Using e-surveying with Low Literacy Patients

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LA Net
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Disclosure

I or my immediate family members DO have an affiliation or financial interest with one of the commercial products to which my presentation refers.
The Challenge facing LA Net

• There are 224 identified languages in Los Angeles County, not including dialects. (Los Angeles Almanac)

• The Los Angeles Times reports 83% of the ZIP Codes contain 20 or more languages, and nearly half have 30 or more.

• Average reading level = 2\textsuperscript{nd} grade
Impact

• Costly (paper surveys = $1500)

• Difficult to staff (multi-lingual, multi-cultural)

• Uncomfortable for patients
Response

• Develop a tablet-based survey administration tool that “talks” to patients

• Tested w/ 80 patient at FQHC using survey from previous study on Obstructive Sleep Apnea

• Administration time: reduced 50% time
• Good patient satisfaction
Talking Survey

- Electronically administers any survey or form to patients (ex: registration, eligibility, PHQ9, California Health Assessment)

- Runs on low-cost Android tablets and smart phones

- “Reads” surveys to low-literacy patients reducing the need for staff assistance and providing privacy

- Translates and reads in 62 different languages using Google translate or self-translation

- Delivers individualized electronic health education to patients based on condition, demographics, survey responses

- Transmits data to EHRs, registries, warehouses for use in clinical care, QI and research

- Can be used in the waiting room, exam room, community, and the patient’s home
Next steps

- Partnership w/ DARTNet
  - Creation of redacted dataset + clinical data set
  - Ability to obtain informed consent
  - Ability to transmit to EHR using middle-ware

- Partnership w/ LA Net
  - Ability to launch individualized health education based on responses
  - HL7 interface to EHRs and registries
  - Test transmission to Office Ally

- Adapt for clinical application
  - Complete registration
  - Complete California Health Assessments (all ages, required for MediCal)
  - Increase Medicare Health Risk Assessment completion
  - Conduct PQH9
  - Provide “wait room” entertainment
Outcomes

• 5000 patients have completed surveys on the Talking Survey™ system

• Automated individualized health education delivered to 20 patients based on survey score (COPD screening)

• Time to complete survey reduced by 50% for patients

• Out of 400 tablets in use, 0 stolen or dropped

• Collaborative product development - New functionality based on requests from clinicians and staff: Examples: tablets embedded in tables, Tablet tables, population health reports with alerts, link to patient portal, more to come

Case Example

Outcomes for Florence Western

• From 0 Medicare Health Risk Assessments completed to 31 Assessments completed

• From 0 substance abuse screeners completed to 31 completed

• Patient satisfaction w/ Talking Survey: 95% satisfied or very satisfied

• 50% English, 50% Spanish

• Staff time to assist patient: 1-2 minutes

• Time to transmission of results to MA (accessed via Egnyte): 15 seconds
If Airlines Can do it why can’t we?
Small Safety Net Practice -Before
Wait room of future pilot
Technical integration

HARDWARE
Android tablets
Desk top PC computer running SQL Or use TS™ server
Disposable Ear buds (40 cents each)

NETWORK
Basic Wi-Fi or cellular connection

DATA STORAGE
Engnyte Cloud file storage
EHR at practice
Or TS™ data warehouse (server)

EHR INTERFACE
HL7 interface available

SECURITY (HIPAA COMPLIANT)
AES-256 Encryption
GIS tracking/alarm system for lost tablet monitoring
Optional, automatic periodic purge of data from tablet
Password protection

STAFF TRAINING
On-site or virtual – 20 minutes

HELP DESK
9 (EST) to 5 (PST) Monday thru Friday

SYSTEM SPECIFICATIONS
Voices can be recorded by Human voice or generated by computer
Automatic text translation from English to 62 languages
All data is stored within SQL databases
Data storage and transmissions are encrypted using AES-256
Authorized tablets can be located anywhere on the Earth (remote locations)
Autonomous operation allows tablets to work without communications
Systems can “auto” update when new releases/versions become authorized
**How is it used in Clinics?**

**FQHC Use Case: UMMA**

**Screening, patient satisfaction & Individualized health education**

**Goal:** Increased ability to conduct systematic screening.

**Population:** 70% Low-literacy, 70% Latino

**Workflow:**
- Front desk provides patient with tablet;
- Patient uses ear buds and completes survey in waiting room;
- Results transmitted instantly secure server database;
- Patient returns tablet

**Outcomes:**
- 61 patients screened for COPD
- Average time to complete: 3 minutes
- COPD education videos played for all patients with score of 5 or higher
- Now Expanding use to patient registration, satisfaction survey

**Examples of Surveys:**
- Patient eligibility and registration forms
- Family PACT Female and Male
- California Health Assessment (all ages)
- PHQ9
- SBIRT screening (AUDIT C)
- Medicare Initial Health assessment
- CAHPS patient satisfaction survey
- Diabetes Self Management
- Quality of Life
- Your own custom surveys

**Examples of Educational modules:**
- COPD (Spanish & English)
- Diabetes self management
- Senior falls prevention
- Senior nutrition
- Senior exercise
- Managing depression (Spanish & English)
- Your own custom video/audio/html
# Customers & Pipeline

<table>
<thead>
<tr>
<th>Current Customers</th>
<th>Use case</th>
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<tbody>
<tr>
<td>Dart Net (70 practices) (paid)</td>
<td>NIH research, ADHD screening &amp; access to info at POC</td>
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<tr>
<td>UMMA (non-paying beta for Wait Room of Future)</td>
<td>COPD screening, CAHPS, SBIRT, registration, health education</td>
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<tr>
<td>Florence Western (non-paying beta for Wait Room of Future)</td>
<td>Medicare Health Assessment, Family PACT forms, Screening for HCCs, PHQ9, Community monitoring of asthma symptoms</td>
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<td>LA Net Kaiser CHW project (paid)</td>
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<tr>
<td>Home monitoring PROS of cardiovascular health (paid)</td>
<td>Diabetes self-management behaviors</td>
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<td>Home monitoring PROS of INR (paid)</td>
<td>Quality of life, medication adherence</td>
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<th>Inquiries(Pipeline)</th>
<th>Use case</th>
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<tr>
<td>L.A. County DHS</td>
<td>Media system, Patient reported outcomes</td>
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<tr>
<td>Chap Care/EPIC OCHIN users group</td>
<td>California Health Assessments, Behavioral health assessment</td>
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<tr>
<td>North East Valley CHC</td>
<td>Health education screening &amp; delivery</td>
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<tr>
<td>Oklahoma University Internal Medicine</td>
<td>Registration, patient screening</td>
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<tr>
<td>Colorado University Family Medicine</td>
<td>Registration, patient screening</td>
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<tr>
<td>CHF IPA</td>
<td>Medicare Initial Health Assessment, Health Risk Assessment, Patient satisfaction, Patient education on changes in L.A. Care coverage and for SPD patients, Patient education on PCMH care teams</td>
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## Pricing and Revenue Model

<table>
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<tr>
<th>Cost per tablet</th>
<th>Optional charges</th>
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<tr>
<td>License fee per tablet (includes 3 content modules, support and maintenance)</td>
<td>Tablet hardware (per tablet) $360</td>
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<td>Disposable ear-buds (quantity 100) $40</td>
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<td>EHR integration (one time charge) $500</td>
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<td>On-site server $500</td>
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<td>Egnyte file storage (per year) $500</td>
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<td>Additional content modules $1000</td>
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<td>Custom development $75/hour</td>
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When we expect to raise additional funds?

In next 12 months seeking to raise $1,000,000

What will we use it for?

Sales Director (1)
Site implementation specialist (1)
Part-time financial/accounting (.5)
Help Desk/Service Director (1)

Sales personnel (2)
Deployment/development staff (2)
Quality Assurance Analyst (1)
Help Desk operator (2)
Marketing materials, website upgrade, demonstration videos

Current Investment

Who has invested how much?

Principals have invested $100,000 and 4 ½ years in development and field testing. No additional investments have been sought.