New York City's (NYC) tuberculosis (TB) cases have fallen sharply since the peak of the epidemic in the early 1990's. Use of Live Video Directly Observed Therapy (LVDOT) was offered to patients receiving treatment for suspected or confirmed TB disease who met enrollment criteria (Fig 1). Participants signed two forms: DOT enrollment form and care of DOHMH issued smartphone. Employed by the NYC Bureau of Tuberculosis Control (BTBC), 114 technical issues were experienced during the planning and implementation phases of the pilot project. Participants who experienced adverse reaction(s) to prescribed medication were enrolled. All BTBC case managers, nurses, and doctors were informed of the project. Determinants for the failure of DOT adherence were taken into account to identify potential costs and benefits of expanding VDOT coverage. 80-84% of patients were found to be TB cases; meaningful cost savings realized.

**RESULTS**

LVDOT still requires specified time frame when observer and patient can meet. VDOT does not depend on weather conditions. Many jurisdictions are now implementing VDOT. The NYC Bureau of Tuberculosis Control (BTBC) provides DOT to approximately 200-250 patients at any given time. After enrollment in LVDOT, patients were: assigned a unique conference number; poured medication in front of the camera so medication name and bottle are visible to observer; and maintained car fleet. To estimate the likelihood of increasing the number of patients that receive TB treatment via VDOT.

**STRENGTHS/LIMITATIONS**

**STRENGTHS**

- Convenient method
- Accommodate work schedule
- Preserve privacy
- Protect from work interruptions
- Ability to resume observation

**LIMITATIONS**

- Not a TB case
- Changed mind
- Commissioner’s order issued
- Patient had difficulty overcoming phone positive
- Other

**METHODS**

- A webcam was convened to craft the implementation plan and process.
- BTBC collaborated with internal and external partners:
  - Department of Health and Mental Hygiene (DOHMH)-Department of Information and Information Technologies (DIDIM)
  - DIDIM-General Counsel
  - DIDIM-Research Review Board
  - University of California, San Diego (UCSD)
  - New York State Department of Health
  - Venkata Foundation

**WORKGROUP ACTIVITIES**

- Created a protocol to address responsibilities of staff and patients and program evaluation.
- Secured, HIPAA-compliant video conferencing software that met DIDIM DOT approval was identified.
- Staff were to conduct LVDOT observations.
- Staff were to transmit email patients in LVDOT and observe medication ingestion.

**OBJECTIVES**

- To assess the feasibility of implementing LVDOT as a permanent supplement to face-to-face DOT
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- To compare DOT adherence rates with LVDOT adherence rates.
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- To estimate the likelihood of increasing the number of patients that receive TB treatment via VDOT.
- To determine the potential costs and benefits of expanding VDOT coverage.

**PLANNING PHASE**

- To determine the potential costs and benefits of expanding VDOT coverage.

**CONCLUSIONS**

- DOT is available to patients receiving treatment for suspected or confirmed TB disease who met enrollment criteria (Fig 1).
- Participants signed two forms: DOT enrollment form and care of DOHMH issued smartphone.
- After enrollment in LVDOT patients were: assigned a unique conference number, questionnaire and schedule, and ability to resume observation.
- Participants selected LVDOT primarily due to increased convenience.
- The median age of females was 12 years less than the median age of males.
- The age range for females was wider than for males.
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**IMPLICATIONS**

- The NYC Bureau of Tuberculosis Control (BTBC) provides DOT to approximately 200-250 patients at any given time.
- After enrollment in LVDOT patients were: assigned a unique conference number, questionnaire and schedule, and ability to resume observation.
- Participants selected LVDOT primarily due to increased convenience.
- The median age of females was 12 years less than the median age of males.
- The age range for females was wider than for males.
- The flexibility of VDOT above patients to be observed at times and places where traditional DOT is limited.