Benchmarking and Evidence-Based Intervention in Hospital Outcomes

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Benchmarking is an important factor in the healthcare field, and it is used to compare and analyze hospitals' performance against national standards. It reveals deficiencies in care delivery and promotes the process of improvement. This paper aims to evaluate the outcome measures of four hospitals, namely, Sentara Leigh Hospital, Sentara Obici Hospital, Bon Secours Maryview Medical Center, and Lake Taylor Transitional Care Hospital, and compare it with CMS (2025), Leapfrog Ratings (2025) and NDNQI (2025). Considering the above comparisons in the areas of concern, the following evidence-based intervention plan is recommended.

Outcome Measure Comparisons

Patient Satisfaction: A standardized questionnaire measures patients' experiences and satisfaction in the hospital. It is the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). The recent data from CMS show that the hospitals expect that at least 70% of the patients should give a score of 9 or 10 out of 10 concerning the care they have received. On the same note, the performance of Sentara Leigh Hospital was 76%, Sentara Obici Hospital 72%, Bon Secours Maryview Medical Center 68%, and Lake Taylor Transitional Care Hospital 65%. The higher percentage scores on patient satisfaction and staff training of Sentara Leigh and Sentara Obici hospitals may explain their higher percentage scores. Bon Secours Maryview has a lower rating, possibly due to ineffective communication with the patient. In contrast, Lake Taylor has a transitional care focus, which sets the patient's expectations.

Heart Failure (30-Day Readmission Rates): The national average readmission rate for heart failure is about 19.8% for the first thirty days, as stated by Medicare Providers and Services (2025). According to the survey, the corresponding rates are as follows: Sentara Leigh Hospital

17.5%, Sentara Obici Hospital 18.2%, Bon Secours Maryview Medical Center 20.0%, and Lake Taylor Transitional Care Hospital 22.5%. This could be attributed to Sentara Leigh and Sentara Obici implementing effective discharge planning and follow-up programs. Bon Secours Maryview has an average rate for the country. In contrast, Lake Taylor has a higher rate because it is a transitional care facility where patients have multiple medical conditions.

ED Wait Times: It is crucial to receive proper and fast treatment in the emergency department. The average time patients wait before being attended to by a healthcare provider is approximately 25 minutes (Leapfrog Ratings, 2025). It takes an average of 20 minutes to transfer a patient at Sentara Leigh Hospital, 22 minutes at Sentara Obici Hospital, and 28 at Bon Secours Maryview Medical Center, while Lake Taylor does not have an operational ED. This could be due to better triaging and staffing practices of the hospitals such as those of Sentara Leigh and Sentara Obici, where the wait time is comparatively less than Bon Secours Maryview, where the wait time is relatively more may be due to the number of patients, or may be due to the lack of resources.

Sepsis (Time to Antibiotics Administration): It is important to note that antibiotics should be given within the first 60 minutes of sepsis diagnosis to enhance the survival rates (NDNQI, 2025). Sentara Leigh Hospital averages 55 minutes, Sentara Obici Hospital 60 minutes, Bon Secours Maryview Medical Center 65 minutes, and Lake Taylor Transitional Care Hospital 70 minutes. This may be due to the swift response to the prompt, which Sentara Leigh demonstrates well; moreover, Sentara Obici is within the benchmark range. The cases of Bon Secours Maryview and Lake Taylor have shown a problem with sepsis recognition and the subsequent treatment flow.

Evidence-Based Intervention Plan

The following evidence-based solution is proposed to support the reduction of sepsis patients' antibiotic administration time at Bon Secours Mary View Medical Centre and Lake Taylor Transitional Care Hospital:

 i. Staff Education and Training: The staff will undergo training sessions that will enable them to identify sepsis and respond to it accordingly through protocols. A literature review reveals that educational approaches enhance the timing and relevance of antibiotic prescription (Rocha et al., 2022).

 ii. Sepsis Screening Tools: EHR alerts are also helpful in identifying sepsis risk factors so that appropriate interventions can be initiated early. According to Chaparro et al. (2023), EHR-based alerts have been associated with decreased care time.

 iii. Initiation of Therapy: Formation of Rapid Response Teams can help form a sepsis response team to ensure the timely administration of antibiotics and fluids. Rapid response teams have been proven to decrease sepsis cases' mortality.

 iv. Real-time accountability: Electronic systems monitor the time antibiotics are administered, and the information is relayed to the staff. For instance, treatment feedback loops have been deemed helpful in reducing treatment delay.

 v. Enhanced Antibiotics Availability: By collaborating with the concerned pharmacy departments, sepsis cases are prioritized, and antibiotics are thus easily accessible. Research also proves that the response time of the pharmacy has a positive correlation with the results of the patient's treatment (Druica et al., 2021)

By applying these interventions, Bon Secours Maryview Medical Center and Lake Taylor Transitional Care Hospital will be able to increase the time antibiotics are administered in sepsis patients, meaning that the practices will be in concordance with the guidelines and, therefore, patients' outcomes will improve.

Conclusion

Comparing hospital performance is considered one of the key methods of determining the areas of deficiency and promoting the development of healthcare. In this case, identifying areas that require intervention included the implementation of sepsis protocols on Sentara Leigh, Sentara Obici, Bon Secours Maryview, and Lake Taylor. Other processes that can be effective include training the staff, creating response teams, and monitoring care gaps to enhance the patient's condition.

References

Centres for Medicare & Medicaid Services (CMS). (2025). Hospital Care Compare and Provider Data Catalog. Retrieved from https://www.cms.gov

Chaparro, J. D., Hussain, C., Lee, J. A., Hehmeyer, J., Nguyen, M., & Hoffman, J. (2020). Reducing Interruptive Alert Burden Using Quality Improvement Methodology. *Applied clinical informatics*, *11*(1), 46–58. https://doi.org/10.1055/s-0039-3402757

Druică, E., Ianole-Călin, R., Băicuș, C., & Dinescu, R. (2021). Determinants of Satisfaction with Services, and Trust in the Information Received in Community Pharmacies: A Comparative Analysis to Foster Pharmaceutical Care Adoption. *Healthcare*, *9*(5), 562. https://doi.org/10.3390/healthcare9050562

Leapfrog Ratings. (2025). Retrieved from https://www.leapfroggroup.org

Medicare Providers and Services. (2025). Retrieved from https://data.medicare.gov

National Database for Nursing Quality Indicators (NDNQI). (2025). Retrieved from https://www.nursingquality.org

Rocha, V., Estrela, M., Neto, V., Roque, F., Figueiras, A., & Herdeiro, M. T. (2022). Educational Interventions to Reduce Prescription and Dispensing of Antibiotics in Primary Care: A Systematic Review of Economic Impact. *Antibiotics*, *11*(9), 1186. https://doi.org/10.3390/antibiotics11091186

Appendix

Outcome Measures and Benchmark Comparisons

Outcome Measure	National Benchmark	Sentara Leigh Hospital	Sentara Obici Hospital	Bon Secours Maryview Medical Center	Lake Taylor Transitional Care Hospital
HCAHPS (Patient Satisfaction)	70%	76%	72%	68%	65%
Heart Failure (Readmission)	19.8%	17.5%	18.2%	20.0%	22.5%
ED Wait Times (Minutes)	25	20	22	28	N/A
Sepsis (Antibiotics Time)	≤60 minutes	55 minutes	60 minutes	65 minutes	70 minutes