Health Solutions

• 2016 Covered Lives: 400,000
  ▪ Includes Governmental and Commercial Shared Savings, Shared Risk, Full Risk, Employer Sponsored and Pay for Performance contracts

• Health Solutions deployed clinical staff include:
  ▪ Physicians
  ▪ Nurse Practitioners
  ▪ RN Care Managers
  ▪ Social Workers
  ▪ Behavioral Health Specialists
  ▪ Patient Engagement Specialists
  ▪ Health Coaches

• Care Management Strategies
  ▪ Gaps in Care
  ▪ Telephonic Care Management
  ▪ Embedded Care Management
  ▪ Transitional Care Management
  ▪ Advanced Illness Management
  ▪ Care Management Programs
  ▪ Healthy Transitions (CKD)
  ▪ Health Home
  ▪ Pioneer ACO
  ▪ Bundled Payments for Care Improvement
  ▪ Independence at Home
Risk Stratification and Determination of Program Eligibility

Full Range of Care Management Programs Tailored to Individual Patient Needs

In-Person Care Management:
- Hospice
- Advanced Illness Mgmt
- Complex

In-Person & Remote Care Management:
- Complex
- Disease Mgmt
- Telephonic
- Transitional
- Behavioral Health/SW
- Resource Coordination

Remote Care Management:
- Prevention & Wellness, Gaps in Care
- Utilization Management

Northwell Health Solutions
MCO Care Mgmt
Advanced Illness Management

Complex medical management for approximately 1,400 homebound patients with multiple chronic conditions and functional impairment living in Queens, NYC and Nassau and Suffolk counties.

• Interdisciplinary care teams, which include physicians, nurse practitioners, social workers, nurses, and medical coordinators deliver primary and palliative care in the patient’s home in an effort to:
  – Understand wishes of the patient and family (advance care planning)
  – Maintain or improve functional status
  – Reduce unnecessary utilization or unwanted care
  – Increase days at home
  – Allow for death with dignity at home
  – Care for the whole person: social work and care coordination
House Calls Patients, $N=914$

- Oldest: 109
- Average: 82
- Youngest: 19

71% Female, 29% Male

Median Age: 86

* December 2015 Census

Nassau, Suffolk and Queens counties
Background

**House Calls Stats***

- **Attrition**: 30% of annually (death and discharge)
- **Death at Home**: 72% of patients who died, died at home
- **Activities of Daily Living**: 63% of patients have 5 – 6 ADL dependencies

**HCC Categories**

- Pressure Ulcer: 31%
- Dementia: 28%
- Diabetes: 28%
- Specified Heart Arrhythmias: 17%
- Chronic Obstructive Pulmonary Disease: 15%
- Protein-Calorie Malnutrition: 14%
- Chronic Kidney Disease: 12%
- Quadriplegia: 12%
- Vascular Disease: 11%
- Seizure Disorders and Convulsions: 10%

* Dec 2015 Census
Medical Coordinators
Schedule appointments, facilitate DME and referrals, manage patient calls

Providers
- Primary accountability for the entire patient care caseload
- Engage proactively with RNs and MSWs to maximize caseload performance
- Provide timely support to co-manage care with RNs and MSWs
- Provide primary care for entire caseload

Social Work
- Initial assessments and coordination of services
- Initiate & coordinate advance care planning
- Behavioral health support
- Coordination of social support services and next level services (i.e. hospice)

Nursing (RN)
- Patient/family engagement
- Management of red flag medical problems
- Medication reconciliation and Stabilization of functions
- Follow-up care coordination
Care Pathways

**Advanced Illness**
- Advanced condition such as advanced cancer or heart, lung, kidney, liver, or cognitive failure **WITH** evidence of active decline:
  - Active decline is defined as any of the following: 2 hospitalizations/ED visits in the last 6 months **OR** Progressive and significant decline in one or more ADLs in the last 3 months **OR** Nutritional decline (albumin <3 g/d or 5% weight loss over 6 months)
  - Validation: PPS <60

**Complex Care**
- Assistance/Supervision of 2 ADLs
- 2 Hospitalizations/6 ED visits in the last year
- 1 Post/Sub-Acute Care episode in the last year
- Low self-management (poor adherence, limited support network)

**Stabled Chronic**
- Assistance/Supervision of 2 ADLs
- 1 hospitalization in the last year
- 1 Post/Sub-Acute Care episode in the last year
What is Community Paramedicine?

A 24/7, on-demand clinical response for medically frail seniors living in the community
A transformation of the critical care paramedic workforce into *physician extenders*
through telemedicine-guided consultation with primary care physicians
An effective means of:
- providing a meaningful clinical response within the hour
- increasing patient, caregiver, and provider satisfaction
- decreasing care costs
Community Paramedicine Workflow

Provides urgent in-home response at all hours of day and night through utilization of the marginal capacity of CEMS and Clinical Call Center

- **Patient Point of Crisis**
- **Dials House Calls Program “Press 1”**
  - **Triage**
    - Nurses in Clinical Call Center
    - ECNS/Low Code Algorithm
  - **Phone Consult with House Calls On-Call**
  - **Appointment Scheduled for same or next day**
  - **Community Paramedicine response**
  - **Ambulance Transport to ED**

*Acuity*
Community Paramedicine Results

- Since program start, over 1250 CP responses deployed.

- Average Community Paramedic response time is 22 minutes. Average time on scene is 65 minutes.

- 81% of CP responses resulted in a meaningful change in medical management

- Only 23% of cases resulted in transport to the ED setting, as compared to a 90% transport rate across CEMS generally.

- For those that were transported to the ED, 61% were considered “non-avoidable”

- 86% of patient satisfaction survey respondents state they would have turned to ED for care.

- CP resulted in potential cost savings of $3.8M in avoided admissions, ED visits, and ambulance transports.
Reasons for Community Paramedicine Visits

Based on 664 CP visits between January 1, 2014 – April 30, 2015
# Procedures and Medications Administered

## Procedures Performed by Community Paramedics

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-Lead EKG</td>
<td>939</td>
</tr>
<tr>
<td>Pulse Oximetry</td>
<td>713</td>
</tr>
<tr>
<td>ALS assessment</td>
<td>433</td>
</tr>
<tr>
<td>IV established</td>
<td>184</td>
</tr>
<tr>
<td>CO2 Monitoring -...</td>
<td>83</td>
</tr>
<tr>
<td>IV fluid infusion</td>
<td>27</td>
</tr>
<tr>
<td>Bleeding controlled</td>
<td>16</td>
</tr>
<tr>
<td>Splinting</td>
<td>3</td>
</tr>
<tr>
<td>Cold therapy</td>
<td>2</td>
</tr>
<tr>
<td>CPAP</td>
<td>2</td>
</tr>
<tr>
<td>Defibrillation</td>
<td>1</td>
</tr>
<tr>
<td>CPR</td>
<td>1</td>
</tr>
</tbody>
</table>

## Frequency of Medication Administration by Community Paramedics

<table>
<thead>
<tr>
<th>Medication</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>115</td>
</tr>
<tr>
<td>Albuterol</td>
<td>102</td>
</tr>
<tr>
<td>Morphine</td>
<td>44</td>
</tr>
<tr>
<td>Zofran</td>
<td>38</td>
</tr>
<tr>
<td>Aspirin</td>
<td>25</td>
</tr>
<tr>
<td>Dextrose 50%</td>
<td>17</td>
</tr>
<tr>
<td>Labetalol</td>
<td>12</td>
</tr>
<tr>
<td>Diltiazem</td>
<td>6</td>
</tr>
<tr>
<td>Midazolam</td>
<td>5</td>
</tr>
<tr>
<td>Albuterol</td>
<td>5</td>
</tr>
<tr>
<td>Morphine</td>
<td>4</td>
</tr>
<tr>
<td>Labetalol</td>
<td>3</td>
</tr>
<tr>
<td>Diltiazem</td>
<td>3</td>
</tr>
<tr>
<td>Midazolam</td>
<td>2</td>
</tr>
<tr>
<td>Sodium bicarbonate</td>
<td>2</td>
</tr>
<tr>
<td>Nitroglycerin</td>
<td>2</td>
</tr>
<tr>
<td>Vasopressin</td>
<td>1</td>
</tr>
<tr>
<td>Morphone</td>
<td>1</td>
</tr>
<tr>
<td>Oxygen</td>
<td>1</td>
</tr>
</tbody>
</table>
Physician Survey Responses: Medical Management

Did the information provided by the Community Paramedicine evaluation change your medical management?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>467 (80%)</td>
<td>117 (20%)</td>
</tr>
</tbody>
</table>

- “The clinical picture changed between the dtr’s call and the paramedics eval, allowing me to confidently advise to keep pt home.”
- “Pt had acute bronchitis, was able to get 1st dose of steroids by CPmedic IM, get neb treatment. If not for those treatments, would have been hard for patient to stay safely at home, as he was refusing to go to hospital.”
- “CPmedic was able to keep pt home by giving IVF for hyperglycemia and assessing probable location of infection to allow correct antibiotics to be given. Also was able to check fingerstick and identify that pt, who does not have diabetes, [just] had [an] extremely high glucose level.”
- “Pt with hyperkalemia, was able to get 12 lead EKG and then to stay home with aggressive medication management, was able to see EKG by video conference.”
- Death pronouncement
- Reassurance for overwhelmed or distressed caregiver
- Public assist
- Patient is on hospice; has no intention of being hospitalized

* Data from Aug 2014 – August 2015.
Patient Survey Results: Satisfaction

Overall, I was satisfied with my CP experience. 149 (90%) Strongly Agree, 13 (8%) Disagree

I would use the CP service in a future medical emergency. 144 (87%) Strongly Agree, 19 (11%) Disagree

The Community Paramedics delivered high-quality services and care. 146 (88%) Strongly Agree, 19 (11%) Disagree

I was satisfied with how the on-call House Calls provider and Community Paramedics managed my medical issues. 146 (88%) Strongly Agree, 15 (9%) Disagree

My goals for medical care were accounted for in the treatment plan. 141 (85%) Strongly Agree, 18 (11%) Disagree

“We are extremely satisfied with the experience. The paramedics were reassuring, intelligent, and caring. We more than strongly agree with every evaluative statement.”
Patient Survey Results: ED Avoidance

- “This is the best way to prevent unnecessary ER visits. This service should be a prerequisite before dialing 911 for people who are ill at home. 911 should be left for what it was intended for - severe accidents.”

- “The experience was excellent. The team worked together in a very professional and knowledgeable manner. I felt they really ‘cared.’ They checked back with phone calls also.”

- “I was very impressed with the program. I am an RN and I truly appreciate the level of professionalism and caring that was shown to my father. Bernard (our paramedic) made my father feel at home immediately. This is a wonderful program.”

- “I am the daughter of an elderly patient. The House Calls program and Community Paramedics have been an absolute lifesaver - for all of us. With your amazing care, we have been able to keep my mother at home, out of the hospital, comfortable, and incredibly well cared for.”
Community Paramedicine: Financial Metrics

- Costs based on leveraging existing CEMS infrastructure
- Calculated using fixed and variable costs per visit
- Approximately $450 per visit @ 1.25 hours which includes:
  - Vehicle, maintenance and fuel
  - Salaries, wages and benefits
  - Medications, supplies and equipment
  - Dispatch services and specialized software
  - Integrated call services
  - Other general expenses