

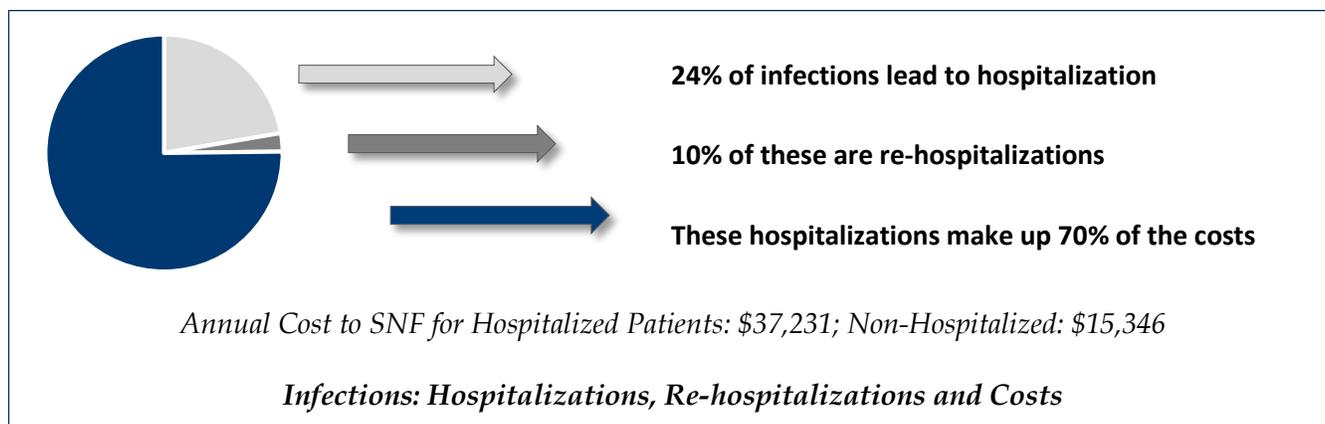
Kimberly-Clark

Study Estimates Communicable Infections Cost SNFs More Than \$50,000 per Year

A recent study¹ completed by Health Dimensions Group (HDG) for Kimberly-Clark found that communicable infections² cost a typical 100-bed skilled nursing facility (SNF)³ more than \$50,000 per year.

Overview

During a three-month study, SNFs collected data on infections and their financial impact on the communities and resident payors. This data found a large number of communicable infections resulting in hospitalizations and re-hospitalizations. The costs of these infections were surprisingly high – over \$50,000 per year for a 100-bed SNF using national payor mix averages and over \$150,000 for Medicare-only SNFs. The study found not only increased expenses related to infections for both the SNF and the resident payor, but significant losses of revenue to the SNF.



“It is a standard of practice to closely monitor infections, with the goal of improved patient care. The financial impact of infections has gone largely uncalculated, and is quite substantial,” states Health Dimensions Group Vice President Erin Shvetzoff Hennessey.

¹ Independent Study by Health Dimensions Group for Kimberly-Clark: **Report for Research on Infection in Senior Care Settings: Quantifying Costs and Promoting Prevention** (2015)

² Infections included pneumonia, upper respiratory infections, lower respiratory infections, gastrointestinal illness, and clostridium difficile

³ National average payor mix for typical skilled nursing home from white paper by AHCA/NCAL: **Quality of Care in Skilled Nursing Care Centers, Commission on Long-Term Care** (August 2013)

Research Goals

Kimberly-Clark was looking for quantified, standardized data from SNFs on the infection rates and associated costs of facility-acquired infections, including upper respiratory infections, pneumonia, and gastrointestinal illness, considering costs to both SNFs and payors. Kimberly-Clark engaged Health Dimensions Group (HDG), one of the nation's leading post-acute and senior care management and consulting firms, to complete the research and analysis. HDG brought extensive experience working with hospitals, health systems, and long-term care and senior living providers, as well as operating over 30 senior living communities across the country.

Research Methods

From October 2015 through December 2015, HDG's managed communities⁴ began collecting patient-blind data on infections and their financial impact on the communities and resident payors. Specifically, the data that was used to calculate impact on these items was: diagnosis and minimum data set (MDS) data; readmission data, including hospital admitted to, diagnosis, diagnostic-related group (DRG), admission and discharge dates, and length of stay; resident payor source and rates; SNF interventions for the infection, including labs, X-rays, medications, oxygen, and personal protective equipment; bundled payments or accountable care organization (ACO) involvement; transport type and cost to and from the hospital; and staffing patterns and pay rates during infectious outbreaks. Data was collected and reviewed every other week by HDG's team of advanced practice clinicians, SNF operators, hospital leaders, and financial analysts to ensure accuracy and to understand the impact of these infections.

Findings

The financial impact to the communities from these infections was identified as being a complex mix of revenue and expense implications. These include loss of revenue from hospitalized or discharged residents, loss of revenue from lower RUG rates, expenses of non-reimbursed SNF treatment, and increased labor costs during outbreaks. During the research period, there were 82 infections that qualified to be analyzed. Of these, 24% were hospitalized, and 10% of those hospitalizations were considered re-hospitalizations.

The expenses to the SNF related to these infections were significant and are outlined in Tables 1–3 for both residents treated in the SNF and those treated at the hospital. In addition, the expense to the payors for these infections is significant, including the cost of hospitalization, transport to hospital, and expense of health care during and post illness.

⁴ 10 managed communities in MN, WI, IA, NE, and PA with a total of 690 skilled nursing beds.

Table 1: Percent of Infection Cases that Required Hospitalization

Illness	Total Cases	Number Hospitalized	Percent Hospitalized
Pneumonia	43	18	42%
URI	18	0	0%
LRI	4	1	25%
GI	8	1	13%
C-diff	9	0	0%
TOTAL	82	20	24%

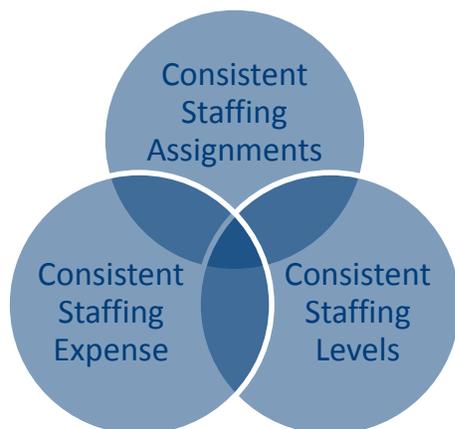
Table 2: Average Cost of Infection (to SNF) without Hospitalization

Illness	Total Treated at SNF	Average Cost (All-Payers)
Pneumonia	25	\$647.07
URI	18	\$865.29
LRI	3	\$917.60
GI	7	\$437.51
C-diff	9	\$470.72

Table 3: Average Cost of Infection (to SNF) with Hospitalization

Illness	Total Hospitalized	Average Cost (All-Payers)
Pneumonia	18	\$680.70
LRI	1	\$1,294.48

Two of the research communities reported three labor periods in which infections in the community impacted staffing. This highlights the common understanding that when an outbreak occurs in a SNF, staffing is impacted in several ways. First, there can be an increase in costs from overtime labor to fill shifts left open by ill employees, or by the addition of more staff needed to care for ill residents. Second, there can be a decrease in costs if additional labor is not available and the per patient labor decreases; lower per patient day (PPD) labor and inconsistent staffing is directly related to quality of care and resident satisfaction. Aside from the financial impact of outbreaks on staffing, outbreaks impact consistent staffing models that are designed maintain levels to drive patient satisfaction, staff safety, and Centers for Medicare and Medicaid Services (CMS) Five-Star Quality Rating System goals.



“As a director of nursing, we are tasked with balancing top-notch quality care with the financial parameters of our budget. We know the impact on quality of life for our residents when they acquire an infection, but a better understanding of the costs of infections has been eye-opening. I can think of many better ways to spend \$50,000 – not to mention happier residents, team members, and families!”

– Melissa Hill, RN, MSN, WCC, Health Dimensions Group Director of Nursing

Closing

The data collected and evaluated during this study showed that infections in SNFs have a large impact on the operational and financial performance. The costs of infections not only impacted the SNF, but in cases where the resident was hospitalized, involved significant hospital expenses billed to payors. It is important for operators to manage infection control closely to minimize the operational impact of infections as well as to maintain quality of life for residents.

To learn more about this study or Heroes In Prevention*, or to receive a free assessment of the costs of infections to your organization and guidance to reduce them, please contact:

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About Heroes In Prevention*: An integrated program designed to minimize preventable infections. It consists of staff education and engagement, advanced hygiene products, and monitoring and IT systems with real-time data for continuous improvement.

About Kimberly-Clark: For more than 140 years, Kimberly-Clark has developed innovative products that change the way people live in more than 175 countries. Kimberly-Clark leads the world in providing essential products for a better life, and their well-known, global brands, including Kleenex®, Huggies®, Kotex®, Poise® and Depend®, are used by nearly one-quarter of the world’s population.

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