



# Implementation and Evaluation of Diabetes Management via Clinical Video Telehealth

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“Telehealth” is a delivery of health-related services and information via telecommunications technologies. Clinical video telehealth (CVT) is a form of telehealth using a real-time video and audio transmission that is used to virtually connect a health care professional and a patient. CVT links the patient at a clinic closer to their home to a provider at another location. The goal of telehealth is to improve clinical outcomes and access to care while reducing costs, time, and risks with traveling to the main medical center. Typical patients are veterans in postacute care settings and high-risk patients with chronic disease states (1).

We implemented a CVT pharmacotherapy clinic for patients with diabetes at the West Palm Beach Veterans Affairs Medical Center (WPBVA). These patients were managed by a clinical pharmacy specialist. Auxiliary personnel included nurses and telehealth technicians. In the Veterans Health Administration, the clinical pharmacy specialist practices autonomously under a scope of practice. Incorporating a CVT clinic into the diabetes specialty clinic allows patients to receive their care at affiliated community-based outpatient clinics (CBOCs) closer to their home to reduce travel burden. The primary objective was to assess patient satisfaction with the CVT program via a patient satisfaction survey. The secondary objective was to evaluate the impact of the CVT program on Veterans Health

Administration resources, including total travel mileage saved and clinic utilization. Patients were enrolled in the CVT clinic via a specialized consult in the computerized patient record system. Data were collected from all patients enrolled in the CVT clinic from 1 October 2012 to 30 April 2013 and analyzed using descriptive statistics. Data collected included clinic demographics (age and clinic utilization), baseline HbA<sub>1c</sub>, CBOC location, distance from patient’s home to the WPBVA, and distance from the patient’s home to the CBOC location.

There were 14 patients enrolled in this CVT clinic. The average age of the patients was 65 years old. Of the 25 scheduled encounters, there were 6 missed visits, calculated as a 24% missed clinic visit utilization rate. The average baseline HbA<sub>1c</sub> was 9%. Of the 19 CVT encounters, the average distance from the patient’s home to the WPBVA was 59.4 miles and average distance from patient’s homes to their respective CBOC was 11.6 miles. The total miles averted for our patients was 1,795 miles. The average miles averted per patient

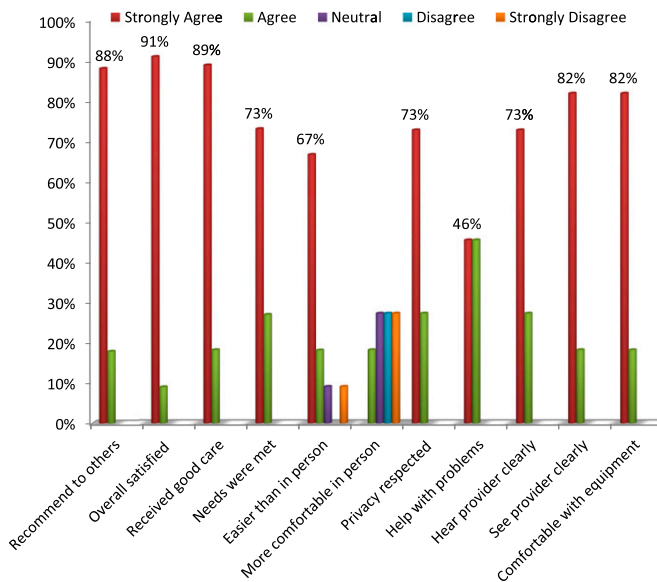


Figure 1—Patient satisfaction survey results

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visit was 88 miles. Cost savings ranged from \$182 to \$300 over 5 months depending on the patient's travel reimbursement status. This cost savings would be quite significant if extrapolated to other medical facilities. We received 11 patient satisfaction surveys during our CVT clinic enrollment period (Fig. 1). Overall, there was a 91% patient satisfaction rate with the patient's telehealth session and 88% of veterans said they would recommend telehealth to other veterans.

The CVT pharmacotherapy diabetes clinic has improved access and reduced travel burden and costs, which has led to patient satisfaction. This method of care is exportable to other medical facilities as well as other clinical areas.

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**Duality of Interest.** This clinic was implemented at the WPBVA (employer of N.V., C.B., and N.L.). No other potential conflicts of interest relevant to this article were reported.

**Author Contributions.** N.V. implemented the clinic, collected and reviewed the data, and

wrote the manuscript. C.B. implemented the clinic, contributed to the writing of the manuscript, and reviewed and edited the manuscript. N.L. reviewed and edited the manuscript. C.B. is the guarantor of this work and, as such, had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

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