Future of Healthcare

Taking Innovation to Scale in Emerging Markets

Ting Shih - Founder & CEO, ClickMedix
(ting@clickmedix.com)

http://clickmedix.com
Growing Physician Shortage

35M more Americans + 50M more seniors
Physician Shortage Worldwide

Physicians Density (per 10,000 population)

- less than 1
- 1 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 20 - 30
- 30 - 40
- more than 40

Source: [http://chartsbin.com/view/gcu](http://chartsbin.com/view/gcu)

2008: Mobile Application for Tele-Consultation (HIV/AIDS, cervical cancer, pre/post oral surgery)

- >$1M USD saved from transportations per year
- >90 women treated for cervical cancer (in 3 months) through mid-wives screening for cancer
- Thousands of patients with increased access to care per year
- Transitioned process and service model to Botswana government
Since 2011, ClickMedix has facilitated care delivery in 16 countries, through 90+ clinical sites addressing different diseases.
Start with the Service Chain, then Identify Technologies to Facilitate Service Delivery
Task-Shift to Community Nurses / Health Workers to Collect Data via Provider-Designated or Evidence-Based Protocols

- Diagnose
- Treat
- Follow Up

< 5 minutes per patient, 4-10X More Patients / Hour

Speedup Treatment < 3 days
1. Serve more patients while lowering costs through task-shifting (screen / refer)

2. Connect healthcare providers and specialists enable efficient treatment planning

3. Develop revenue model and demonstrate ROI

Where to task-shift towards?

Which partners to form win-win collaboration?

What are short-term and long-term ROIs
In the past 24 months, Medtronic used an otoscope + telemedicine to screen 180,000+ patients with just 20 health workers and prevented hearing loss amongst those patients while increasing right-referrals to hospitals.
Applicable in Chronic Disease Management: Requires Multiple Specialists

Complications
<table>
<thead>
<tr>
<th>1</th>
<th>&lt;7.0 (&lt;53 mmol/mol)</th>
<th>SBP &lt; 130</th>
<th>&lt;100 or &lt;70 with CVD</th>
<th>No Symptoms &amp; No Structural Heart Disease</th>
<th>At risk; chronic cough, sputum production; normal spirometry</th>
<th>No Nephropathy</th>
<th>No Retinopathy</th>
<th>No Dental Infection</th>
<th>No Neuropathy &amp; No PAD</th>
<th>18.5-24.9</th>
<th>No Depression PHQ-9 score 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>7.0-7.9 (53-63 mmol/mol)</td>
<td>SBP 130-139</td>
<td>101-130</td>
<td>No Symptoms &amp; + Structural Heart Disease</td>
<td>GOLD 1 or 2 &amp; 0-1 exacerbation s/yr &amp; mMRC 0-1 &amp; CAT&lt;10</td>
<td>Albuminuria 30-299 mg/g</td>
<td>Non-Proliferative Mild</td>
<td>Mild Gingival Inflammation</td>
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<td>8.0-8.9 (64-74 mmol/mol)</td>
<td>SBP 140-149</td>
<td>131-160</td>
<td>Symptomatic &amp; + Structural Heart Disease</td>
<td>GOLD 1 or 2 &amp; 0-1 exacerbation s/yr &amp; mMRC ≥2 &amp; CAT≥10</td>
<td>Albuminuria 300-999 or eGFR 30-60</td>
<td>Non-Proliferative Moderate</td>
<td>Moderate Gingival Inflammation</td>
<td>+PAD &amp; +/- Neuropathy</td>
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<td>Mild Depression PHQ-9 score 5-9</td>
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<tr>
<td>4</td>
<td>9.0-9.9 (75-85 mmol/mol)</td>
<td>SBP &lt;150</td>
<td>161-190</td>
<td>Symptomatic w/ Heart Failure</td>
<td>GOLD 3 or 4 &amp; ≥2 exacerbation s/yr &amp; mMRC 0-1 &amp; CAT&lt;10</td>
<td>Albuminuria 1000-2999 or eGFR 15-29</td>
<td>Non-Proliferative Severe/Inactive Proliferative</td>
<td>Severe Gingival Inflammation</td>
<td>+ Ulcer History</td>
<td>35-39.9</td>
<td>Moderate Depression PHQ-9 score 10-14</td>
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<td>≥ 10.0 (≥86 mmol/mol)</td>
<td>SBP ≥ 150</td>
<td>&gt;191</td>
<td>Refractory Heart Failure</td>
<td>GOLD 3 or 4 &amp; ≥2 exacerbation s/yr &amp; mMRC ≥2 &amp; CAT≥10</td>
<td>Albuminuria ≥3,000 or eGFR ≤15</td>
<td>Active Proliferative</td>
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<td>Previous Amputation</td>
<td>≥40 or &lt;18.5</td>
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Patient Receives Health Score Card, along with Care Plans and Service Referrals.
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Consumerize Solution: Guided Patient Journey
(Diabetes Example for Hispanic Patients)

Discovery / Assessment

Understanding
Health worker helps patient understand their condition

See Results
Track results and improvements

Guidance and support through treatment plan
Health worker use mobile application tool to guide patients

Stronger engagement
Effective process and improved health strengthen trust and relationship with care coordinators and clinical team

Care Coordinator or PCP

Significant improvement in patients presenting to WDI with poor glycemic control (*HbA1c ≥ 9%)

Mean HbA1c (%)
Distribute Solution through Partnerships: Community Clinics, Pharmacies, Grocery Stores
Patient App for Adherence Tracking

Patient Self-Management App

- Log Out
- Menu Principal
  - Care Plan
  - Dermatology
  - Heart Disease Assessment
  - Medications and Supplements
  - Mental Health
  - My risk for diabetes
  - Stroke Assessment
  - Tele-consult

Patient Self-Management Credentialing

- Direct Consultation

- Video Call
  - Menu Principal
  - Review
    - 3. How would you rate your fat...
      Not answered.
    - 4. How would you rate your pai...
      Not answered.
    - CHECK APPOINTMENT/CONSULT
      No answer.
    - Is patient able to make it for next...
      Not answered.
    - Additional Information
      No answer.
    - Notes / General Comments
      No answer.
    - Next Follow-up Call
      No answer.
    - That's all I needed to talk to you...
      Not answered.
    - Date of next call
      No answer.
    - Time of next call
      No answer.
    - Discard
    - Upload/Save
1. Serve more patients while lowering costs through task-shifting (screen / refer)

2. Connect healthcare providers and specialists enable efficient treatment planning

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Where to task-shift towards?

Which partners to form win-win collaboration?
- List partners that can help you
- List your organization expertise

What are short-term and long-term ROIs?
- List target metrics (e.g. cost-savings, increased patient reach, improved health outcomes)

ClickMedix Model to Scale Healthcare Innovations