Ho’okele Health Navigators

“Complex Care Coordination”
A new line of business

2013 NAHC Annual Meeting and Exposition
10/31/13

"Medicine used to be simple, ineffective, and relatively safe. It is now complex, effective, and potentially dangerous."

Sir Cyril Chantler. BMJ 1998; 317:1666
Objectives

• Describe the need for improved care coordination to high risk/high cost individuals.

• Design a complex care coordination program that will have a positive impact on the quality of individual’s lives and lower overall cost of medical care to a group of high cost individuals in particular Medicare and Medicaid members.

• Evaluate the impact of care coordination with health indices and cost of care measures.

Healthcare is a Maze
Ho’okele Overview

• Founded in 2006 - enabling families to navigate the complicated health and elder care systems

• Professional staff – RNs, MSWs, Health Coaches, In-Home Aides

• Customers – Individuals, Employers, Health Plans

• iHealthHome® technology developed to enable cost effective care coordination at home

The Aging Tsunami and Chronic Disease
Aging Tidal Wave

• 10.5 million seniors live alone, this number will double by 2030
• Over ½ of all humans that have ever lived to be 65 or older are alive today!

The Boomers are Here

Every 8.5 seconds a baby boomer in the U.S. turns 50 years old
Chronic Disease

• Eight of ten Americans age 65 or older are living with heart disease, diabetes or some other form of chronic disease.
  • U.S. Center for Disease Control and Prevention (CDC)
• Disproportionate drivers of healthcare costs.
• These individual’s in general experience poor health outcomes due to the fragmented healthcare delivery system.

What to Do?

“High blood pressure, high cholesterol, high blood sugar, high anxiety... getting high is no fun at my age!”
What is Care Coordination

• An approach to healthcare in which all of a patient’s needs are coordinated with the assistance of a knowledgeable, single point of contact
  – Medical
  – Home & Community Based Services
  – Functional Assistance
  – Social Participation
  – Personal Goals
Challenges

Transitions

- 42% were able to state their diagnosis
- 40-80% of medication information is immediately forgotten
- Almost half of the information was remembered incorrectly
  - Inner city NY hospital

Fragmentation

- Medication compliance
- Missed MD appointments
- Life challenges
- Lack coordination - multiple providers

Leads to:
- ED visits
- Readmission

Readmissions

- Study involved 11,855,702 beneficiaries
- 19.6% readmission rate within 30 days
- Significant number with no follow up with primary care physician at the time of re-hospitalization
- $17.4 billion spent on readmissions

Public reporting, shared incentives, shared accountability
Care Coordination Models

- Care Transitions Interventions (CTI)-Coleman model
  - 4 week intervention

- Transitional Care Model (TCM)-Naylor
  - 1 to 3 month intervention

- Guided Care
  - John’s Hopkins
  - Longterm contact usually for life

- Geriatric Resources for Assessment and Care of Elders (GRACE)
  - Longterm contact up to 2 years

Complex Care Coordination

One model
**Complex Care Coordination Model**

- Intensive RN Care Coordination
- Health Coaching
- Client
- Technology

---

**Who would benefit**

- Multiple chronic conditions
- Frequent hospital admission, re-admissions
- Numerous ER visits
- Complex family and psychosocial environment
- Within the top 1% to 5% of highest cost members of a health plan
- High risk per health plan predictive modeling
- Challenging & time intensive for PCP’s and office staff
- May be approaching end of life
Complex Care Coordination

Attend to the highest risk and/or highest cost patients within a physician’s panel:

Population of Focus #1
• 72 members (3.4%) used 61% of cost ($3.4 M)

Population of Focus #2
• 449 members (5.0%) used 63.5% of cost ($45.6M)

RN Care Coordination

• Partnership with Primary Care Physician
• RN as central point of contact
• Initial intensive face to face interventions
• Pharmacist medication reconciliation
• NCQA care coordination standards
### Tools

- Checklists assist with training and education and promote consistency of practice.

### Discharge Checklist

**Example Questions**

- I have been involved in decisions about what will take place after I leave the facility.
- I understand what my medications are, how to obtain them and how to take them.
- I understand what symptoms I need to watch for and whom to call should I notice them.

---

Tool developed by Dr. Eric Coleman, UCHRC, HCPR
Sign and Symptoms

Tools

• Great tool to train individuals on signs and symptoms and what to do if noted

ALL CLEAR

CAUTION! CALL DR. IF:

CALL 911 - GO TO EMERGENCY!

Health Coaching

• Patient Activation
• Motivational Interviewing
• Self-Management Teaching
• Non-Clinical Model
**Patient Activation - National Outcomes**

The MORE ACTIVATED you are in your own health care, the BETTER HEALTH CARE you get...

<table>
<thead>
<tr>
<th></th>
<th>MORE ACTIVATED Patient</th>
<th>LESS ACTIVATED Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readmitted to the hospital within 30 days of discharge</td>
<td>12.8%</td>
<td>28%</td>
</tr>
<tr>
<td>Experienced a medical error</td>
<td>19.2%</td>
<td>35.8%</td>
</tr>
<tr>
<td>Have poor care coordination between health care providers</td>
<td>12.6%</td>
<td>41.8%</td>
</tr>
<tr>
<td>Suffer a health consequence because of poor communication among providers</td>
<td>13.2%</td>
<td>48.6%</td>
</tr>
<tr>
<td>Lose confidence in the health care system</td>
<td>15.1%</td>
<td>59.8%</td>
</tr>
</tbody>
</table>

Source: Adapted from AARP’s “Beyond 50:9” Patient Survey. Published in AARP Magazine. Study population age 50+ with at least one chronic condition. More Involved=Levels 3 & 4, Less Involved=Levels 1 & 2.
Personalized Education

- Personal
- Specific to Goals
- Relevant
- Digestible
- Easy to Access
- Easy to Review
- Virtual Delivery

Have you tried any of these ways to be more physically active?

- Gardening
  - Walking to mailbox
- Walking dog
- Walking in the mall
- Doing yard work
- Walking in place while watching TV
- Chair exercises
- Parking car further from
- Call a friend to join you
- Join a gym or the YMCA
- Local groups, churches
- Nintendo Wii

Technology

iHealthHome
Complex Care Coordination - National Outcomes

- **Veterans Administration**
  - 25% reduction in bed days
  - 19% reduction in hospital admissions

- **Geisinger Proven Health Navigator Program**
  - 18% reduction in hospital admissions
  - 36% reduction in re-admissions
  - 7% reduction in overall cost

- **TriHealth Cincinnati**
  - 23% reduction in readmissions

- **Massachusetts General Hospital**
  - 15% reduction in ER Visits and Hospital Stays

---

In-Home Remote Monitoring
Interactive Self Management

Fri 04 May
11:41am

79°F

Grand Mother

Blood Pressure

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Systolic</th>
<th>Diastolic</th>
<th>M.R. Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-04-16</td>
<td>9:24 AM</td>
<td>120/53</td>
<td></td>
<td>101 BPM</td>
</tr>
<tr>
<td>2012-04-16</td>
<td>9:01 AM</td>
<td>136/96</td>
<td></td>
<td>100 BPM</td>
</tr>
<tr>
<td>2012-04-09</td>
<td>9:18 AM</td>
<td>127/91</td>
<td></td>
<td>98 BPM</td>
</tr>
<tr>
<td>2012-04-06</td>
<td>9:33 AM</td>
<td>119/82</td>
<td></td>
<td>115 BPM</td>
</tr>
<tr>
<td>2012-04-05</td>
<td>9:19 AM</td>
<td>118/86</td>
<td></td>
<td>96 BPM</td>
</tr>
<tr>
<td>2012-04-05</td>
<td>9:17 AM</td>
<td>100/75</td>
<td></td>
<td>95 BPM</td>
</tr>
<tr>
<td>2012-04-04</td>
<td>12:05 PM</td>
<td>117/87</td>
<td></td>
<td>91 BPM</td>
</tr>
<tr>
<td>2012-04-04</td>
<td>10:56 AM</td>
<td>130/82</td>
<td></td>
<td>101 BPM</td>
</tr>
<tr>
<td>2012-04-04</td>
<td>10:09 AM</td>
<td>118/86</td>
<td></td>
<td>103 BPM</td>
</tr>
<tr>
<td>2012-03-30</td>
<td>9:28 AM</td>
<td>117/80</td>
<td></td>
<td>102 BPM</td>
</tr>
<tr>
<td>2012-03-29</td>
<td>12:22 PM</td>
<td>122/102</td>
<td></td>
<td>101 BPM</td>
</tr>
<tr>
<td>2012-03-29</td>
<td>10:37 AM</td>
<td>132/120</td>
<td></td>
<td>98 BPM</td>
</tr>
<tr>
<td>2012-03-27</td>
<td>10:19 AM</td>
<td>111/81</td>
<td></td>
<td>102 BPM</td>
</tr>
<tr>
<td>2012-03-22</td>
<td>12:06 PM</td>
<td>112/89</td>
<td></td>
<td>95 BPM</td>
</tr>
<tr>
<td>2011-09-01</td>
<td>3:51 PM</td>
<td>114/82</td>
<td></td>
<td>81 BPM</td>
</tr>
</tbody>
</table>

Engagement

On-line Assessment

- Great
- OK
- Not so good

Video Education

Skype Visits
A Story

Mrs. B

Mrs. B

• 68 years old female lives with her 70 y/o husband in public housing.
• English is their second language.
• She is dependent on her husband for her care
**Goals**

**Personal Goal**
- To travel to her home country to see her 14 grandchildren.

**Clinical Goals**
- Blood glucose range – 110 -130 mg/dl
- HgA1c < 7%
- Weight range – 135-137 lbs
- BP range – 130-138/70 -78
- Minimize readmissions due to respiratory infections
- Increase self management and compliance

**Outcomes**

**Personal goal**
- Mrs. B visited her children and grandchildren in 2012

**Improved Health and Cost**
- Blood Glucose –Goal Met- 50% improvement
- HbA1c – Goal Met - decreased 8%
- Weight – Goal Met - lost 12 lbs
- Lipids – Goal Met – 6% improvement in total cholesterol
- Reduced hospitalizations by 20%
- No Admissions in Last 10 months
- Technology in Place = Automated hovering
A New Line of Business

Home Health Care Agencies

Business Opportunity

• Home health agencies are in a unique position to include complex care coordination as a new service line.

• Home care nurses roles can be expanded to coordinate care and resources for individuals with complex chronic disease as a value added service line.
A Need

AHRQ White Paper – January 2012: private physicians

• Smaller practices have little “reserve capacity” or flexibility to devote extra time to the complex patient.

• Lack of time and emotional energy to spend on anything other than the acute needs of the complex.

Private Physicians

• Time required to navigate the variety of community based, social and behavioral programs is overwhelms the lean practice staff

• Lack of time to maintain breadth of knowledge in multiple narrow topics for care of complex patients.

• Low prevalence of complex cases in a panel
Complex Care Coordination Goals

Clinical
  – Reduce ER Visits, hospitalization, re-admissions
  – Improve chronic condition health measures

Technology
  – Increase care coordinator efficiency
  – Engage patients-self management

Payment Alignment
  – Cost savings
  – Increased automation- scale

Common Attributes

• Care team
• Comprehensive assessments.
• Individualized Plans of Care
• Enable access
• Community resources
• Monitoring and communication
How to Begin

• Design as a part of the current home health care position or a separate service line
• Training
• NCQA or other evidence based standards
• Design workflows

Complex Care Coordinator

**Role**
- Coordinate care for medically complex individuals in their homes and community.
- Fosters partnerships with the individual’s physician and healthcare team to promote continuity of services.

**Responsibilities**
- Comprehensive assessment
- Understand the individual’s culture, family and community relationships.
- Develop customized and comprehensive service plan.
- Provide individualized patient education.
- Evidence based tools
- Accompany clients to medical appointments care.
- Referral to community resources
A Story

Mr. H

• 76 year old male
  • Malignant hypertension, Diabetes, Prostate CA
  • Hypertension not responsive to medication therapies
    • Baseline blood pressure of 210/100-194/94
  • 2 ER Visits pre intervention and one hospitalization day of enrollment
  • Client was seeking clinical trials on mainland on own
Goals

Personal
Go to Las Vegas and visit grandchildren in California

Clinical
Medication compliance
BP 140/80 - 130/70
Decrease ED visits
No Hospitalizations due to BP complications

Outcomes

Personal goal
• Mr. H is planning a trip to Las Vegas and California this fall.

Improved Health and Cost
• BP range 142/86 - 132/78
• No Admissions or ED visits in Last 12 months
• Technology in Place = Automated hovering
Measurement

Quality Improvement

Measures

- Biometric improvement
  - Hba1C
  - Blood Pressure
  - Lipids, Others as relevant
- Patient Activation Score
- Predictive Modeling Score
- Medication Reconciliation

- Medication Adherence
  - % refills
- Pre vs. Post Intervention
  - Cost of Care
  - Hospitalization rate
  - ER Visits
- Physician and Patient Satisfaction
HbA1c - 36% Better

**Mean**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Post</th>
<th>Sustained</th>
<th>36.0% Pct Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>7.80</td>
<td>5.04</td>
<td>4.99</td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td></td>
<td></td>
<td></td>
<td>6.63 t-value</td>
</tr>
<tr>
<td>Sustained</td>
<td></td>
<td></td>
<td></td>
<td>0.00 p-value</td>
</tr>
</tbody>
</table>

Total Cholesterol-19% Better

**Mean**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Post</th>
<th>Sustained</th>
<th>19.0% Pct Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>161.50</td>
<td>150.00</td>
<td>130.80</td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td></td>
<td></td>
<td></td>
<td>4.28 t-value</td>
</tr>
<tr>
<td>Sustained</td>
<td></td>
<td></td>
<td></td>
<td>0.00 p-value</td>
</tr>
</tbody>
</table>
**LDL – 10% Better**

- **Baseline**: 83.00
- **Post**: 78.42
- **Sustained**: 74.75 (9.9% Pct Improvement)

**HDL – 13% Better**

- **Baseline**: 41.29
- **Post**: 40.06
- **Sustained**: 46.67 (13.0% Pct Improvement)
Triglycerides - 37% Better

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>193.22</td>
</tr>
<tr>
<td>Post</td>
<td>145.52</td>
</tr>
<tr>
<td>Sustained</td>
<td>122.00</td>
</tr>
</tbody>
</table>

36.9% Pct Improvement
6.75 t-value
0.00 p-value

IP Admits – 42% Reduction

<table>
<thead>
<tr>
<th></th>
<th>Cases</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>25</td>
<td>24</td>
</tr>
<tr>
<td>Post</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>t-Value</td>
<td>-25.0%</td>
<td>-41.7%</td>
</tr>
<tr>
<td>p-Value</td>
<td>5.099</td>
<td>7.464</td>
</tr>
</tbody>
</table>
ER Visits – 20% Reduction

Total ER Visits

Baseline vs. Post

<table>
<thead>
<tr>
<th>Cases</th>
<th>Post Improvement</th>
<th>t-Value</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>East</td>
<td>14</td>
<td>-14.3%</td>
<td>3.696</td>
</tr>
<tr>
<td>West</td>
<td>20</td>
<td>-20.0%</td>
<td>4.416</td>
</tr>
</tbody>
</table>

PAM Outcomes

(PAM Level Change: Baseline to Remasure 1)

<table>
<thead>
<tr>
<th>(Calculated) PAM Level Remasure 1 vs. Baseline</th>
<th>Mean</th>
<th>SdDev</th>
</tr>
</thead>
<tbody>
<tr>
<td>East</td>
<td>1.5</td>
<td>0.9</td>
</tr>
<tr>
<td>West</td>
<td>0.9</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td>1.3</td>
<td>1.1</td>
</tr>
</tbody>
</table>
Cost

• 42 of 72 enrollees had HMSA as a payer
• 19 of the 42 had HMSA as their primary
• 32% reduction in PMPM was observed in the HMSA members enrolled in the program.
  – Sample size is statically small

MD Satisfaction Survey

91% Percent of Responses rated the following as Strongly Agree or Agree:

The RN Navigator helped my patient to better understand and improve managing their health care

The RN Navigator helped me and my office staff to manage the details for my patient and address problems in a timely and professional manner
MD Comments

“Patients who were calling or coming in to the office frequently were able to reduce their visits to every 3-4 months.”

“Excellent service by skilled and compassionate professionals which improve care and cost.”

“Following patients doings, help with their understanding of their medical problems”

Patient Satisfaction Survey

% Responded as Strongly Agree or Agree:

96% My RN Navigator helped me to better understand my medical condition and what I needed to do to take care of myself

97% My RN Navigator listened to me to learn what I wanted and what problems I had before developing a plan to help me

89% I have a better idea of how to talk to my doctor and what to ask
Patient Comments

"You took me to the hospital when I had no one else"

"I still want you folks to come and visit me, it helps me to know that you guys care about me"

"I want more contact, I enjoyed the machine"

"The equipment gave me confidence"

"Why did they take the computer from me now I feel lost, I really got spoiled by you two"

"Keep the program I like it"

"I like to see my blood sugar now I no can"


Patient Comments

“It seems that healthcare is a pile of jigsaw pieces My care navigator helped to show me how the pieces fit into a map of health. It helped to prioritize these, that allows my family and I to make better choices for me.”
The time is now

- The prevalence of chronic diseases and aging population.
- Hospital and MD incentives to improve transitions of care and care coordination across the continuum.
- Unique position and trained labor force
Thank you

Questions?

Bonnie Castonguay, RN
Co-Founder/CEO
Ho’okele Health Navigators
bonnie@hookelehealth.com