“Buy or Build”

Delivering Acute Care at Home
Medically Home – 12 Year History in Two Minutes

Loss of Life

Hospital
Fixed Costs

New Care
Model Needed

The Home
as Venue

Clinical
Pilot

Atrius Health

Patient #1
Chuck

Oncology
Clinical Trial

Pandemic
Propellant

Mayo Clinic
Alignment

Reimbursement
Waivers

Mayo Clinic
Alignment
The Hospital Model Problem – Opportunity for Disruption

- High Fixed Cost Hospital Model Compromising its Mission
- Rising Hospital Costs
- Changing Consumer Preferences and Demographics
- Evolving Delivery Models Competing with Hospitals
- Hospital Capacity Challenges
- Hospital Safety Issues
Continuum of Patient Acuity

The Patient Acuity Continuum

- Low
- Low-Medium
- Medium
- High Medium
- High

Observation Patients Not Qualified For Hospital Admission

ICU-Level Patients Not Qualified For Care in Decentralized Settings
Patient Characteristics in the Acuity Continuum

**Lower Acuity Patients**
- Shorter hospital LOS
- Less post acute care
- Strong social support
- Lower probability of readmission
- SOI 1
- <10% hospital admissions

**Higher Acuity Patients**
- Significant comorbidities
- Longer LOS
- High post acute care
- Higher readmissions
- Requires acute response, remote monitoring, 24/7 contact
- High ancillary service utilization
- SOI 2-3
- +20% of admissions
Thought Exercise - Comparing Acuity Levels

1 Sample Cohort of 38 Total Patients, 4 SOI and 38 SOI 34

- Direct Costs in the Home:
  - SOI 1: $4,300
  - SOI 3: $9,200

- Length of Stay (LOS) for Acute Phase:
  - SOI 1: 42
  - SOI 3: 44

- Length of Stay (LOS) for Acute + Restorative:
  - SOI 1: 75
  - SOI 3: 146

- Average # of Touches - Acute Phase:
  - SOI 1: 75
  - SOI 3: 44

- Average # of Touches - Acute + Restorative:
  - SOI 1: 42
  - SOI 3: 44
Essential Elements of our Virtual Acute Care Model

Characteristics of High Acuity patients (SOI 2-3)
• Failed outpatient treatment
• Require >3-day inpatient hospitalization (ALOS = 4-5)
• Typically, a history of frequent, recent hospitalizations
• Need for frequent medication adjustments and assessment of treatment plan
• Multi-morbid, often frail, polypharmacy
• Risk of clinical decompensation (e.g., to Tele/ICU)

Requirements for High Acuity care

- 24/7 Physician-led observation and interventions
- Ability to do complex assessment and treatment
- Multiple touchpoints per day
- Mix of in-person and telemedicine care

Supported by a technology layer (software and hardware)
Patient Experience

- Patient presents in affiliate Hospital ED
  - ED Activities – diagnostic tests leading through to patient opts into program

- Patient presents in Urgent Care
  - Urgent Care Activities – diagnostic tests, presumptive diagnosis, patient opts into program

- Patient presents in PCP Clinic
  - Clinic Activities – Diagnostics, antibiotic infusion therapy administered, patient opts into program

- Patient presents at home
  - Home Diagnostic Activities
Medical Command Center

Medical Command Center Key Attributes

- Designed for high acuity care at home
- 24/7/365
- Staffed by MDs/NPs, RNs that can support high acuity care at home
- Tethered to clinicians dispatched to home
- Purpose-built software (Cesia™) enabled
- Seamless team during acute and restorative phases
The Heart of the Idea – Acute Care Supply Chain

<table>
<thead>
<tr>
<th>1. Paramedicine</th>
<th>10. Home health aide</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Medical Supplies</td>
<td>11. Behavioral health</td>
</tr>
<tr>
<td>3. DME</td>
<td>12. Licensed social worker</td>
</tr>
<tr>
<td>4. Oral Meds/Rx svs.</td>
<td>13. Physical therapy (+ OT, ST)</td>
</tr>
<tr>
<td>5. Infusion</td>
<td>14. Registered dietitian</td>
</tr>
<tr>
<td>6. O2 services</td>
<td>15. Meal</td>
</tr>
<tr>
<td>7. Lab (incl. phlebotomy)</td>
<td>16. Courier delivery</td>
</tr>
<tr>
<td>8. Mobil imaging</td>
<td>17. Transportation</td>
</tr>
<tr>
<td>9. Skilled nursing</td>
<td>18. Home tech. installation</td>
</tr>
</tbody>
</table>

**Integration and Control Function**
- SLAs
- Local market contracting and capability requirements
- Training
- Oversee and direct supply and service fulfillment
- Manage provider/network performance
- Manage payment and disbursement to vendors

**MEDICAL MISSION CONTROL**
Manage patients telemedically

**CESIA™ TECH PLATFORM**
Enabling the delivery of care in the virtual hospital model

**TECHNOLOGY IN THE HOME**
Create telepresence for the command center

**ACUTE RAPID RESPONSE SERVICES**
Everything patients need brought to the home on demand

**Medically Home**
Massachusetts Health Data Consortium
Inspired by Military Medicine Logistics - The Principle of Tethering
The Tethered Virtual Hospital Room

- Device Integration
- Inbound/Outbound Video
- Vital Signs Collection
- Patient Outcomes Reporting
- Provider Documentation
- Patient Education
- Hardware for Health Monitoring
Integrated Software Platform (Cesia™)

External Electronic Health Record (e.g., Epic, Cerner)

- Traditional Clinical Data
- Order Management
- Documentation
- (FFS) Billing

Care Coordination
- Voice, Video and Tablet
- Nursing Access and Staffing
- Alerts & Incident Management
- Care Plans & Task Management

Supply Chain Platform – Acute Rapid-Response Coordination
- Order->Activities Matching
- Real-time / Smart Dispatch
- Service Order Fulfillment Support
- Service Status, Tracking, and Alerts

Acute Care Telemedicine “The Virtual Hospital Room”
- Patient Tablet
- Biometric Device Integrations
- Mobile (Provider and Family)
- Patient Reported Outcomes
- In-Home Clinician Tools
- Phone, Video, PERS Contact Management

Medically Home Data Warehouse
- Real Time Analytics
- Decision Support
- Reporting

24/7 Continuous Monitoring
- Redundant deployments across regions and cloud providers for high availability
- Managed integration services for EHR APIs and HIE Connectivity
- HIPAA Compliance across the partner ecosystem
Flexible Chassis Designed to Scale

The Virtual Hospital Chassis
A Common Expandable Platform Designed to Safely Shift +25% of Patients From Hospital to Home

Entry Points into the Virtual Hospital
- PCP Referral
- Specialist Referral
- ED & Urgent Care
- Transfer Center
- Med/Surg
- ICU Step-Down
- PACU/Post-Surgery

Chassis
- RAPID RESPONSE SUPPLY CHAIN: Everything brought to the home on demand
- MEDICAL COMMAND CENTER: Centralized, physician-led, telemedical, 24/7
- TECHNOLOGY IN THE HOME: Create telepresence for the command center
- CESIA TECH PLATFORM: Enabling delivery of care in the virtual hospital

Use Cases to Cover all Key Points on the Patient Entry Point Continuum
- Episode Prevention
- ED Substitution
- Obs Substitution
- Acute Substitution
- Reduced LOS
- SNF Substitution

Use Cases for High Volume Potential Patient Groups
- Oncology Patients
- Pediatric Patients
- Transfusion
- Ventilated Patients

Use Cases for High Impact Interventions to be Added to the Chassis

Medically Home
Massachusetts Health Data Consortium
## Sources of Value

### HEALTH SYSTEM

- Additional revenue for existing patient volume associated with the 30-day+ bundle vs. the DRG (e.g., $13,000 vs. $10,000)
- Potential for new revenue from new patient volume attracted to the @Home model
- Fewer quality-related penalties (e.g., infections, readmissions)
- Backfill beds with higher margin / higher acuity / better payer mix patients
- Avoid CAPEX associated with building additional capacity (e.g., ~$2M/bed)
- Higher overall CMI

### PAYER / RISK-BEARER

- Locked-in savings through bundle which represents savings over a 30-day cost of care
- Additional savings due to reduced readmission rates beyond bundle time horizon (e.g., 90+ days)
- Better clinical-outcome metrics (including reduced mortality)

### PATIENT / FAMILY

- Higher patient satisfaction (as measured by HCAHPs scores)
- Higher engagement in health
- Better clinical outcomes
- Tie into community support, as needed (e.g., VA benefits)

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Overall cost savings of 25-30% experienced with the MH Program over a 30-day episode of care
While lower cost to the payer, the bundle model often represents higher total reimbursement to the health system by capturing SNF and other post-acute revenue that often flows outside of the health system (e.g., hospital DRG = $11K; but bundled payment = $15K for 30-day episode also covering SNF care equivalent).
Use Case Illustration – ED in Home

- Alternative to the Hospital ED
- Urgent evaluation and treatment
- High acuity patients that are not in extremis or having an MI, stroke or major trauma
- Community paramedic tethered to medical command center ED physician
- Vehicle contains all necessary equipment and supplies
- Provides all the necessary diagnostic/therapeutic services to ensure safe and quality
- Develops an appropriate disposition plan
- +900 Patients
- Strong outcomes
- Higher avg acuity vs. hospital ED
Goal – Make Home Hospital the Standard of Care

Hospitals

Default Position
The Current Standard of Care

Home Hospital

Appropriate Conditions
Appropriate Acuity Levels

- 25+ years of evidence of safety and outcomes
  - 110 U.S. Hospitals have been approved for the CMS “hospital without walls waiver”
    - Lessons learned from COVID

Mindset Shift
Enabled by Higher Acuity
Safely scaling