Case Studies of 6 Teledentistry Programs: Strategies to Increase Access to General and Specialty Dental Services

Margaret Langelier, MSHSA, Carol Rodat, MA, Jean Moore, DrPH

Objective: Concerns about limited access to oral health services for underserved populations are prompting providers to adopt innovative service delivery models to meet the needs of those with access barriers. The use of teledentistry as a means to improve access to oral health services in areas with inadequate availability of general and specialty dental care is emerging as a practical solution, especially for treatment planning and specialty consultations. The objectives of this project were:

- to describe contextual conditions affecting the decision by a provider organization to offer teledentistry services,
- to understand environmental facilitators and barriers to implementing teledentistry services,
- to learn about the technology necessary to provide teledentistry, and
- to describe provider attitudes towards and satisfaction with services delivered through remote communication technologies.

Design/Methods: The research was qualitative, using a collective case study methodology to describe delivery of teledentistry services by 6 provider organizations. Organizations were selected for the case studies based on a history of using teledentistry for delivering oral health services and for having established strategies to sustain teledentistry services. A concerted effort was made to identify teledentistry provider organizations with diverse organizational structures. Organizations selected for the project included:

- an independent dental hygiene practice,
- a non-profit staff model group dental practice,
- a dental service organization/insurer,
- a dental residency program,
- a district health department, and
- a federally qualified health center.

The case studies were conducted in person and by telephone. A variety of executive, administrative, and clinical staff were interviewed from each location.

Results: The findings from the case studies are summarized in the following common themes developed from the interviews conducted for the project:

- Teledentistry is a relevant and appropriate strategy for linking patients with clinical providers who are not otherwise easily accessed.
- The effectiveness of teledentistry services is predicated on significant preliminary planning processes and focused training for providers before implementation.
- Infrastructure requirements vary by location, but certain basic technology is essential to provide high quality services.
- Teledentistry services are useful for delivering both primary and specialty dental consultations.
- Teledentistry is a cost effective modality for both patients and providers, but finding sustainable funding to provide the services is challenging.
- Teledentistry is an effective modality for providing continuing education and training for practicing clinicians, for dental students and dental residents, and for other members of the oral health team.
- Evaluations of the effectiveness of teledentistry programs are lacking. There are many outcomes of interest that would benefit from further study.

Conclusions: Teledentistry is an emerging modality for delivering oral health services to populations with significant difficulty finding services because of geography or other factors that limit the accessibility or availability of dental care. Case study participants commented on the efficacy of teledentistry for patients, especially on the advantages for triaging patients to the most appropriate level of care. As a result of using teledentistry, scarce dental resources in communities were appropriately reserved for patients in need of more extensive treatment or surgical services or for those assessed at high risk for disease. Patients experienced shorter wait times to obtain consultations and services and providers found the modality efficient, timely, and cost effective.

Maintaining teledentistry program services required the ongoing participation of a broad range of clinicians and support staff in sponsoring organizations focused on patient centered care. However, informants discussed regulatory and reimbursement barriers that affected providers' engagement with teledentistry, including scope of practice requirements that limited the practice of dental hygiene in remote locations, inadequate funding for teledentistry services, and regulations that inhibited their provision. Further quantitative research is needed to document the impact of teledentistry on cost of care, access to services, and patients' oral health outcomes.

Key Words: Teledentistry, Oral Health, Access to Care

HWRC Website Link: http://www.oralhealthworkforce.org/wp-content/uploads/2016/12/OHWRC_Case_Studies_of_6_Teledentistry_Programs_2016.pdf