Introduction

Hospital-acquired conditions continue to cause excess healthcare spending and impact patient care outcomes. In 2016, more than 3,239 patient deaths and $2 billion in excess spending resulted from avoidable hospital-acquired conditions (HACs). Despite guidelines and penalties from the Centers for Medicare and Medicaid Services, more than 48,700 HACs led to increased length of stays and higher mortality risk.

The American Medical Association’s Journal of Internal Medicine estimates that the current rates of C. Diff infections add an additional $1.5 billion annually to the cost of healthcare. Though the overall rate declined approximately 8 percent from 2014 to 2016, HACs are still prevalent in facilities across the U.S.

The team selected four hospitals expanding throughout Illinois to identify trends in hospital acquired complications. Research was conducted for quality measures used to reduce the risk of hospital acquired conditions in those five categories.

Standards

To audit these hospitals, five different hospital acquired complications were selected from Leapfrog Hospital Safety Grade website. The nation’s best and worst hospital scores for each complication were then averaged. This average was then used for comparison of each hospital’s score. Those that fell above the corresponding standard were said to not meet the required audit scoring. Below are the five areas of the audit and their standards.

1. Surgical wound split open 1.265
2. C. Diff infection 0.977
3. Dangerous bed sores 1.205
4. Infection in urinary tract 1.425
5. Collapsed lung 0.355

Recommendations

Surgical wounds split open (wound dehiscence)

To reduce dehiscence:

- Proper suture knot technique - Maintaining appropriate tension on the suture is vital to healing, so knots must be set properly to ensure stitches remain intact.
- Suture material - Multifilament materials are those that are made by braiding or twisting making the friction rate is high. As a result, knots hold well and remain tied as they are created. Synthetic polymeric monofilament suture materials have “memory,” which means they tend to return to their original shape instead of lying flat, which is a desired quality in suturing. Heavier suture materials provide the best tension strength for holding wounds closed and require fewer and more secure knots. Lighter materials cause less tissue irritation and degrade and wound through wounds more efficiently. But they need several knots for adequate closure.
- Not suturing wounds under tension - this is emphasized in most surgical skills and suturing courses. Excessive pressure may cause the suture to break and could cut tissue which leads to the wound reopening.

C. diff infections

To prevent and reduce spread:

- Create nurse-driven protocols to create rapid isolation of patients with suspected or confirmed C. diff.
- Place symptomatic patients on contact precautions, in a single-patient room with a dedicated toilet.
- When transferring patients: Notify receiving wards or facilities about the patient’s C. diff status so contact precautions are maintained at the patient’s new location.
- Create daily cleaning protocols and checklists for patient-care areas and equipment.
- To prevent C. diff, perform daily cleaning of patient-care environment using a C. diff sporicidal agent.
- Assess the appropriateness of prescribing antibiotics that pose the highest risk for C. diff, especially fluoroquinolones and 3rd and 4th generation cephalosporins. Develop facility-specific treatment recommendations for common infections that include first- and second-line antibiotics. Ensure that patients receive the shortest effective duration of antibiotic therapy. Include inpatient antibiotic duration when determining post-discharge antibiotic duration.

Conclusion

To conclude, two of the hospitals had rates that were under the standard rate in all categories and the other two hospitals had rates over the standard rate in only one category. Advocate BroMenn Medical Center had the best overall rates in all 5 categories. The lowest rate hospital was Herrin Hospital and that was due to the high C. Diff infection rate. It was surprising to see Rush University Medical Center had the highest rate in infection in the urinary tract, since it is a hospital that does kidney transplants. With Herrin Hospital being a rural hospital was alarming to see such a high rate in C. Diff infections. In order to provide the highest quality patient care, all hospitals should improve their complication rates by incorporating the recommendations outlined.