

## Poster Abstract – Quality Improvement Category

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**Title:** Elimination of Contact Precautions for Nursing Home Residents Colonized with Multi-Drug Resistant Organisms: Substantial Cost Reduction and Improved Quality of Life

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**Objective/Aim:** The aim is to understand and decrease the burden of CP for MDRO colonized residents in our NH with the goals of improving QOL, maintaining overall health by avoiding increased infection and hospitalization rates, and reducing cost.

**Background:** Multi-Drug Resistant Organisms (MDRO), including MRSA, ORSA, and VRE, are often identified in nursing homes (NHs). NH Infection prevention practices for MDRO vary across homes and are often based upon current standards of care in hospitals that utilize contact precautions (CP) for all patients with MDRO regardless of colonization or active infection. The literature on the efficacy and appropriateness of this practice in the NH setting is limited. Newer research and the SHEA/APIC guideline for MDRO infection prevention recommend standard precautions (SP) in place of CP unless the resident is ill and dependent on staff for care.

**Quality Improvement Methods:** Highlands Living Center is a non-profit, 120-bed NH affiliated with the University of Rochester Medical Center and a member of the Greater Rochester Nursing Home Quality Consortium. Member NH teams receive Lean Six Sigma (LSS) training to implement improvement projects. We used the 5-phase LSS Define, Measure, Analyze, Improve, and Control (DMAIC) model to eliminate wasted resources using CP on healthy residents and to implement evidence-based SP to reduce MDRO transmission. Baseline data included staff and resident satisfaction, infection and MDRO colonization rates, and costs associated with current CP practices. Staff survey (n= 33) revealed 48% did not thoroughly follow CP and 79% perceived increased social isolation for residents on CP. Annual cost of CP in colonized NH residents was estimated at \$61,000. In January 2013, SP were implemented and the impact was monitored by tracking rates of infections and MDRO colonization, resident reported QOL, and supply costs.

**Results:** Average monthly infection rate following implementation of SP in January - September 2013 was 4.73/1,000 resident days compared to 5.52/1,000 resident days for the same period in 2012. Hospitalizations remained stable at 65, compared to 62 in 2012. There was no increase in MDRO colonization with an average of 10 residents with known colonization both before and after policy change. Since January 2013, an estimated \$42,000 has been saved in supply costs and staff productivity, or \$6,000 annualized per resident. MDRO colonized residents (n=11) were interviewed after 10 months and reported decreased isolation (54%) and increased staff interaction (73%), along with improved mood (73%) and QOL(64%).

**Conclusion:** Understanding the benefits and burdens of infection prevention decisions in NHs are critical when balancing safety and QOL for residents. Early findings suggest that limiting CP for MDRO colonized residents positively impacts QOL and reduces cost without increasing infections or hospitalizations.

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