The Science of Improvement

The Model for Improvement: Overview

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Faculty
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The presenters have nothing to disclose

Applying the Lens of Profound Knowledge
“Every system is perfectly designed to achieve the results that it gets”
- Atlanta’s infamous ‘Spaghetti Junction’

**A System**

- A system has an aim or purpose
- The network of factors that lead to outcomes of value to stakeholders
- Factors comprise structures, processes, culture, personnel, geography, and much more.
- Dynamic: The ‘thing in motion’.
- The system ‘is what it is’
- Improving outcomes requires understanding the dynamics of the system
The System Of Care

- Reliable evidence-based care
- Patient-centered
- Timely
- Safe
- Efficient
- Effective

The System Of Care

- Staying fit
- Getting better
- Managing chronic disease
- Healthy mom & baby
- Coping with end-of-life
The System Of Care

Population health and well-being
- Percent of patients who suffered harm
- Percent with current preventive care
- Percent of patients who would recommend

Sizing the ‘System’

D: The environment (policy, payment, accreditation, etc.)
C: Organizations that support Microsystems
B: Microsystems
A: Experience of Patients
### Zooming the View

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Macro-systems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>e.g. facility, region</td>
</tr>
<tr>
<td>Service Area</td>
<td>Meso-systems</td>
</tr>
<tr>
<td></td>
<td>e.g. division, clinical dept, pathology, IT</td>
</tr>
<tr>
<td>Frontline Unit</td>
<td>Microsystems</td>
</tr>
<tr>
<td></td>
<td>e.g. unit, clinic, surgical team</td>
</tr>
</tbody>
</table>

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### System Components

Structure

+ Process

+ Culture*

**Outcome**

*Added to Donabedian’s original formulation

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**System Purpose**

“The quality of patients’ experience is the “north star” for systems of care.”

–Don Berwick

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**The Voice of the Patient**

How would your patients describe the purpose of your system of care?

“I want your pharmacy to provide me with the right medications at the right time, in the correct dosages, to help me heal.”

“While I am in your care, I want you to provide me with compassionate, respectful care. I want to be free from pain and have a dignified death.”
Exercise: What’s Your System?

1. Describe the system you want to improve
2. List the stakeholders and what they value in the system
3. Identify the patient population
4. Write down the purpose of your system using the language of the patient

Applying the Lens of Profound Knowledge

Theory of Knowledge

Appreciation of a system
Human Side of Change
Understanding Variation
QI
Aim or Values
A Theory for Weight Loss

**AIM:** A New ME!

- Calories In
  - Limit daily intake
  - Substitute low calorie foods
  - Avoid alcohol

- Calories Out
  - Exercise
  - Fidgeting

- Track Calories
- Plan Meals
- Drink H2O Not Soda
- Work out 5 days
- Bike to work
- Hacky Sack in office

“Every system is perfectly designed to achieve the results that it gets”

A Theory of How to Improve a System

**Aim:** Expresses stakeholder value!

**Drives**
- P. Driver
  - S. Driver 1
  - S. Driver 2
  - S. Driver 3

**Cause**
- Change 1
- Change 2
- Change 3

**Effect**
- S. Driver 1
  - S. Driver 2
Improving Diabetes Care Driver Diagram

Outcomes

Primary Drivers

Secondary Drivers

Change Concepts

- Improved outcomes for patients with Diabetes
- Information systems
- Planned Care
- Guideline-driven Care
- Patient Self Management

- Identify DM patients at time of visit
- Recall patients for follow up
- Identify needed services for DM patients
- Team work dedicated to patient centered care
- Reliable care delivery processes
- DM protocol
- Care conforms to individual patient plan
- Patient is knowledgeable about DM & control
- Patient is able to participate in self management

See ideas in the METRC Interventions document

Post-Acute Care Activated
- MD Follow-up Visit
- Home Health Care (as needed)
- Social Services (as needed)
- Skilled Nursing Facility Services

Alternative or Supplemental Care for High-Risk Patients
- Hospice/Palliative Care
- Transitional Care Models
- Intensive Care Management (e.g. Patient-Centered Medical Homes, HF Clinics, Evercare)

* Additional Costs for these Services

IHI’s Roadmap for Improving Transitions and Reducing Avoidable Rehospitalizations

- Improved Transitions and Coordination of Care
- Reduction in Avoidable Rehospitalizations

- Transition from Hospital to Home
- Enhanced Assessment
- Teaching and Learning
- Real-time Handover Communications
- Follow-up Care Arranged

- Patient and Family Engagement
- Cross-Continuum Team Collaboration
- Evidence-based Care in All Clinical Settings
- Health Information Exchange and Shared Care Plans
Improving Transitions and Reducing Avoidable Rehospitalizations

**Reduce Readmissions by 25%**

- 95% of Patients Report Top Box Experience of Discharge Planning

**95% of Patients Report Top Box Experience of Discharge Planning**

**Transition from Hospital to Home**

- Enhanced Assessment
- Teaching and Learning
- Follow-up Care Arranged
- Real-time Handover Communications

**Post-Acute Care Activated**

- MD Follow-up Visit
- Home Health Care (as needed)
- Social Services (as needed)
- Skilled Nursing Facility Services
- Hospice/Palliative Care

**Supplemental Care for High-Risk Patients**

**Transitional Care Models**

- Intensive Care Management

**Patient and Family Engagement**

- Cross-Continuum Team Collaboration
- Evidence-based Care in All Clinical Settings

**Health Information Exchange and Shared Care Plans**

**Improve Transition from Hospital to Home**

- Perform an enhanced assessment of post-hospital needs
- Provide effective teaching and facilitate enhanced learning
- Ensure post-hospital care follow-up
- Provide real-time handover communications

**Percent of admissions where patients and family caregivers are included in assessing post-discharge needs**

**Percent of admissions where community providers are included in assessing post-discharge needs**

**Percent of discharges with readmission for any cause within 30 days**

**HCAHPS (Hospital-wide data)**

- Communication Questions #3 and #7
- Discharge Questions #19 and #20

**Percent of patients discharged who had a follow-up visit scheduled before being discharged in accordance with their risk assessment**

**Percent of time critical information is transmitted at the time of discharge to the next site of care (e.g., home health, long-term care facility, rehab care, physician office)**
Meet the Patient, Family Caregiver(s) and Inpatients Caregiver(s) in the hospital and Review the Transition Plan

Whenever possible, the home health care nurse or liaison meets the patient, family caregivers, and at least one inpatient caregiver (e.g., nurse, hospitalist, social worker, discharge case manager) in the hospital and reviews the transition plan. It is important to identify and collaborate with the appropriate responsible caregiver(s) whenever possible.

Reinforce to patient, family caregiver(s), and inpatient caregiver(s) the importance of scheduling a follow-up appointment before hospital discharge to ensure timely follow-up after hospitalization with the primary care or managing clinician.

Assess the Patient Initiate the Plan of Care and Reinforce Patient Self Management at First Post-Discharge Home Health Care Visit

Re-evaluate the patient's clinical status since leaving the hospital. Reconcile all medications, including all medications in the home. Use Teach Back to assess, reinforce, and improve the patient and family caregiver's understanding and ability to manage medications and self-care.

Initiate treatments as ordered (e.g., dressing changes, oxygen saturation, wound care).

Engage, Coordinate, and Communicate with the Entire Clinical Team

Ensure that there is proactive, consistent, real-time consultation with the primary care provider or other managing clinician(s).

Use a patient-centered health record to communicate patient information to all caregivers.

Advocate as necessary to ensure referrals are completed and needed services are received.

Percent of patients admitted to a home health care agency who required a follow-up visit scheduled in accordance with their risk assessment

Percent of home health care agency admissions where patients and family caregivers were included in assessing home health care needs prior to hospital discharge

Reconcile the Treatment Plan and Medication List

Re-evaluate resident's clinical status since transfer.

Reconcile the treatment plan and medication list based on an assessment of the resident's clinical status, information from the hospital, and past knowledge of the resident (if he or she was previously a resident).

Obtain a Timely Consultation when the Resident’s Condition Changes

Develop the care plan collaboratively with the resident and family.

Use protocols to guide immediate interventions for conditions and complications that commonly occur in the SNF

Ensure That SNF Staff Are Ready and Capable to Care for the Resident

Develop mutually agreed-upon standardized transfer criteria.

Receive and confirm understanding of resident's care needs from hospital staff.

Resolve any questions regarding the resident's status to ensure fit between resident needs and SNF resources and capabilities.

Identify an emergency clinician contact for the resident.

Percent of all SNF residents admitted to the SNF from the hospital who are then readmitted to the hospital within 30 days
Improve Transition from Hospital to Clinical Office Practice

Prior to the Visit: Prepare Patient and Clinical Team

- Review the discharge summary.
- Clarify outstanding questions with sending physician(s).
- Place a reminder call to patient or family caregiver to help them prepare for the visit.
- Coordinate care with home health care nurses and case managers if appropriate.

During the Visit: Assess Patient and Initiate New Care Plan or Revise Existing Plan

- Ask the patient about his/her goals for the visit, what factors contributed to hospital admission or ED visit, and what medications he/she is taking and on what schedule.
- Perform medication reconciliation with attention to the pre-hospital regimen.
- Determine need to adjust medications or dosages, follow up on test results, do monitoring or testing; discuss advance directives; discuss specific future treatments.
- Instruct patient in self-management; have patient repeat back.
- Explain warning signs and how to respond; have patient repeat back.
- Provide instructions for seeking emergency and non-emergency after-hours care.

At the Conclusion of the Visit: Communicate and Coordinate Ongoing Care Plan

- Print reconciled, dated medication list and provide a copy to the patient, family, home health care nurse, and case manager, if appropriate.
- Communicate revisions of the care plan to the patient, family caregiver, home health care nurse, and case manager, if appropriate.
- Ensure that the next appointment is made, as appropriate.

Percent of discharges with heart failure or other chronic conditions who were readmitted for any cause within 30 days of discharge for the clinic office practice

Percent of patients who are seen in an appropriate time frame (i.e., 2 days for high-risk and 5 days for moderate-risk, and at provider discretion for low-risk patients)

Percent of patients who left the first post-hospital visit with a printed and reconciled medication list

Percent of patients who left the first post-hospital visit with a printed care plan

Percent of patients who can teach back the medications they should take at home, including dosage and time.

Percent of patients who can teach back the warning signs they should watch for and how to respond.

Percent of patients who leave the first post-hospital visit with a printed and reconciled medication list

Percent of patients who leave the first post-hospital visit with a printed care plan

Percent of first post-hospital visits with physician had discharge summary available at the visit.

Percent of patients who received a reminder call prior to their first post-hospital office visit.

Hospitals
- Perform an enhanced assessment of post-hospital needs
- Provide effective teaching and facilitate enhanced learning
- Ensure post-hospital care follow-up
- Provide real-time handover communications

Office Practices
- Provide timely access to care following a hospitalization
- Prior to the visit: prepare patient and clinical team
- During the visit: assess patient and initiate new care plan or revise existing plan
- At the conclusion of the visit: communicate and coordinate ongoing care plan

Home Care
- Meet the patient, family caregiver(s), and inpatient caregiver(s) in the hospital and review transition home plan
- Assess the patient, initiate plan of care, and reinforce patient self-management at first post-discharge home care visit
- Engage, coordinate, and communicate with the entire clinical team

Skilled Nursing Facilities
- Ensure that SNF staff are ready and capable to care for the resident patient’s needs
- Reconcile the Treatment Plan and Medication List
- Engage the resident and their family or caregiver in a partnership to create an overall place of care
- Obtain a timely consultation when the resident’s condition changes
About Drivers

• Secondary Drivers
  – Structures, processes, or cultural norms that contribute to desired outcomes
  – Evidence based: clinical or improvement
  – Necessary and sufficient for improvement

• Primary Drivers
  – Groups of secondary drivers with common resources, manager, equipment, patients, etc.
  – Could be assigned to a team to improve

Drivers and Processes

Many drivers are processes

Improving the reliability, consistency, usability or efficiency of care processes is central to improving system outcomes
Readmissions Drivers

- What processes are your drivers for reducing readmissions?

Exercise: Drivers of Improvement

• Review the driver diagram for your system
  — Aim & Outcomes
  — Key drivers of improvement in the outcome(s)

• Is there anything you would change? Add?

Hmmmm.... am I a primary or a secondary driver?
What are We Trying To Accomplish?

The Project AIM is:

• Not just a vague desire to do better
• A commitment to achieve measured improvement
  —In a specific system
  —With a definite timeline
  —And numeric goals
What are We Trying To Accomplish?

“Hope” is not a plan

- Not just a vague desire to do better
- A commitment to achieve measured improvement
  - In a specific system
  - With a definite timeline
  - And numeric goals

“Some” is not a number

“Soon” is not a time

What are We Trying To Accomplish?

Components of an Aim

- Boundaries: the system to be improved (scope, patient population, key processes, drivers you will address, etc.)
- Specific numerical goals for outcomes
  - Ambitious but achievable
- Includes timeframe
- Provides guidance on sponsor, resources, strategies, barriers, interim & process goals
Sample Aim

- General Hospital will improve transitions home for elderly patients as measured by a reduction in unplanned 30-day readmissions of elderly patients from 25 percent to 15 percent or less by December 31, 2012. We will focus on enhanced assessment for discharge needs, coordination with community providers, and pt/family understanding of how to care for themselves at home.

Example #2 of an Aim Statement

The Best Homehealth Agency will improve transitions home for all patients as measured by a decrease in their acute care hospitalization rate within 30 days of the last day of hospital stay by 30 percent within 24 months. We will start with patients being cared for by Teams A and B and will expect to see a decrease in readmissions for patients being cared for by those teams of at least 15 percent within 12 months.
By December 2011, Maryfree Skilled Nursing Facility will reduce readmissions for all residents as measured by a decrease in 30-day all-cause readmission rate from 17 percent to 13 percent or less. The Facility will focus on identifying early changes in patients’ condition, standardized communication, and teamwork.

- **System:**
- **Goal:**
- **Timeframe:**
- **Guidance:**

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### Example #3 of an Aim Statement

**By December 2011, Maryfree Skilled Nursing Facility will reduce readmissions for all residents as measured by a decrease in 30-day all-cause readmission rate from 17 percent to 13 percent or less. The Facility will focus on identifying early changes in patients’ condition, standardized communication, and teamwork.**

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### Aim Statement

<table>
<thead>
<tr>
<th>Aim Statement</th>
<th>Good</th>
<th>Bad</th>
<th>Ugly</th>
</tr>
</thead>
<tbody>
<tr>
<td>We aim to improve transitions home for all patients.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>By June of 2012 we will reduce hospitalizations of our over-65 home care patients with CHF by 50%.</td>
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<td></td>
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</tr>
<tr>
<td>Our patient satisfaction scores are in the bottom 10% of the national comparative database we use. As directed by senior management, we need to get the score above the 50th percentile by the end of the 1st Q of 2011.</td>
<td></td>
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</tr>
<tr>
<td>We will improve patients understanding of discharge materials.</td>
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</tr>
<tr>
<td>According to the consultant we hired to evaluate our home health services, we need to improve the effectiveness and reliability of home visit assessments and reduce rehospitalization rates. The board agrees, so we will work on these issues this year.</td>
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</tr>
<tr>
<td>Our most recent data reveal that on the average we only reconcile the medications of 35% of our discharged inpatients. We intend to increase this average to 50% by 4/1/12 and to 75% by 8/31/12.</td>
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</table>
**Sponsor Owns The Aim!**

- Each project should have a senior sponsor that can provide resources and accountability
- The sponsor’s credibility is on the line for results:
  
  *The Sponsor Owns the Aim*

- Meet quarterly, review results & plans

**Tips for Developing Aims**

- Achieve consensus and state the aim early
- Include outcome goals (may leave numbers for later)
- Don’t worry if it’s vague at first, BUT…
- Revise as you develop drivers and measures and think through changes
- Revisit and kick it up a notch!
Exercise
Review and Revise Your Aim Statement

• Based on your description of your system and driver diagram, review & revise the aim statement for your project.
• Include:
  ─ System or process description
  ─ Timeframe
  ─ Goals

Where You Want to Get To?

“Would you tell me, please, which way I ought to go from here?”

“That depends a good deal on where you want to get to,” said the Cat.

“I don’t much care where—” said Alice.

“Then it doesn’t matter which way you go,” said the Cat.

Lewis Carroll, Alice in Wonderland
A Good Aim Statement

- Identifies the **system or process** to be improved (scope, patient population, drivers selected)
- Has specific numerical **goals**
  - Ambitious but achievable
- Includes **timeframe**
- Provides **guidance** on sponsor, resources, strategies, barriers

How Do We Know if a Change is an Improvement?

"You can’t fatten a cow by weighing it”

- Palestinian Proverb

- Improvement is **NOT** about measurement
- However…
How Do We Know if a Change is an Improvement?

“You can’t fatten a cow by weighing it”

- Palestinian Proverb

“If you can’t measure it, you can’t manage IMPROVE it”

Improvement Project Measurement Guidelines

- Need a balanced set of measures reported each month (at a minimum) to assure that the system is improved.
- These measures should reflect your aim statement & make it specific.
- Measures are used to guide improvement and test changes.
- Integrate measurement into daily routine.
- Plot data for the measures over time and annotate graph with changes.
Types of Measures

• Outcome Measures
  — Results - system level performance

• Process Measures
  — Inform changes to the system

• Balancing Measures
  — Signal “robbing Peter to pay Paul”

Hospital Outcome Measures: Readmissions
Hospital-level AND Pilot-level

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-Day All-Cause Readmissions</td>
<td>Percent of discharges with readmission for any cause within 30 days</td>
</tr>
<tr>
<td>Hospital-overall Pilot-unit(s)</td>
<td></td>
</tr>
<tr>
<td>Readmissions Count</td>
<td>Number of readmissions (numerator for 30-day all cause readmissions measure) for hospital and pilot unit(s)</td>
</tr>
<tr>
<td>Hospital-overall Pilot Unit</td>
<td></td>
</tr>
<tr>
<td>Optional Measure</td>
<td>Percent of discharges in the desired subpopulation who were readmitted for any cause within 30 days of discharge</td>
</tr>
<tr>
<td>30-Day All-Cause Readmissions for a specific clinical condition or subpopulation (e.g., CHF, COPD, frail elders)</td>
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</table>
### Hospital Outcome Measures: Patient Experience

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>HCAHPS (Hospital-wide data) Communication Questions #3 and #7 Discharge Questions #19 and #20</td>
<td>“During this hospital stay, how often did nurses explain things in a way you could understand?” (Q3) “How often did doctors explain things in a way you could understand?” (Q7) “Did hospital staff talk with you about whether you would have the help you needed when you left the hospital?” (Q19) “Did you get information in writing about what symptoms or health problems to look out for after you left the hospital?” (Q20)</td>
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</table>

### Hospital Patient Experience: Care Transitions Measures

**PILOT UNIT**

<table>
<thead>
<tr>
<th>Description</th>
<th>Numerator</th>
<th>Denominator</th>
<th>Data Collection Strategy</th>
</tr>
</thead>
</table>
| - The hospital staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left the hospital.  
- When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.  
- When I left the hospital, I clearly understood the purpose for taking each of my medications. | Calculate the sum of responses across the 3 items. Responses are scored Strongly Disagree =1; Disagree =2; Agree =3; Strongly Agree =4 | Number of questions answered across all patients asked. | Collect data on routine follow up phone calls. Sample 21 patients. If you have less than 21 discharges per month, report 100% Response options: Strongly Disagree, Disagree, Agree, Strongly Agree, or Don’t Know/Don’t Remember/Not Applicable Do not count in your denominator questions where the patient responded don’t know/remember or not applicable If disagree, ask (and document) what their concerns were. |
## Hospital Process and Balancing Measures

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>Description</th>
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</table>
| Enhanced Admission Assessment for Post-Hospital Needs  | • Percent of admissions where patients and family caregivers are included in assessing post discharge needs  
• Percent of admissions where community providers (e.g., home care providers, primary care providers and nurses and staff in skilled nursing facilities) are included in assessing post discharge needs |
| Effective Teaching and Enhanced Learning                | • Percent of observations of nurses teaching patient or other identified learner where Teach Back is used to assess understanding  
• Percent of observations of doctors teaching patient or other identified learner where Teach Back is used to assess understanding |
| Post-Hospital Care Follow Up                           | • Percent of patients discharged who had a follow-up visit scheduled before being discharged in accordance with their risk assessment                                                                                  |
| Real-time Patient- and Family- Centered Handoff Communication | • Percent of patients discharged who receive a customized care plan written in patient-friendly language at the time of discharge  
• Percent of time critical information is transmitted at the time of discharge |

### SNF Draft Outcome Measure

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>Description</th>
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</table>
| 30-Day All-Cause SNF Readmissions                      | Percent of all SNF residents admitted to the SNF from the hospital who are then readmitted to the hospital within 30 days  
Exclusion: planned readmissions                         |
|                                                        | Number of residents admitted to the SNF from the hospital who are then readmitted to the hospital within 30 days  
Exclusion: planned readmissions                         |
|                                                        | Total number of residents admitted to the SNF from the hospital in the measurement month                                                                                                                   |
## Home Health Outcome Measures: Readmissions

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Care Hospitalizations within 30 days of hospital discharge</td>
<td>Percent of acute care hospitalizations within 30 days of hospital discharge</td>
<td>Number of acute care hospitalizations within 30 days of hospital discharge (e.g., chemotherapy schedule, rehab, planned surgery)</td>
<td>The number of patients on service who were discharged from a hospital in the last 30 days</td>
</tr>
<tr>
<td>Count of Acute Care Hospitalizations within 30 days of hospital discharge</td>
<td>Number of acute hospitalizations within 30 days of hospital discharge</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Optional Measure: Acute Care Hospitalizations within 30 days of hospital discharge for a Specific Clinical Condition</td>
<td>Count of acute care hospitalizations within 30 days of hospital discharge with a specific clinical condition who were hospitalized for any cause within 30 days of discharge</td>
<td>Number of patients on service with a specific clinical condition hospitalized for any cause within 30 days of hospital discharge. Exclusion: planned readmissions (e.g., chemotherapy schedule, rehab, planned surgery)</td>
<td>NA</td>
</tr>
</tbody>
</table>

## Home Health Outcome Measures: Patient Experience

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHCAHPS Communication Question 5</td>
<td>When you started getting home health care from this agency, did someone from the agency ask to see all the prescription and over-the-counter medicines you were taking?</td>
<td>Number patients surveyed in the month who answered, “Yes”</td>
<td>Number of surveys completed in the month with an answer for this question</td>
</tr>
<tr>
<td>HHCAHPS Communication Question 4</td>
<td>When you started getting home health care from this agency, did someone from the agency talk with you about all the prescription and over-the-counter medicines you were taking?</td>
<td>Number patients surveyed in the month who answered, “Yes”</td>
<td>Number of surveys completed in the month with an answer for this question</td>
</tr>
<tr>
<td>HHCAHPS Discharge Question 10</td>
<td>In the last 2 months of care, did you and a home health provider from this agency talk about pain?</td>
<td>Number patients surveyed in the month who answered, “yes”</td>
<td>Number of surveys completed in the month with an answer for this question</td>
</tr>
<tr>
<td>HHCAHPS Discharge Question 12</td>
<td>In the last 2 months of care, did home health providers from this agency talk with you about the purpose for taking your new or changed prescription medicines?</td>
<td>Number patients surveyed in the month who answered, “yes”</td>
<td>Number of surveys completed in the month with an answer for this question</td>
</tr>
<tr>
<td>Measure</td>
<td>Description</td>
<td>Numerator</td>
<td>Denominator</td>
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<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Discharge Question 13</strong></td>
<td>home health providers from this agency talk with you about when to take these medicines?</td>
<td>in the month who answered, “yes” Exclude those patients who did not take any new prescriptions or have any medication changes</td>
<td>the month with an answer for this question</td>
</tr>
<tr>
<td><strong>Discharge Question 14</strong></td>
<td>In the last 2 months of care, did home health providers from this agency talk with you about the side effects of these medicines?</td>
<td>Number patients surveyed in the month who answered, “yes” Exclude those patients who did not take any new prescriptions or have any medication changes</td>
<td>Number of surveys completed in the month with an answer for this question</td>
</tr>
<tr>
<td><strong>Discharge Question 17</strong></td>
<td>In the last 2 months of care, how often did home health providers from this agency explain things in a way that was easy to understand?</td>
<td>Number patients surveyed in the month who answered, “Always”</td>
<td>Number of surveys completed in the month with an answer for this question</td>
</tr>
<tr>
<td><strong>Discharge Question 18</strong></td>
<td>In the last 2 months of care, how often did home health providers from this agency listen carefully to you?</td>
<td>Number patients surveyed in the month who answered, “Always”</td>
<td>Number of surveys completed in the month with an answer for this question</td>
</tr>
</tbody>
</table>

### Patient Experience: Care Transitions Measures (Pilot team data) (CTM3)

- This measure is taken from Dr. Coleman's Care Transitions ProgramSM:
  - [http://www.caretransitions.org/](http://www.caretransitions.org/)

**Measure Description**

- Three questions are asked on a follow-up phone call:
  - The home health staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left the hospital.
  - When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.
  - When I started home health, I clearly understood the purpose for taking each of my medications

**Numerator**

- Calculate the sum of responses across the 3 items. Responses are scored:
  - Strongly Disagree = 1
  - Disagree = 2
  - Agree = 3
  - Strongly Agree = 4

**Denominator**

- Number of questions answered across all patients asked.
## Home Health Process Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Meet the Patient, Family Caregivers and Inpatient Caregivers in the Hospital and Review Transition Home Plan Follow-up visit scheduled</strong></td>
<td>Percent of patients admitted to home care who required a follow-up visit scheduled in accordance with their risk assessment. “Family” is defined by the patient and includes any individual(s) who provide support. “Family caregivers” is the phrase used to represent those family members who are directly involved in care of the patient outside hospital or other community institutions.</td>
<td>Number of patients admitted to home care that required a follow-up visit scheduled with their provider in accordance with their risk assessment.</td>
<td>Number of admissions in the sample</td>
</tr>
<tr>
<td><strong>Patients and family included in home needs prior to hospital discharge</strong></td>
<td>Percent of home health admissions where patients and family caregivers were included in assessing home needs prior to hospital discharge</td>
<td>Number of home health admissions where patient and family caregiver were included in assessing home needs prior to hospital discharge and home health admission</td>
<td>Number of patients admitted to home health after a hospital stay in the sample</td>
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</table>

### Home Health Process Measures

<table>
<thead>
<tr>
<th>Measure</th>
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<th>Numerator</th>
<th>Denominator</th>
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</thead>
<tbody>
<tr>
<td><strong>Medication Management</strong></td>
<td><strong>Percent of Teach Back sessions documented by nurse to assess understanding of patient or other identified learner to manage medications.</strong> Often patients are not able to learn enough to teach back due to cognitive issues. Assure you are best supporting the patient by teaching the appropriate person who will support the patient’s self management.</td>
<td>Number of documented sessions of nurses where Teach Back with patient or identified learner is used to assess understanding of medication management</td>
<td>Number of documented sessions where nurse is teaching about medication management</td>
</tr>
<tr>
<td><strong>Percent of patients who can teach-back 75% or more of what they are taught when content is broken into easy-to-learn segments.</strong></td>
<td><strong>Assess the effectiveness of your teaching and your content design by tracking which elements patients can teach back. Define three or four “vital few” elements for the transition instructions, medications, and/or self-care needs.</strong></td>
<td>Number of patients in your sample who were able to Teach Back 3 out 3 or 3 out of 4 content elements by the time of transition</td>
<td>Number of patients in the sample where teach back is used</td>
</tr>
<tr>
<td><strong>Engage, Coordinate and Communicate with the Full Clinical Team.</strong></td>
<td><strong>Contacting managing clinician</strong></td>
<td>Number of times the managing physician or clinician is contacted within 24 hours of home health admission because of significant clinical findings or medication issues.</td>
<td>Number of new admissions</td>
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</tbody>
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*Institute for Healthcare Improvement*
## Office Practice Outcome Measures

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Description</th>
<th>Numerator</th>
<th>Denominator</th>
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<tbody>
<tr>
<td>30-day all-cause readmissions for the selected subpopulation for the clinic office practice</td>
<td>Percent of discharges with heart failure or other chronic conditions who were readmitted for any cause within 30 days of discharge for the clinic office practice</td>
<td>Number of discharges with heart failure or other chronic conditions readmitted for any cause within 30 days of discharge Planned readmissions would be excluded (e.g., scheduled chemotherapy).</td>
<td>Number of discharges in the measurement period with heart failure or other chronic conditions Exclusions: Transfers to another acute care hospital, patients who die before discharge</td>
</tr>
</tbody>
</table>

| Patient satisfaction or patient experience of care measure* | To be determined by the practice | To be determined by the practice | To be determined by the practice |

* Teams may select a measure that they are already using to track patient satisfaction. An alternative approach would be to begin surveying a sample of patients each month using a survey question to assess patient experience. As an example, the question could be "When you think about your health care, how much do you agree or disagree with this statement: 'I receive exactly what I want and need exactly when and how I want and need it.'?" Patients may respond with I strongly agree, somewhat agree, somewhat disagree, or strongly disagree.

## Office Practice Process Measures

- Percent of patients who are seen in an appropriate time frame (i.e., 2 days for high-risk and 5 days for moderate-risk, and at provider discretion for low-risk patients)
- Percent of first post-hospital visits when the physician had the discharge summary available at the time of the visit.
- Percent of patients who received a reminder call prior to their first post-hospital office visit.
- Percent of patients who can teach back the medications they should take at home, including dosage and time.
- Percent of patients who can teach back the warning signs they should watch for and how to respond.
- Percent of patients who leave the first post-hospital visit with a printed and reconciled medication list
- Percent of patients who leave the first post-hospital visit with a printed care plan
Some Measurement Assumptions

- The purpose of measurement in the collaborative is for learning not judgment
- All measures have limitations, but the limitations do not negate their value
- Measures are one voice of the system. Hearing the voice of the system gives us information on how to act within the system
- Measures tell a story; goals give a reference point

Qualitative Patient Experience Data

- Conduct the diagnostic tool with 4 patients readmitted each month (1 per week). Present findings to the cross continuum team to identify areas for redesign, better communication and improvement.
- Conduct a quarterly in-depth analysis of 1 patient who has experienced frequent readmissions within the year. Include a review of the diagnostic tool and a list of the patient’s cross continuum care history with a timeline. For example, a diary or log of discharges, subsequent visits to the doctor, etc. Review at the cross continuum meeting.
Heart Failure pt story on Readmissions

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<thead>
<tr>
<th>Date</th>
<th>Location</th>
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<tbody>
<tr>
<td>4/1</td>
<td>Inpatient</td>
<td>Hx: ESRD, DM, HTN, A. Fib; Anemia; On Dialysis 3x/week; Social: Lives with wife and 2 sons; Functional: Mostly independent with Problems discovered: barriers to visit MD, MD out sick (missed appts), Lasix meds cause dizziness (self stopped), eats food high in phosphorous, cravings for fluids (thirsty from dialysis), frequent sudden Interventions: frequent communications with pt and family members (wife and son), changed primary MD, educated on reason for Lasix, back on foods high in phosphorous-esp. Tofu, take candy/ginger in place of fluids, count # of cups/day, sit up for SOB and &lt; exertion, monitor for Thinking he knows his body best, not disclosing his actual water/food intake 1st intervention- discovered pt felt that his MD did not want to see him, preferred to go to ER; spoke to pt and son, MD changed further diet edu- consult with dietary for issues r/t to dialysis, &lt;Na, K, Phos intake MD called to cancel appt, out sick.</td>
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2009

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For Each of the Key Measures

- Carefully define each of the measures for your pilot population (numerator and denominator)
- Develop run charts to display your measures monthly (or weekly)
- Begin collecting and reviewing (with your team) your measures immediately

Tracking Changes: Annotated Time Series

<table>
<thead>
<tr>
<th>Observed Data Value</th>
<th>e.g., % readmissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change 1 tested</td>
<td></td>
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<tr>
<td>Change 2 tested</td>
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Family Of Measures

PDSA Cycle Measures

- In addition to the family of measures you review each month, specific data is required to determine and document the success of your PDSA tests and implementation cycles:
  - Collect useful data, not perfect data - the purpose of the data is learning, not evaluation
  - Use a pencil and paper until an information system is ready
  - Use sampling as part of the plan to collect the data
  - Use qualitative data rather than wait for quantitative
  - Record what went wrong during the data collection
What Changes Can We Make?

- **Understand the system.**
  - Front-line knowledge about drivers generates insights for useful changes.

- **Use change concepts & directed creativity to generate additional change ideas.**
  - Techniques for taking a fresh look at the issues!

- **Copy** from successful colleagues.
  - Who does this best? Who has successfully improved? How did they do it?
  - Is there a change package available?

How Will We Know We Are On Track to Improve?

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Primary Drivers</th>
<th>Secondary Drivers</th>
<th>Ideas for Process Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calories In</td>
<td>Limit daily intake</td>
<td>Substitute low calorie foods</td>
<td>Plan</td>
</tr>
<tr>
<td>Calories Out</td>
<td>% of opportunities used</td>
<td>Avoid alcohol</td>
<td>Drink H2O Not Soda</td>
</tr>
<tr>
<td></td>
<td>Avg cal/day</td>
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<td>Exercise</td>
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<td>Fidgeting</td>
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Measures let us
- Monitor progress in improving the system
- Identify effective changes
**Improve Transition from Hospital to Home**

Perform an enhanced assessment of post-hospital needs
- Reconcile medications
- Identify the patient's

Create a customized discharge plan based on the assessment

- Percent of admissions where patients and family caregivers are included in assessing post-discharge needs
- Percent of admissions where community providers are included in assessing post-discharge needs

Provide effective teaching and facilitate enhanced learning
- Involve all learners in patient education
- Redesign the patient education material
- Use Teach Back

Ensure post-hospital care follow-up
- Schedule timely and appropriate follow-up care

- Percent of patients discharged who received a custom plan written in patient-friendly language at the time of discharge
- Percent of time critical information is transmitted at the time of discharge to the next site of care (e.g., home health, long-term care facility, rehab care, physician office)

Provide real-time handover communications

- Percent of patients discharged who had a follow-up visit scheduled before being discharged in accordance with their risk assessment

- Percent of patients discharged who are included in assessing post-discharge needs

- Percent of admissions where community providers are included in assessing post-discharge needs

---

**Hospitals**
- Perform an enhanced assessment of post-hospital needs
- Provide effective teaching and facilitate enhanced learning
- Ensure post-hospital care follow-up
- Provide real-time handover communications

**Office Practices**
- Provide timely access to care following a hospitalization
- Prior to the visit: prepare patient and clinical team
- During the visit: assess patient and initiate new care plan or revise existing plan
- At the conclusion of the visit: communicate and coordinate ongoing care plan

**Home Care**
- Meet the patient, family caregiver(s), and inpatient caregiver(s) in the hospital and review transition home plan
- Assess the patient, initiate plan of care, and reinforce patient self-management at first post-discharge home care visit
- Engage, coordinate, and communicate with the entire clinical team

**Skilled Nursing Facilities**
- Ensure that SNF staff are ready and capable to care for the resident patient's needs
- Reconcile the Treatment Plan and Medication List
- Engage the resident and their family or caregiver in a partnership to create an overall place of care
- Obtain a timely consultation when the resident's condition changes

---

**Institute for Healthcare Improvement**
Exercise: Measuring Improvement

Using your driver diagram, identify the key measures you will need to track improvement in your system.

The PDSA Cycle

Your ‘reality check’ tool for testing changes

“Act” “Plan” “Do” “Study”

“What’s next: Try something else? Explore this further? Implement?”

“What’s happening now? What will happen if we try something different?”

“Did it work?”

“Let’s try it!”
**Schedule Appointment – Cycle 1**

**PLAN:** Pick one pt who is likely to be discharged in the next two days and determine who their PCP is

**DO:** Ingrid calls PCP

**STUDY:** Ingrid makes appointment but is on hold for 20 min and pt does not like the time

**ACT:** next cycle, have Ingrid talk to pt and family first

---

**Schedule Appointment – Cycle 2**

**PLAN:** this week, Ingrid will talk to all med risk pts/families likely to be discharged in the next two days – plan to schedule appts w/in 5 to 7 days

**DO:** Ingrid was able to talk to three of six pts/families

**ACT:** ???

**STUDY:** pts/families did not initially understand why they needed appt w/in 5-7 days, but were convinced and delighted by discussion and help in scheduling
Not Just Once!

LATHER
RINSE
REPEAT

Building Confidence for Change

System changes that will result in improvement

Learning from data

Change ideas, suggestions, intuition
Change Idea: actively include pt and family in assessing needs (specifically, identify the learner on admission, and include them in discharge planning)

If we identify the learner on admission, we can engage them in discharge planning and have a better chance of adherence to plan.

Testing v. Implementation

- **Testing** – Trying and adapting ideas and knowledge on small scale. Learning what works in your system.
- **Implementation** – Making this change a part of the day-to-day operation of the system – a permanent change in how work is done
  - Would the change persist even if its champion were to leave the organization?
The Sequence of Improvement

1. Develop a change
2. Prerequisites for change
3. Test under a variety of conditions
4. Implement a change
5. Prototype a change
6. Embed in daily operations
7. Spread throughout the system

Confidence that change is effective