



Reducing Emergency Department Use and Improving Health Outcomes by Co-locating an Oral Health Provider in a Hospital Setting

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Background: The high incidence of emergency department (ED) utilization for non-traumatic dental conditions (NTDC) in Oregon's Linn county prompted a partnership with Capitol Dental Care and Samaritan Lebanon Community Hospital in 2019¹. Additionally, it is well known that hospitalized patients are at higher risk for nosocomial pneumonia² and that oral bacteria are a major source of bacteria responsible for hospital-acquired pneumonia.³ Capitol Dental Care is a leader in innovation, integration, and the use of teledentistry in community settings, so expanding dental services to hospital patients has been an innovative approach to reaching vulnerable Oregonians, many who have not had access to consistent dental care. In 2022 we expanded our services into a second hospital, and in 2023 we expanded to a third hospital.

Objectives:

- Provide oral health services for patients to improve oral and overall health through hospital-based care
- Prevent use of emergency department for non-traumatic dental conditions.
- Create interdepartmental relationships between hospital departments and oral care provider
- Explore modes of sustainability and scalability.

Implementation: Our expanded Practice Dental Hygienists (EPDHs) provide oral health care and education for hospital patients and staff to improve oral health outcomes for hospital patients in three hospitals. In addition to providing oral health expertise, EPDHs assist hospital teams with their oral health protocols for inpatients⁴, improve referral resources for the care coordination teams, teach oral health education classes for outpatients, and may reduce nosocomial pneumonia rates³. Utilizing teledentistry and palliative dental treatment, patients presenting with dental pain in the emergency room and throughout the hospital receive timely dental care. In addition, outpatients receiving services in the hospital who are pregnant, have diabetes, and who get infusions for cancer treatment are also provided dental care.

Key results and next steps:

- Patient surveys showed **91%** extremely satisfied with dental visit during hospital stay and **82%** would implement changes discussed during dental visit (71 respondents)
- **100%** of hospital staff strongly agreed that patient quality of care improved when they received a dental care visit in the hospital (11 respondents)
- **More than 2100** patients have received dental visits since the partnership began.
- **More than 660** patients who did not have regular dental care received referrals to appropriate dental providers.
- Collecting hospital readmission data from patients with documented oral care vs those without proper oral care.
- Collecting data to determine if fewer patients are returning to the ER for dental pain since start of program.
- Hoping to expand to fourth hospital within 2 years

¹ Samaritan Emergency room data 2014-2017 <file:///H:/CCOs/IHN/Pilot%202019/research/Emergency%20Room%20Utilization%20Data%20for%20NTDC.pdf>

² **Hospital Acquired Infections;** Alberto F. Monegro; Vijayadershan Muppidi; Hariharan Regunath. <https://www.ncbi.nlm.nih.gov/books/NBK441857/>

³ **Oral Microbes in Hospital-Acquired Pneumonia: Practice and Research Implications;** Kimberly Paige Rathbun 1, Annette M Bourgault 2, Mary Lou Sole 3. *Crit Care Nurse*. 2022 Jun 1;42(3):47-54. doi: 10.4037/ccn2022672

⁴ Nonventilator hospital-acquired pneumonia: A call to action. Recommendations from the National Organization to Prevent Hospital-Acquired Pneumonia (NOHAP) among nonventilated patients. Published online by Cambridge University Press: 09 June 2021

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