nursing Home Resident COVID-19 Booster Rates in TR-Supported and Unsupported Nursing Homes



Sources: CMS TR-QII Referrals, NHSN, QIN-QIO Self-Reported Encounters

- The IEC's modeling found that the effect of TR-QII support 20 weeks after initial intervention was a 5.1 percentage point increase in resident booster rates.
- The specific interventions associated with statistically-significant increases in booster rates are depicted in the graphic at right above.

Percentage Point Increase in Nursing Home Resident Booster Rates Associated with Select Interventions from the Fully Adjusted Model



Sources: CMS TR-QII Referrals, NHSN, QIN-QIO Self-Reported Encounters

LIMITATIONS

The IEC faced several limitations in this study. The conditions of the study period, starting in January 2022, may not be replicated, limiting the study's external validity. Many facilities referred for TR-QII support had evidence of data reporting errors. The comparison group included nursing homes previously referred for TR-QII support, and other forms of support, such as from state and local health departments, were unaccounted for in the model. There was insufficient data on some interventions, necessitating their exclusion. The TR-QII referral mechanism was non-random, limiting the generalizability of the model findings.

METHODOLOGY

The IEC's impact evaluation used a mixed-methods approach to assess the attributable impact of vaccination TR-QII on nursing home resident COVID-19 vaccinations, specifically the receipt of booster vaccinations. The IEC's statistical model used a Comparative Interrupted Time Series (CITS) design, a form of difference-in-differences that controls for pre-intervention trends in the intervention group and their matched comparisons. Drawing from a bulk referral of 3,402 nursing homes that took place in January 2022, the IEC matched 1,686 TR-QII-supported nursing homes to a comparison group of 1,667 non-supported nursing homes on state and trend in vaccination rates before initial TR-QII support to evaluate the impact of vaccination TR-QII on resident vaccination rates. The IEC controlled for factors such as community vaccination rates, Social Vulnerability Index (SVI), star rating, percentage of long-stay residents, bed size group, past TR-QII support, community spread of COVID-19, and staff vaccination rates. The IEC also used qualitative data including literature on vaccine hesitancy and access issues, QIN-QIO contractor monthly reports of activities, and Key Informant Interviews (KIIs) with QIN-QIO contractors to understand the specific challenges they faced in implementing TR-QII support to referred nursing homes.

RECOMMENDATIONS

The IEC recommended increased focus on interventions associated with statistically significant increases in vaccination rates, such as organizing and facilitating vaccination clinics, the development of messengers who can educate nursing home residents on the benefits of vaccination.

ACKNOWLEDGEMENT

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