Leveraging Telehealth for Effective Hypertension Management

Navigating the Terrain of Effectively Using Today's Digital Health Tools

Christian Milaster
Founder & CEO
Ingenium Digital Health Advisors

Matt Faiman, MD
Chief Clinical Officer
Ingenium Digital Health Advisors

Session Description

+ Telehealth is a great way to deliver care at a distance.
+ But how can you leverage it effectively to manage chronic conditions such as hypertension?
+ How do you optimize telehealth from a strategic, financial and clinical perspective?

Learn more from a Cleveland Clinic TeleInternist and a German-born, Mayo Clinic-trained Engineer and Consultant.
Telehealth Defined

Everybody agreed, until somebody defined it.

Everybody agreed, until somebody defined it...

Telehealth
Delivering Care at a Distance

Telemedicine
Practicing Medicine at a Distance
A Telehealth Taxonomy

- Telehealth
- Telemedicine
- Patient Portal
- Interactive Patient Care
- Remote Patient Monitoring
- Store and Forward

The Quadruple Aim of Telehealth

- Improved Patient Satisfaction
- Improved Provider Satisfaction
- Better Health Outcomes
- Lower Cost of Care
Serving the Modern Healthcare Consumer

Effectively Managing Hypertension using Telehealth

Data, Technology and then some

Matt Faiman, MD
Chief Clinical Officer
Ingenium Digital Health Advisors
### The Question

Hypertension: What is it? Who has it?

Can **Telehealth** control hypertension better?

### The Problem

<table>
<thead>
<tr>
<th>Blood Pressure Category</th>
<th>Systolic mm Hg (Upper Number)</th>
<th>Diastolic mm Hg (Lower Number)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Normal</strong></td>
<td>LESS THAN 120</td>
<td>LESS THAN 80</td>
</tr>
<tr>
<td><strong>Elevated</strong></td>
<td>120 – 129</td>
<td>LESS THAN 80</td>
</tr>
<tr>
<td><strong>High Blood Pressure (Hypertension) Stage 1</strong></td>
<td>130 – 139</td>
<td>80 – 89</td>
</tr>
<tr>
<td><strong>High Blood Pressure (Hypertension) Stage 2</strong></td>
<td>140 OR HIGHER</td>
<td>90 OR HIGHER</td>
</tr>
<tr>
<td><strong>Hypertensive Crisis</strong></td>
<td>HIGHER THAN 180</td>
<td>HIGHER THAN 120</td>
</tr>
</tbody>
</table>

Source: AHA
Who has Hypertension?

Nearly 45% US Adults have Hypertension (116 Million)

Hypertension: BP ≥ 130/80

CDC, 2018

Controlled Hypertension: Only 25%

U.S. Adults with Hypertension

47.3% (116 million)

Recommended intervention type

- Lifestyle modifications only: 21.0% (24.3 million)
- Lifestyle modifications plus medication: 79.0% (91.7 million)

Blood pressure control status

- Uncontrolled: 100% (24.3 million)
- Uncontrolled: 73.9% (67.8 million)
- Controlled: 26.1% (23.9 million)

Blood pressure treatment status

- Treated: 49.6% (33.6 million)
- Untreated: 50.4% (34.1 million)

Current blood pressure level (mm Hg)

- >140/90: 59.5% (20.0 million)
- >140/90: 68.0% (23.2 million)
Delivering RPM – It’s more than data!

Delivering Care through...

- **Synchronous Virtual Visits**
  - Live, Audio/Visual Connection

- **Asynchronous Telehealth**
  - eVisits, pushes and pulls

- **Remote Patient/Physiologic Monitoring (RPM)**

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Remote Patient Monitoring

- Needs both: Pushes and Pulls

Reimbursement opportunities:

Chronic Disease Management – Active Programs

- Hypertension
- Adult and Peds
- Diabetes
- Heart Failure
- Asthma
- COPD
- BMT

Virtual HTN 1.0 – An Example

Hypertension Pilot
80 patients for 6 months
Hypertension 1.0

- 80 actively monitored patients: uncontrolled BP
- RPM + optional lifestyle coaching (curriculum based)
- ~370 care coach motivational interviewing video / phone visits (58 patients)
- 16 patients declined coaching

- Heightened awareness of blood pressures and how to manage them better
- Enhanced accountability for self-management of care
- Increased patient engagement in their care

This program has been very helpful. It has increased my awareness and made me more accountable.

“I feel better with taking my medications in the morning. I am taking ownership and feel great participating in this program... only took me 20 years!”

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Online Chronic Disease Management

CCF Carepaths

Express Care Virtual Visits
Interval touches

Remote Monitoring daily touch

Data Analytics

Patient Engagement

CCF Certified
Coaches

Patient Entry
Health Plan
Employer
Patient Advertising
Referring Provider

CCF Certified
MDs
APPs
RNs
RTs
Pharmacists

Wi-Fi BP cuff
Medcompliance
Activity monitors

e-Coaching daily touch
**Results of Cleveland Clinic Healthy Life HTN Program**

15.5% Achieved BP Control in "16k in '16 Campaign" (52,800 Patients)

BP < 140/90: 8,160 (15.5%)
BP > 140/90: 44,640 (84.5%)

62.5% Achieved BP Control in Healthy Life HTN Program (80 Patients)

BP < 140/90: 30 (27%)
BP > 140/90: 50 (63%)

4x | 300% improvement in BP control!!

**Current HTN Programs**

+ Pushes and Pulls
+ No Risk Categories
+ No Stratifications
+ Using AI to analyze Multivariate Data
Development of a Risk Model

**Literature Review:** no model found to risk-stratify for use with RPM
+ ASCVD – 10 year
+ CVD – 10 year

**European and Canadian Literature**

**Sparked Idea:**
+ Can we make a model to use with RPM?
+ Non-linear regression, gradient boost, C-stat

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**HTN – A Possible Future**

**Definitions and Categories**

<table>
<thead>
<tr>
<th>Hypertension Type</th>
<th>RPM Program – Coaching, Digital, Behavioral Modification, Medical, AI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistant HTN</td>
<td>Intensive</td>
</tr>
<tr>
<td>Uncontrolled HTN (Non-Resistant)</td>
<td>Intensive</td>
</tr>
<tr>
<td>Controlled HTN</td>
<td>Moderate – Intensive</td>
</tr>
<tr>
<td>Pre-HTN</td>
<td>Low – Moderate</td>
</tr>
<tr>
<td>General Wellness</td>
<td>Low</td>
</tr>
</tbody>
</table>

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*Definitions and Categories*

**HTN**

- **Resistant HTN**
- **Uncontrolled HTN**
- **Controlled HTN**
- **Pre-HTN**
- **General Wellness**

**RPM Program**

- Coaching, Digital, Behavioral Modification, Medical, AI
Optimizing Telehealth

Avoiding Insanity.
Insanity: doing the same thing over and over again and expecting different results.

- Albert Einstein

Proven Telehealth Optimization Strategies

Maturity Growth

Performance Management

Change Management
## Maturity Growth

1. Start with the End in Mind: Create a Clear Vision
2. Assess Current Maturity Level
3. Establish a Desired Maturity
4. Lay Out a Clear Path To Close the Gap

### Maturity Levels

- **LEVEL 0 — CHAOTIC**
- **LEVEL 1 — EMERGING**
- **LEVEL 2 — COORDINATED**
- **LEVEL 3 — SUPPORTED**
- **LEVEL 4 — INTEGRATED**
- **LEVEL 5 — STRATEGIC**
- **LEVEL 6 — TRANSFORMATIVE**

### Ingenium Telehealth Program Maturity Model

- **Dec 2021**
- **Apr 2021**

**Ingenium Digital Health Advisors**
Maturity Analysis & Roadmap

<table>
<thead>
<tr>
<th>April 30 Assessment</th>
<th>targeted Dec '21</th>
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</thead>
<tbody>
<tr>
<td>Services:</td>
<td></td>
</tr>
<tr>
<td>few scattered</td>
<td>some supported</td>
</tr>
<tr>
<td>few scattered</td>
<td>some supported</td>
</tr>
<tr>
<td>slow</td>
<td>slow medium</td>
</tr>
<tr>
<td>Coordination:</td>
<td></td>
</tr>
<tr>
<td>none</td>
<td>some informal</td>
</tr>
<tr>
<td>Tech Support:</td>
<td></td>
</tr>
<tr>
<td>none</td>
<td>some informal</td>
</tr>
<tr>
<td>Operational Support</td>
<td></td>
</tr>
<tr>
<td>none</td>
<td>some formal</td>
</tr>
<tr>
<td>Launch Support:</td>
<td></td>
</tr>
<tr>
<td>none</td>
<td>some informal</td>
</tr>
<tr>
<td>Leadership:</td>
<td></td>
</tr>
<tr>
<td>unaware</td>
<td>aware supportive</td>
</tr>
<tr>
<td>Governance:</td>
<td></td>
</tr>
<tr>
<td>none</td>
<td>some established</td>
</tr>
<tr>
<td>Vitality:</td>
<td></td>
</tr>
<tr>
<td>survive</td>
<td>alive</td>
</tr>
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Ingenium Telehealth Program Maturity Model

- **LEVEL 0 — CHAOTIC**
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Dec 2021
Apr 2021
2
Performance Management

Identify Key Performance Indicators (KPIs)

Establish Goals

Measure Telehealth Performance

Improve Performance

The 5 Most Important Telehealth Metrics

Clinician Satisfaction
Patient Satisfaction
Technical Performance
Visit Volume
Reimbursement
Measuring Telehealth Success

**Definition**
How to collect the metric?
How to analyze the metric?
How often? How to report?

**Ownership**
Executive Owner
Operational Owner
“Data Steward”

**Expectations**
What are the goals/targets?
for acceptable performance?
for success?

**Actions**
pre-defined actions to take
if goals not reached?
if goals exceed? if met?

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3 Change Management

<table>
<thead>
<tr>
<th>Mitigate</th>
<th>Overcome Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>Focus on Motivation</td>
</tr>
<tr>
<td>Acknowledge</td>
<td>Acknowledge Struggles</td>
</tr>
<tr>
<td>Systems</td>
<td>Optimize Systems, not People</td>
</tr>
</tbody>
</table>
ADKAR Model for Successful, Sustainable Change

- Awareness
- Desire
- Knowledge
- Ability
- Reinforcement

Proven Telehealth Optimization Strategies

- Maturity Growth
- Performance Management
- Change Management

Level 6 — Transformative
Level 5 — Strategic
Level 4 — Integrated
Level 3 — Supported
Level 2 — Coordinated
Level 1 — Coordinated
Level 0 — Chaotic

Confusion
Resistance
Reluctance
Frustration
Backsliding
CHANGE!
Thank You!

Christian Milaster
Founder and CEO &
Digital Health Transformation Advisor
Ingenium Digital Health Advisors
Christian.Milaster@IngeniumAdvisors.net
(657) 464-3648

Ingenium
Telehealth
Tuesday
IngeniumDigitalHealth.com/insights

LinkedIn

Thank You!