Value-Based Care “From A to V” (Asthma to Ventilation):

Leveraging Partnerships and Payment to Drive Quality and Manage Cost
Enhanced Respiratory Care—Background

- Specialized intensive respiratory care provided to individuals dependent on mechanical ventilation for at least 12 hours a day and individuals with a tracheostomy that require deep suctioning through the tracheostomy
- TN—one of the few states in the country with an ERC program that offers enhanced rates of Nursing Facility (NF) reimbursement for these services
- Developed in 2002 to improve access to NF services with a primary goal of ventilator liberation, including individuals deemed “unweanable”
- Reimbursed by MCOs as a cost-effective alternative service to continued inpatient hospitalization, based on negotiated rates
- Historically one of the longest operating and most successful ventilator programs in the country
  - Began with a single, statewide provider with focus on quality and outcomes
  - Liberation rates in the 65% range across 3 units
- Recognized as a Best Practice/Center of Excellence by the American College of Chest Physicians
- Standards of care recommended as national standards by the American Association for Respiratory Care in 2010
Evolution, growth, and concerns

• TennCare ERC reimbursement introduced in March 2010 as part of CHOICES MLTSS program, including specialized (“standard”) rates for:
  – Ventilator Weaning $750
  – Chronic Ventilator Care $600
  – Frequent Tracheal Suctioning $400

• Also in 2010, Medicare revised RUG rates, which doubled from an average of $350 to $700 per day for ventilator care

• Increased provider interest in serving the ventilator population

• Prior to 2010, three ventilator units with 48 total beds operated across Tennessee—one in each grand region

• Between 2010 and March 2015, the number of facilities approved for ventilator services nearly tripled to eleven facilities with a total bed capacity of 316 on record with HCF, a 558% increase in bed capacity

• After implementing ERC rates in 2010, the cost of ERC reimbursement increased more than 900% between 2011-2015
NFs with Licensed Vent Beds and Bed Count

- 266% increase in NFs with licensed vent beds
- 558% increase in licensed vent beds
ERC Utilization Trends FY 2011-FY 2015

Medicaid ERC Recipients

% Change FY10 to FY15

<table>
<thead>
<tr>
<th>Service</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Ventilator Care</td>
<td>1285%</td>
</tr>
<tr>
<td>Tracheal Suctioning</td>
<td>824%</td>
</tr>
<tr>
<td>Ventilator Weaning</td>
<td>318%</td>
</tr>
<tr>
<td>Total of distinct persons</td>
<td>732%</td>
</tr>
</tbody>
</table>
ERC Utilization Trends FY 2011-FY 2015

ERC Medicaid Spending

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Ventilator Care</td>
<td>$2,188,455</td>
<td>$5,000,000</td>
<td>$10,000,000</td>
<td>$15,000,000</td>
<td>$22,787,273</td>
</tr>
<tr>
<td>Tracheal Suctioning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ventilator Weaning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

% Change FY10 to FY15

<table>
<thead>
<tr>
<th>Service</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Ventilator</td>
<td>1063%</td>
</tr>
<tr>
<td>Tracheal Suctioning</td>
<td>805%</td>
</tr>
<tr>
<td>Ventilator Weaning</td>
<td>546%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>941%</td>
</tr>
</tbody>
</table>
TennCare Response

- Changes in ERC reimbursement were needed to help rein in unsustainable growth in expenditures for these services and to address important quality concerns
- Moratorium on new MCO contracts for ERC reimbursement pending evaluation of need and development of more structured utilization management and quality processes
  - MCO initiated exception based on quality or timely access to care
- Launched quality improvement initiative to review and improve Enhanced Respiratory Care/Reimbursement
  - Contracted with Eventa, LLC to provide assistance with:
    - On-site assessments of all NFs receiving ERC reimbursement
    - Establishing quality outcome and technology measures
    - Collecting quality outcome and technology performance data
    - Using data to develop new value-based purchasing approach, aligning incentives to improve the quality of care and quality of life experienced by individuals receiving ERC reimbursement
    - Adjusting medical eligibility requirements and standards of care, as needed
Multi-Prong Approach to Improving Quality

• Strengthen medical eligibility requirements, consistent with best practices
• Refine standards of care for ventilator services
• Establish standards of care for tracheal suctioning
• Manage network expansion in order to ensure quality and rein in expenditure growth
• Strengthen health plan oversight of facilities receiving ERC reimbursement
• Develop quality outcome and technology performance measures
• Modify ERC reimbursement to incentivize quality outcomes and improve the member’s experience
Key Performance Indicators

- **Quality Outcome Measures**
  - Ventilator Wean Rate*
  - Average Length of Stay to Wean*
  - Infection Rate
  - Hospitalization Rate
  - Decannulation Rate
  - Unanticipated Deaths
  - Denial Rate

*Not applicable to NFs providing Tracheal Suctioning-only NFs
Key Performance Indicators

• **Technology Measures**
  – Alarm Paging/Beeper System
  – Cough Assist
  – Heated Wire
  – High Flow Molecular Humidification
  – High Frequency Chest Wall Obs or IPV
  – Incentive Spirometer or any PEP*
  – Mobile Monitoring Device*
  – Non-Invasive Ventilation*
  – Non-Invasive Open Ventilation (Nasal application for mobility)*

*Not applicable to NFs providing Tracheal Suctioning-only NFs
TennCare Data Collection

• “Data collected over an initial period will be used to identify appropriate benchmarks and to finalize a new reimbursement structure to appropriately align incentives and improve the quality of ERC services provided. Facilities providing better quality services with better patient outcomes will receive higher reimbursement, while facilities performing more poorly on quality measures will receive lower reimbursement.”

• “ERC quality measure data submission to TennCare will be mandatory. A facility will not be eligible to continue receiving ERC reimbursement if the facility fails to submit these reports, or (following a reasonable period for training and technical assistance) submits untimely, incomplete, or inaccurate reports regarding chronic ventilator care, ventilator weaning and tracheal suctioning services.”

• “Audits will be conducted in the future to validate the information provided through this reporting process.”
Implementation Timeline

**Phase I**
- **January 2014** – Quality improvement initiative, including intent to implement new value-based ERC reimbursement approach announced to facilities
- Site visits conducted by Eventa, LLC
- Quality and technology measures developed

**Phase 2**
- **November 2014**—Facilities notified/trained on new measures
- **December 2014**—Data collection commenced
- Targeted training and technical assistance to improve data quality

**Phase 3**
- **April 2016**—12 months of reliable data collected
- Data analysis and rate modeling to determine quality measure point values, quality tiers, and reimbursement rates
- **June 2016**—Training and information provided to facilities in June 2016

**Phase 4**
- **July 2016**—New value-based ERC reimbursement system launched
## ERC Quality Point Distribution

<table>
<thead>
<tr>
<th>Ventilator wean rate</th>
<th>Average length of stay to wean</th>
<th>Infection Rate</th>
<th>Unplanned Hospitalizations</th>
<th>Decannulation rate</th>
<th>Unanticipated deaths</th>
<th>Denial rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;60</td>
<td>40</td>
<td>Points not assigned at this time</td>
<td>25</td>
<td>&gt;50</td>
<td>20</td>
<td>&lt;1</td>
</tr>
<tr>
<td>45-60</td>
<td>25</td>
<td>5-10</td>
<td>20</td>
<td>30-50</td>
<td>15</td>
<td>1-3</td>
</tr>
<tr>
<td>20-44</td>
<td>10</td>
<td>11-15</td>
<td>10</td>
<td>10-29</td>
<td>10</td>
<td>&gt;3</td>
</tr>
<tr>
<td>&lt;20</td>
<td>0</td>
<td>16-25</td>
<td>5</td>
<td>&lt;10</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;25</td>
<td>0</td>
<td>&gt;50</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

If wean rate is >45%:
- <45 days = 35
- =>45 days = 25

If wean rate is 20-44%:
- <45 days = 25
- =>45 days = 10

If wean rate is <20%:
- 0

Points not assigned at this time

Points not assigned at this time
## 1. TECHNOLOGY MEASURES

<table>
<thead>
<tr>
<th>Measure (available and used)</th>
<th>Point Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm Paging/Beeper System</td>
<td>4</td>
</tr>
<tr>
<td>Cough Assist</td>
<td>7</td>
</tr>
<tr>
<td>Heated Wire</td>
<td>3</td>
</tr>
<tr>
<td>High Flow Molecular Humidification</td>
<td>6</td>
</tr>
<tr>
<td>High Frequency Chest Wall Oscillation or Intrapulmonary Percussive Ventilation</td>
<td>3</td>
</tr>
<tr>
<td>Incentive Spirometer or any Positive Expiratory Pressure Device*</td>
<td>1</td>
</tr>
<tr>
<td>Mobile Monitoring Device*</td>
<td>3</td>
</tr>
<tr>
<td>Non-Invasive Ventilation*</td>
<td>8</td>
</tr>
<tr>
<td>Non-Invasive Open Ventilation (Nasal application for mobility)*</td>
<td>3</td>
</tr>
</tbody>
</table>

*Measure not applied to facilities that do not perform ventilation services.
Enhanced Respiratory Care Reimbursement

4 Levels of ERC Reimbursement

• Ventilator Weaning
• Chronic Ventilator Care
• Tracheal Suctioning
  – Sub-Acute: Short-term intensive respiratory intervention during the post-weaning period
  – Secretion Management
• Add-on to NF’s per diem rate based on NF’s performance on quality outcome and technology measures
• ERC add-on payment adjusted semi-annually based on NF performance
• ERC reimbursement only available if quality measurement data submitted monthly and accurately (audited every period)
Scores and Tiers

Facility Scoring (Vent, Wean and TS)
• 140 possible Quality points + 38 possible Technology points
• Point totals are tabulated for each facility and divided by total available points (178)
  High       =>67%      (>119 points)
  Moderate   33-66%    (60-119 points)
  Low        <33%      (<60 points)

Tracheal Suctioning-Only Facility Scoring
• 65 possible Quality points + 23 possible Technology points
• Point totals are tabulated for each facility and divided by total available points (88)
  High       =>67%      (>59 points)
  Moderate   33-66%    (30-59 points)
  Low        <33%      (<30 points)
Tiers and Rates

- Rates prior to 7/1/16
  Ventilator Weaning $750  Ventilator $600  Tracheal Suctioning $400

- Add-on value-based payment structure effective 7/1/16

<table>
<thead>
<tr>
<th>Tier</th>
<th>Ventilator Weaning</th>
<th>Ventilator</th>
<th>Enhanced Tracheal Suctioning—Sub-Acute</th>
<th>Enhanced Tracheal Suctioning—Secretion Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>$600</td>
<td>$350</td>
<td>$200</td>
<td>$125</td>
</tr>
<tr>
<td>Moderate</td>
<td>$550</td>
<td>$300</td>
<td>$150</td>
<td>$75</td>
</tr>
<tr>
<td>Low</td>
<td>$450</td>
<td>$250</td>
<td>$100</td>
<td>$50</td>
</tr>
</tbody>
</table>

- Assuming $200 per diem (current average $210.83; up to $259.91)

<table>
<thead>
<tr>
<th>Tier</th>
<th>Ventilator Weaning</th>
<th>Ventilator</th>
<th>Enhanced Tracheal Suctioning—Sub-Acute</th>
<th>Enhanced Tracheal Suctioning—Secretion Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>$800</td>
<td>$550</td>
<td>$400</td>
<td>$325</td>
</tr>
<tr>
<td>Moderate</td>
<td>$750</td>
<td>$500</td>
<td>$350</td>
<td>$275</td>
</tr>
<tr>
<td>Low</td>
<td>$650</td>
<td>$450</td>
<td>$300</td>
<td>$250</td>
</tr>
</tbody>
</table>

- No data=no add-on payment for ERC
ERC Early Successes

Quality

Quality Measure Analysis

- A decrease (-4.73%) in the amount of chronic ventilator care
- A substantial increase (55%) in ventilator weaning utilization
- A significant decrease in tracheal suctioning (-90.27%)

In October 2016 we finalized our calculation methodology for the existing quality measures. In comparing the analysis from October 2016 to the next analysis in March of 2017 (6 months worth of data) we observed:
- Average Wean Rate increased from 41.47% to 45.33%
- Average Decannulation rate increased from 32.30% to 36.42%
- Unpanned Hospitalizations decreased from 20.42% to 17.83%

Personal Outcomes – Weaning Chronic Patients
July 2016 – March 2017
- 1 individual weaned who had been mechanically ventilated for 4 years.
- 2 individuals weaned who had been mechanically ventilated for 3 years.
- 2 individuals weaned who had been mechanically ventilated for 2 years.

Utilization

- From FY 2004 until FY 2015 ERC spending increased ten-fold. FY 2016 marks the first year ERC spending has decreased.
- The changes in rates and service definitions when coupled with the changes to utilization patterns to secure a higher quality score has demonstrated a decrease of 25% in ERC spending.

FY 16 – FY 17
1. A decrease (-4.73%) in the amount of chronic ventilator care
2. A substantial increase (55%) in ventilator weaning utilization
3. A significant decrease in tracheal suctioning (-90.27%)
Wean Rate – 8 of 10 facilities improved
Total Points – 8 of 10 facilities improved
ERC Facility Tiers

Changes over measurement periods

**Oct 17 - Mar 18 Tiers**
- Tier 1 (HIGH): 3
- Tier 2 (MODERATE): 2
- Tier 3 (LOW): 5

**Apr – Sept 18 Tiers**
- Tier 1 (HIGH): 4
- Tier 2 (MODERATE): 6
- Tier 3 (LOW): 0
Total Ventilator Days

Utilization in Units

FY 14-15: 25635
FY 15-16: 26409
FY 16-17: 26034
FY 17-18: 25876
Total Ventilator Spend

Utilization in Dollars

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Spend</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 14-15</td>
<td>$14,999,205.41</td>
</tr>
<tr>
<td>FY 15-16</td>
<td>$15,614,033.50</td>
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<tr>
<td>FY 16-17</td>
<td>$13,647,568.72</td>
</tr>
<tr>
<td>FY 17-18</td>
<td>$14,072,531.44</td>
</tr>
</tbody>
</table>
Total Ventilator Cost per Day

Cost per Day

<table>
<thead>
<tr>
<th>Year</th>
<th>FY 14-15</th>
<th>FY 15-16</th>
<th>FY 16-17</th>
<th>FY 17-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>$585.11</td>
<td>$591.24</td>
<td>$524.22</td>
<td>$543.84</td>
</tr>
</tbody>
</table>

$600.00

$580.00

$560.00

$540.00

$520.00

$500.00

$480.00

Total Tracheostomy Days

Utilization in Units

- FY 14-15: 16402
- FY 15-16: 19710
- FY 16-17: 12703
- FY 17-18: 12724
Total Tracheostomy Spend

Utilization in Dollars

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Total Spend</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 14-15</td>
<td>$6,242,858.07</td>
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<tr>
<td>FY 15-16</td>
<td>$7,615,057.00</td>
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<tr>
<td>FY 16-17</td>
<td>$3,731,406.81</td>
</tr>
<tr>
<td>FY 17-18</td>
<td>$3,958,555.86</td>
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</table>
Total Tracheostomy Cost per Day

<table>
<thead>
<tr>
<th>FY</th>
<th>Cost per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 14-15</td>
<td>$380.62</td>
</tr>
<tr>
<td>FY 15-16</td>
<td>$386.35</td>
</tr>
<tr>
<td>FY 16-17</td>
<td>$293.74</td>
</tr>
<tr>
<td>FY 17-18</td>
<td>$311.11</td>
</tr>
</tbody>
</table>
An MCO perspective

Kathy Shinkle Sakpibal
Director, LTSS, Amerigroup
TN CHOICES Program
8/27/2019
MCO Responsibilities

Care Coordination Responsibilities

- Regular visits to the NF to check on supported individuals residing in the NF
- Semi-Annual (at minimum) face to face meetings with the individual and any natural supports the individual wishes to engage
- Quarterly Provision of Care discussions with NF team
- Supplemental Plans of Care if an individual goal is not being addressed by the NF
- Review and implementation of Eventa recommendations for care and/or PAE
- Oversight and remediation of any gaps in care or concerns with the care being provided to the individual
- Help with placement and transitions in care settings
ERC Oversight in the Nursing Facility

Partnership in Care

• Responsibilities:
  • Amerigroup Care Coordination Team – Monitoring total support needs; coordination with family, facility, and Eventa
  • Nursing Facility Staff – Day to day care of individual
  • Eventa Team – Monitoring of respiratory support needs; recommendations to improve outcomes
  • TennCare – Monitoring of quality

• The feedback loop is critical to support the individual
  • Enables quick response to individual/family concerns
  • Enforces the importance of quality of care
  • Provides regular, consistent oversight of the care needs
  • Ensures appropriate payment to support level of care needs
Expanding Outside the NF

What about the home setting?

• Opportunity
  • Amerigroup realized an opportunity to better support individuals residing in the community with ventilator and tracheostomies by partnering with Eventa to provide in home evaluations

• Results
  • Provides caregiver training
  • Affirms appropriate supplies are in the home
  • Additional resource to support coordinator work efforts with the individual

• In June alone, Eventa completed 13 visits and identified 5 DME concerns, 3 individuals with decannulation potential, and assessed 1 caregivers’ ability to provide appropriate care.
Expanding the Impact

Population Outcomes Management

• **Objective**
  - Support individuals with various respiratory diagnoses to live as symptom free as possible leveraging strong relationships and tools

• **Outcome**
  - Healthier population of individuals with reduced expense for overall medical cost

• Enrollment through Case Management referrals, as well as referral lists based on historical claims based diagnoses
• Participation is voluntary but involves regular check in with the Eventa clinician
• Current enrollment is 562 individuals
Results of Program

Bigger than Savings

- 87% of participants report the impact of the disease on their ADL function is maintained or improved (CAT Assessment data, June 2019)
Questions
From Asthma to Ventilation
“A to V”
Four Populations of Care

A to V

- Asthma
- COPD
- Enhanced Respiratory Care
- Home ventilator and tracheostomy complex care
ERC Target Population

• Ventilator Dependent Patients who are medically stable

• Tracheostomized patients-those who have already been weaned at the hospital level and need deccanulation of the tracheostomy

- Average age is 58
- 32% lung Disease
- 27% Neurological
- 19% cardiac
- 14% Trauma
- 9% other causes
The Ventilator Dependent Population

• The ventilated population consumes almost 40% of the cost and resources in acute care.

• The population of patients ventilated for > 96 hrs is predicted to be 605,898 by the year 2020 – approximately 20% of these will require PMV care.

• Currently the trend is to place these patients in long-term care facilities or at home often, with no hope of weaning – resulting in high cost of care over time.

• The financial incentive is to keep the beds full of ventilated patients – there is no incentive for successful outcomes.

• Although there are published benchmarking statistics, there is little emphasis on continued weaning in long-term care due to poor funding, lack of resources and misaligned incentives.

• In most states the prevalence of ventilator patients in long-term care is increasing – cost are rising at an alarming rate.
# Published Data

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of patients</td>
<td>224</td>
<td>1,123</td>
<td>278</td>
<td>420</td>
<td>102</td>
<td>57</td>
</tr>
<tr>
<td>% weaned</td>
<td>51</td>
<td>56</td>
<td>38</td>
<td>60</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>Survival to discharge</td>
<td>50</td>
<td>71</td>
<td>53</td>
<td>94</td>
<td>80</td>
<td>98</td>
</tr>
<tr>
<td>Cost ($/day)</td>
<td>453</td>
<td>980</td>
<td>630</td>
<td>1,084</td>
<td>303</td>
<td>370</td>
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<tr>
<td>Type of unit</td>
<td>NRCU</td>
<td>RWC</td>
<td>RWC</td>
<td>NRCU</td>
<td>NH</td>
<td>NH</td>
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<tr>
<td>% neurologic</td>
<td>NP</td>
<td>7.8</td>
<td>19</td>
<td>NP</td>
<td>27</td>
<td>26</td>
</tr>
<tr>
<td>% postoperative</td>
<td>21</td>
<td>23.5</td>
<td>11</td>
<td>75</td>
<td>38</td>
<td>NA</td>
</tr>
</tbody>
</table>

* Length of studies ranged from five to eight years. NH, nursing home; RWC, regional weaning center; NRCU, noninvasive respiratory care unit; NP, not presented.
ERC “Super SNF” vs Hospital

• Better quality of life - move out of ICU, more visitors, go to shower, etc..

• Patient focused care with low RT and nurse to patient ratio

• Able to focus on weaning due to lower acuity of all patients – patients go home – back to work

• Able to focus on communication – ST and RT

• Slower pace, superior environment for family teaching for home ventilation needs if can’t wean

• Greater family involvement

• Dramatically reduced cost of care
Volume/Cost Filter

Annual Volume of new PMV patients and post vent trach patients

PMV = MV > 6 hrs for > 21 days & Post vent trach for decannulation

Vent & Trach
Vent to Trach
Trach to NIV
Liberation

50-75% reduction in PMV & trach cases
Realigned Incentives and Quality Oversight

- Regulatory requirements for participation
- Pay for performance model – financial incentives for improved outcomes
- Incentives for use of advanced technology
- Clinical reporting for benchmarking
- Clinical oversight
- Joint operational meetings between state, payer, and contractor
Note: initial measures from early 2016 show a total of 5 ERC facilities in tier 3. As a result of our aggressive efforts working with these facilities to improve quality, there are 0 ERC facilities in tier 3.
<table>
<thead>
<tr>
<th>Clinical Indicators</th>
<th>Q4 14 - Q1 15</th>
<th>Q4 18 - Q1 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wean Rate</td>
<td>8.69</td>
<td>56.63</td>
</tr>
<tr>
<td>Days to Wean</td>
<td>32.60</td>
<td>25.10</td>
</tr>
<tr>
<td>Decannulation Rate</td>
<td>8.86</td>
<td>45.53</td>
</tr>
<tr>
<td>Unplanned Hospitalization</td>
<td>17.23</td>
<td>22.74</td>
</tr>
<tr>
<td>Unanticipated Death Rate</td>
<td>0.59</td>
<td>1.20</td>
</tr>
</tbody>
</table>

Eventa begins FY 15-16
Home Complex Respiratory Care

Members discharged home are provided very little support aside from nursing they might receive. Most are sent home with equipment but are poorly educated, and ill prepared in its use. Currently, there’s little to no oversight of quality performance monitoring for Home Medical Equipment Companies/Home Health Agencies.

New discharges to home with invasive mechanical ventilation or tracheostomy

- Evaluate prior to discharge for most appropriate care path ~ home vs ERC
- Assure proper equipment provided at discharge
- Assure adequate family/caregiver training

Existing members on home invasive or noninvasive ventilation or tracheostomy

- Evaluate for latent weaning or decannulation potential
- Assure all proper equipment is in place and utilized correctly
- Resolve any DME issues (90% of 300 cases some degree of issue noted)
- Monitor closely
Population Outcomes Management-780

Those with diagnosis of COPD or unstable lung disease
- Assessment of severity on admission using a variety of validated clinical tools etc..
- Medication assessment and validation of compliance
- Disease education
- Member engagement
- 24 hour RT coach availability

Children or Adults with Asthma – Asthma/medication education
- Clinical assessment
- Medication assessment and validation
- Disease education
- 24 hour RT availability
Population Health Update

94% of active members had severe or very severe CAT scores upon admission to the program.

We have seen a 72% reduction in hospital visits.

Initial staging process suggested that over 84% of the members had Stage 3 or Stage 4 COPD (severe and very severe).

87% Improvement in *CAT scores.

Patient Satisfaction Survey Results have been very promising. We are at a 98% Satisfactory rate.

Self Management Data

Results-competent and/or improved post education

- Smoking Improvement: 30%
- Oxygen Improvement: 49%
- Infection Improvement: 78%
- Exacerbation Improvement: 49%
- Disease Process Improvement: 46%
- Action Plan Improvement: 86%

*CAT Score: The COPD Assessment Test (CAT) is a standardized test which measures the impact that COPD has on a member’s life.
Liberation the Ultimate Outcome

Ms Cannon has spinal bifida and is paralyzed from the waist down. She resided at home in Georgia with her uncle and spends most of her time outside in her wheelchair doing craft projects.

She went to the hospital for a wound which required surgical repair. She went into respiratory failure and was placed on the vent.

She stayed a total of 109 days in acute care and failed many weaning trials. She was deemed unweanable, and was being referred by the hospital to a “nursing home” in Kentucky or Ohio, far away from her family.

She came to us and was weaned from her vent in 2 days, her trach was decannulated 20 days later!

She returned to her home state of Georgia vent and trach free.

Acute Care Cost
$600,000

SNF
$10,000

2 Thumbs up
Priceless
Our Longest Running Case

Jason Collins was a 30 year old with DMD. He was ventilated via oral endotracheal tube for 22 days in a 50 bed rural hospital. He was extubated on 3 occasions and immediately required reintubation. He did not want a tracheostomy. He was referred for evaluation for transfer to an ERC facility on January 25, 2010.

- On Evaluation he met none of the classic indicators of weaning success
- He couldn’t be transferred due to heavy snow and family refusal
- Our team elected to convert him to noninvasive ventilation using a protocol published by Dr John Bach
- Following the protocol Jason was extubated and immediately placed on non invasive volume control ventilation by nasal mask.
- He tolerated the conversion well and within hours was able to speak, eat and was telling jokes with his family.
As of January 31st 2010 his family was fully trained for home care and he was discharged.

Day ventilation

Night Ventilation

He self weaned from the ventilator by March 2010. In June he flew to Germany for a month with his new wife.
Part 2 - Fast Forward to 2016

From 2010 to 2016 Jason led an active life with no hospitalization's.

In November 2016 he was admitted to a local hospital with Pneumonia and subsequent respiratory failure. He was emergently intubated and transferred to Erlanger Medical Center in Chattanooga, TN.
He was ventilated with oral endotracheal tube for another 21 days, all the while refusing tracheostomy.
He was extubated twice and failed the extubation.
The hospital insisted on a tracheostomy but again he refused.
In mid November 2016, at the request of the patient and family Eventa was contacted by the hospital for assistance. The hope was that we could repeat the conversion to NIV and again avoid a tracheostomy.
On arrival to the hospital ICU Jason was evaluated and we met with the family and his attending physicians to discuss the case.
The protocol was reviewed with the hospital staff and once again he was successfully extubated and placed on advanced NIV with high respiratory rate and high tidal volume. He tolerated the procedure well and was moved from ICU to a step down unit 3 days later.

Unfortunately on his 3rd day post extubation he had not received his essential daily regimen of mechanically assisted cough and was found to be lethargic with an elevated CO2.

Rather than increase his noninvasive support he was emergently intubated again and the family was told that a tracheostomy had to be performed at that point. It was reluctantly agreed to proceed and Jason was tracheostomized and returned to the ICU.

During the few days that followed Jason's mother (the primary care giver) suffered a stroke while at the hospital visiting. She expired the same afternoon.

Two days later the hospital informed the family that he was to be discharged home and nothing else could be done for him.
Never Give up

The family reached out again to Eventa for help. The hospital continued to insist that he go directly home stating that **nothing else could be done for him and deemed him ventilator dependent for life.** In the end the family had to demand a transfer to an ERC site and he was transferred to an ERC Unit in early December.

On arrival to the ERC site he immediately started weaning but with adequate ventilatory support.

During the time off the vent he was supported with high flow humidity directly to his trach. The 60 lpm flow enabled him to remain off the vent for extended periods of time.

Jason spent Christmas and New Years at the ERC but his spirit remained high.
Using All the Technology in our Arsenal

To keep his spirits high a new medical technology was introduced, the Xbox One.

With this Jason was highly motivated to wear his speaking valve so that he could don his headset for gaming.

By Mid April 2017 Jason had been weaned from the vent during the day, his trach was downsized then subsequently removed.
Another Great Ending

- He was discharged home in late April on NIV via mask at night.
- He uses the cough assist 4-5 times per day
- He has planted a small garden
- Gone 4 wheeling
- Lives a good quality of life trach free.
21 year old member was admitted to a Nashville ERC Unit in March 2018 after suffering a gunshot wound to the neck, which resulted in quadriplegia.

- He was ventilated and given a very poor prognosis at a local hospital, and he was informed that he would never be able to eat, speak, or breathe independently.
- Over several months the member had greatly improved in clinical presentation.
- Eventa recommended trach collar trials, and the member tolerated the weaning very well.
- On 02/05/19, he was successfully liberated from mechanical ventilation.
- On 04/29/19, he was successfully decannulated!
The Trifecta

76-year old female who had aortic valve replacement on 02/06/18.

- Unfortunately, she developed respiratory distress post-operatively, requiring intubation and invasive mechanical ventilation on 03/07/18.
- The member was transitioned to an LTACH on 03/28/18 for continued ventilator/tracheostomy management.
- During the LTACH stay, the member’s renal status worsened, requiring hemodialysis.
- After months of failed progress, she was transitioned to the ERC program at West Meade Place for ventilator/tracheostomy weaning with hemodialysis.
- The member had lost all hope for recovery after the complicated course, but the facility quickly restored it.
- Within months, she was able to “wean” from hemodialysis.
- After 15 months of invasive mechanical ventilation, the member was successfully liberated from invasive mechanical ventilation.
- Moreover, she was decannulated 1 month later, which allowed her to return home in early July.
Life Changing Decannulation Success

10-year-old member at home that has past medical history significant for Taybi Syndrome and OSA.

• Member had a tracheostomy placed when he was 1 year old (2009)
• Member failed a decannulation attempt in 2012

• Eventa completed an initial evaluation in the home on 6/20/19 and found that member was an excellent candidate for tracheal decannulation because of the following:

✓ Member had a 3.0 pediatric cuffless trach
✓ Member had not required tracheal suctioning in at least 2 weeks
✓ Member had a negative sleep study 1 year prior to the evaluation

• The member is now decannulated and doing well
Last One a Real Winner Too

5-year-old member born at 25 weeks gestation had tracheostomy placed at 6 months old

- Eventa completed initial evaluation on 6/17/19 and found member to be an excellent candidate for tracheal decannulation because of the following:
  - Small amount of tracheal secretions
  - Strong cough
  - Negative sleep study with capped trach
  - No supplemental oxygen requirements

- The member was admitted to the hospital on 7/24/19 and successfully decannulated

- Eventa visited the member for a follow up evaluation on 8/12/19 and found the member was doing remarkably well with stoma nearly closed

- The member started school on 8/13/19 Trach free!
Thank you!

Questions?