

Video Directly Observed Therapy for Active Tuberculosis Treatment Update July 2018

Background

In September 2017, the Office of Performance and Analysis (OPA) compiled a report, the focus of which was to determine interest among Dakota County active tuberculosis (TB) clients in a proposed Video Directly Observed Therapy (VDOT) program, analyze the feasibility and cost-benefit of implementing a VDOT program, and evaluate technology vendor options for VDOT.

This memo provides a high-level update of events over the last several months, including a brief update on Dakota County's implementation of a VDOT option leveraging the Minnesota Department of Human Services' (DHS) existing contract with Vidyo, a provider of these services, and a high-level estimate of monetary and other benefits resulting from Dakota County's implementation of a VDOT option for TB clients.

In December 2017, Dakota County entered into contract with DHS, allowing Dakota County Public Health to use Vidyo to offer a VDOT option to Dakota County TB clients. Dakota County staff training with MNIT took place in January 2018. Initial work involved resolving privacy issues, so that clients would not need to enter private information to connect to Vidyo, but would rather enter a private online chat room to interact with a public health nurse.

Dakota County began to offer synchronous VDOT service, in which clients connect live with a public health nurse, on an opt-in basis on February 20, 2018. For asynchronous (store and forward of video) service, Public Health worked with County Information & Technology (IT) to utilize OneDrive, which is a HIPAA compliant video transmission and storage option already available at Dakota County

Update on Initial Pilot (2/20-5/20/2018)

Estimated Cost Savings

Based on analysis from the Public Health Documentation System (PHDOC) data from 2/20/2018-5/20/2018, OPA estimates that Dakota County Public Health saved approximately \$1,750 in expenses through use of VDOT during this timeframe. This is based off an estimated 63 visits completed using VDOT, saving nearly \$1,350 in staff time and over \$400 in mileage costs. The estimated savings per VDOT visit is approximately \$28.

Client Participation

During this 3-month pilot period, nearly 40% of clients (5 of 13) receiving TB treatment from Dakota County opted in and participated in the VDOT program. Taking the following factors into consideration, there are indications that future rates of participation may be higher.

Of clients opting not to participate in the VDOT program, two had been receiving treatment for several months prior to the start of the pilot and went on to complete treatment and have their cases closed during this 3-month test period. Two additional clients began TB treatment in early-to-mid May. During this timeframe these two clients did not yet have sufficient time to begin participating in VDOT, as the first month of TB DOT is typically done in person before VDOT can begin. Both clients have since opted into and begun participating in VDOT.

Clients have the option to continue in-person visits only, and may switch back to in-person visits at any time once VDOT has begun. VDOT will never be an appropriate option for all clients, such as the very

young or elderly, and high risk individuals. The first month of DOT visits are done in person for new clients, and one case management visit per week continues to be done in person for those participating in VDOT.

Ongoing Impact of VDOT

Current participation

The current rate of participation is even higher than the 40% seen during the initial pilot window. As of July 16, 2018, 55% of clients (6 of 11) were participating in VDOT, and a total of eight clients have now participated since the pilot started.

Estimate of future savings

The number of clients receiving treatment for TB from Dakota County can vary from year to year. The number of clients may also fluctuate several times within a given year, as clients complete or begin treatment. Additionally, the number of clients who elect to participate in VDOT may vary in any given year.

The \$1,750 estimate of cost savings for the 3-month period from 2/20/2018-5/20/2018 for the five clients opting to participate in VDOT was based off actual client data. This data reflects the reality that every client is unique, as is the length of their treatment. As long-term VDOT data does not yet exist, these three months of actual data provide our best estimate of savings in a typical year.

If five clients were participating in VDOT throughout the year, a conservative estimate of cost savings would be \$7,000.

Non-monetary program benefits

Besides the realized and estimated ongoing cost savings outlined above, the following additional program benefits should be noted:

- Provides privacy to clients and reduces stigma of having public health in-person visits every day for months on end.
- Limits the impact of disruptions to clients' daily lives (e.g. family and work schedules).
- Increases ability to deliver culturally competent services to accommodate religious and other cultural traditions that effect scheduling time for medications.
- Provides flexibility to clients and PH staff. Caseload fluctuates greatly and can increase at any time.
- Increased safety of staff and reduces risk/liability associated with in person home visits, driving in general, and driving in inclement weather.
- Can increase frequency of direct observations per week, increasing adherence of clients to treatment plans.
- Dakota County Public Health is serving as a leader and model for other local public health agencies in the region. Stearns County is nearing implementation and should join Dakota County shortly in VDOT service provision for TB VDOT.

Future Review and Analysis

Public Health staff added DOT tracking forms within the TB client questions in PHDOC. This should assist in any future evaluation of the program. To continue to deliver the best possible client TB case management, upon client completion of treatment, Public Health staff will be conducting a survey of those clients who opted to participate in VDOT.

If requested by Public Health, OPA will complete a similar cost analysis in the future after more data is available (e.g. a spring 2019 cost analysis of the first year of the pilot program).