Starting a Video Directly Observed Therapy (VDOT) Program

Recommendations based on the New York City VDOT experience

1. **Convene a Research and Implementation Team**
   - Expertise needed: case management, DOT, education & training, quality assurance, information technology, program evaluation and funding/reimbursement

2. **Identify Other Partners as Needed**
   - State Health Department — Medicaid reimbursement
   - CDC – VDOT toolkit coming soon
   - General Counsel/legal experts — Security, privacy, video storage, using the cloud…
   - Software company — Ideally, one that can provide technical support or customization
   - Potential funders — To offset costs of smartphones, data plans, software
   - Institutional Review Board — Research determination and advice

3. **Identify Technological Resources**
   - Hardware for patients —Smart Phones or tablets, loaned or patients' own
   - Hardware for staff — Webcams, computers, headsets
   - Videoconferencing software:
     - Products developed for telemedicine include AiCure, HipaaBridge, Emocha:miDOT, SureAdhere
     - Products NOT specific to telemedicine include FaceTime, Fuze, ooVoo, Skype, Tango
     - See Minnesota DOH "Technology Options for Video Directly Observed Therapy" health.state.mn.us/divs/idepc/diseases/tb/lph/vdot/TechnologyOptionsDecember2015.pdf
   - Method of recording data for evaluation purposes — electronic medical record, database, etc.

4. **Create Policy and Protocols**
   - Type of eDOT/VDOT to be implemented — Live (synchronous) or Recorded (asynchronous, store-and-forward). See comparison below.
   - Enrollment criteria and process
     - Patient Forms — consent and agree to VDOT
   - Responsibilities of staff and patients
     - For staff: training plan, job aids including scripts and procedures
     - For patients: educational materials, scripts
   - Program evaluation plan

COMPARING LIVE, RECORDED AND IN-PERSON DOT

Characteristic	Synchronous (Live) VDOT	Asynchronous (Recorded) VDOT	In-person DOT
QUALITY ASSURANCE AND SAFETY			
• Allows repeat viewing of ingestion event		✓✓✓	
• Quality assurance using duplicate observers	✓✓	✓✓✓	✓
• Allows DOT worker to make visual assessment of patient's health	✓✓	✓	✓✓✓
• Allows DOT worker to actively evaluate for medication side effects	✓✓	✓	✓✓✓
• Ease of verifying correct medications and dosages	✓✓	✓	✓✓✓
• Ability to provide concomitant case management, i.e. contact investigation, social support, teaching	✓✓	✓	✓✓✓
PATIENT CONVENIENCE			
• Allows monitoring of doses taken on weekends, holidays, and after hours	✓✓	✓✓✓	✓
• Allows patients the opportunity to ask questions before medication administration	✓✓		✓✓✓
• Ability to observe patient during travel	✓✓	✓✓✓	
• Suitable for patients in unstable living circumstances (e.g. homelessness, drug treatment programs)	✓	✓✓	✓✓✓
PROGRAM TIME AND COSTS			
• Ability to decrease worker travel time and expense	✓✓✓	✓✓✓	✓
• Ability to simplify scheduling logistics for patients	✓✓	✓✓✓	✓
• Program costs currently well-established	✓	✓	✓✓✓
• Decreased upfront costs and technology requirement			✓✓
TECHNOLOGY AND FUTURE DIRECTIONS			
• Provides a gateway to future mobile health application use	✓✓	✓✓✓	
• Ability to monitor without reliance on consistent internet or cellular connectivity		✓	✓✓✓

Adapted from the California Department of Public Health/California Tuberculosis Controllers Association Guidelines for Electronic DOT Program Protocols in California, 2016, ctca.org/filelibrary/CDPH_CTCA%20eDOT%20Guidelines%20-%20Cleared-%20081116.pdf