LEVERAGING TECHNOLOGY TO IMPROVE OUTCOMES

PRESENTED BY
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Objectives

1. The participant can identify barriers to monitoring patients in rural settings.
2. The participant can describe how AI assists in identifying patients who need assistance.
3. The participant can describe at least one way AI improves efficiency in delivering care.
MCLAREN LANDSCAPE

- 2700+ Providers
- 15 Acute Care Facilities
- 48 Counties
- >1.4M Patients
- ~260,000 “attributed”
CHALLENGES

• Reduce Readmissions
• Reduce “avoidable” ED visits
• Implement strategies to support and manage patients in the home
• Low patient engagement
• Address health inequities
• Bandwidth of Team: Approximately 150 patients per RN/LMSW
  • Identifying those who need assistance most
  • Traditional RPM program presented challenges: Cost, Wi-Fi, blue tooth connections, and patient’s comfort level with technology
Identifying-Predicting Patients

**Traditional Risk Scores Used**
- Hierarchal Category Coding (HCC)
- LACE Tools
- Utilization and cost
- DRG/ Diagnosis Specific

**SSR-Population Health Tool**
Composite score

- Diagnosis and Co-morbidities
  - (ex. Obesity, CHF, COPD)
- Demographics
  - (Age, sex, race, zip code, level of education)
- Utilization
  - (PCP identified and used, ED visits, hospitalizations)
- Lifestyle
  - (smoking, activity, diet)
**Example**

**Key Community Info**

### Community Characteristics

<table>
<thead>
<tr>
<th>Geography Included</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZIP Code: 48858</td>
</tr>
<tr>
<td>Reach: 10 miles</td>
</tr>
</tbody>
</table>

### Neighborhood Statistics

<table>
<thead>
<tr>
<th>Block Groups</th>
<th>Estimated Households</th>
<th>Estimated Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>20,722</td>
<td>60,145</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Walkability Index</th>
<th>Poverty Rate</th>
<th>Uninsured</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.17</td>
<td>32.83%</td>
<td>7.90%</td>
</tr>
</tbody>
</table>

### Reported Age

- 25 or Younger: 25.00%
- 26-44: 73.85%
- 65 and Older: 10.25%

### Reported Race or Ethnicity

- Asian / Pacific Islander: 2.21%
- Black: 3.19%
- Hispanic: 6.07%
- Native American: 3.20%
- Other: 3.83%
- White: 86.76%

### Key Health Characteristics

<table>
<thead>
<tr>
<th>Health Literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speak English 'Less than Well': 0.58%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rates of Preventative Screenings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervical Screening</td>
</tr>
<tr>
<td>--------------------</td>
</tr>
<tr>
<td>77.47%</td>
</tr>
</tbody>
</table>

### Approximate Number of Healthcare Providers Within Ten Miles of 48858

- Family Medicine: 19
- General Practice: 3
- Internal Medicine: 17
- Pediatrics: 7
- Psychiatrists/Neurologists: 8
- Psychologists: 33
Creating a Solution for Target Populations Identified
CHALLENGES

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ALTERNATIVE RPM MODEL-
PATIENT REPORTED OUTCOMES “PRO”

- No Wi-Fi, email, or internet needed
- Easily accessible and convenient for patients
- Increased ability to monitor/touch more patients-without adding resources
- Disease, situation or “trigger event” specific
- Identifies a patient need before urgent
- Free for patients
- Increased Team Bandwidth
Example Algorithms for Target Populations:

- CHF patient is asked to rate their swelling, breathing and a weight
- COPD asked to rate breathing; cough and sputum
- ESRD asked about dialysis and barriers to next appointment
- DM asked to enter blood glucose
- High-poverty rate given SDOH Assessment and resources

Alerts

- Patient’s response can trigger an immediate alert
- Patient can request a call or assistance at anytime
MYCARE PROGRAMS

Dashboard and AI-generated categorization (red, yellow, green)

- Conditions
- Responses
- Frequency of responses (engagement)
- Alerts

Push/Blast Messaging

- SDOH example
- COPD
- Gaps in Care
**Mycare Journey**

**McLaren**
- Identifies and provides list of eligible patients

**Vendor**
- Contacts patients via test, emails, calls

**Patients**
- Patients respond to disease/"trigger event" questions by automated email, text, or phone call

**Responses flow into Platform**
- Categorizes and generates real-time alerts based on patient responses

**McLaren RN Care Manager**
- Monitors dashboard, evaluates, addresses alerts, or assigns to other CT members
- Communicates with provider, or directs to appropriate setting for care as indicated

Patients respond to disease/"trigger event" questions by automated email, text, or phone call.
OUTCOMES

Patient Participation:

- 6500 Active (>12,000 unique in last 12 months)
- 26% of above are in a rural setting
- >12,000 alerts addressed in last 12 months
- 74% (DM)- 86% (Post ED and hospitalization) engagement rate

Most Common Alerts:

- ED Patient has question after discharge
- COPD-breathing worse
- CHF Breathing and swelling
- DM patient glucose out of parameter
OUTCOMES CONT’D

Clinical Outcomes:
- 7.8-point drop in systolic BP from baseline
- 1.6-point drop in HgbA1c for patients starting >8
- Readmission rate reduction overall 3.2%

Staffing Efficiencies:
- RN’s (3)-previously 450 patients now 6500=1300% increase
- Eyes on those likely to have an issue; focused work on those who need assistance

Projected Cost avoidance:
- 5.02M Chronic Illnesses
- 143 ED Visits
EXPANSION

SDOH Initial Assessments
  • Rural
  • Aged-Dual

Analytic tools to predict patients
  • Proprietary Risk score-60+ elements used to predict
  • Risk Stratification

Post-Discharge-system wide
  • ED
  • Inpatient

Gaps in Care
**PATIENT FEEDBACK**

"You know what I like about this kind of text messaging is that it's simple, direct, & the response to my questions or follow up by the caregiver is almost immediate. Thanks!"  
06/15 - Patient #298162

"I will not change a thing. It just reminds me that I have to take care of myself more often by checking my sugar and my pressure everyday thank you so much for the reminder. It's like having a doctor on my phone."  
02/11 - Patient #263915

"It's much easier to text then talk. It gives me time to go over the events being asked about."  
06/09 - Patient #294925

"Just having someone review, my blood pressure makes me feel safer."  
07/20 - Patient #302625

Care Satisfaction • You are getting the best possible care from McLaren.

- **Average**: 7.11
- **N**: 1,376

Health Literacy • Messages from McLaren have helped me understand my condition better.

- **Average**: 6.36
- **N**: 2,868
IN CONCLUSION

SSR-Composite Risk

• Based on research
• Plan to evaluate effectiveness

Alternative RPM Model

• Proved to be an effective tool in the rural health setting
• Gives patients easy access to healthcare team and resources without having to travel or in areas where access is limited (delivers care while in the home)
• Escalates only urgent needs reducing call burden to the practice
• Significantly improved staffing efficiencies
• Promotes lowest cost setting of care through early identification—"warning signs"