PDSA Cycles and their Use in Development of a Care Transition Program

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The Forum of ESRD Networks
Examples of Transitions and Typical Problems

Different: care providers, location, record systems, set of incentives & priorities, level of self-care

Opportunities for mistakes:
- Post d/c workup requiring action
- New medication orders
- Outstanding labs requiring action

Barriers to Proper Care Transition:
- Regulatory, real & perceived (HIPAA), cost of care barriers between settings
- Pt educational level, conflicting orders, lack of access to follow-up care
Reported Notable Gaps in Care and Their Results

• Uncoordinated transitions INCREASE:
  – hospital readmissions,
  – medical errors,
  – duplication of services,
  – wastes of resources

• Most common types of discontinuities among older pts leaving a hospital were:
  – medications,
  – test follow-up, and
  – initiation of post-d/c workup

• 40% of pts have test results pending at d/c with 10% of those requiring action, often with outpatient MD unaware
Results of Breakdowns in Care Coordination Across Transitions

• **Availability** of d/c summary in only 12-34% of post-hosp visits, affecting quality in 25%\(^5\)

• Medication errors affect 1.5M people in US annually at cost of 3.5B (per IOM). 60% of such episodes occur during transitions\(^6\)

• 18% of hosp adms result in re-adm within 30 days, costing CMS $15B\(^7\)

• 19% of hosp d/c’d pts experience an associated adverse event w/i 3 weeks of d/c with 66% of those being adverse drug events\(^8\)

• Joint Commission: 70% of Sentinel Events were caused by communication problems with >1/2 of those during handoffs
Congressional Mandate

- The Balanced Budget Act of 1997 required that the Secretary, HHS conduct and evaluate Care Coordination programs in Medicare
  - Specifically to see if these programs could either reduce program cost or improve the average QoL of the beneficiaries

- Approaches
  - Improve patient centered care & MD-pt communication
  - Strengthening self-care abilities & compliance
  - Improving physician-to-physician communication
  - Increasing adherence to evidence based medicine
IOM Call for Measurement that Promotes Shared Accountability

Current Gaps in Current Performance Measure Sets:  

• Limited scope of measurement, including few measures of pt-centered care, equity, and efficiency
• Narrow time window, mostly single point in time
• Provider-centered focus, centering on traditional silos of care
• Narrow focus of accountability with emphasis placed on individual provider actions
Care Coordination Has Become a Top Priority in Healthcare

• NQF National Priorities Partnership\textsuperscript{11}:  
  – Goal #3: improving the safety and reliability of America’s health care system  
  – Goal #4: ensuring patients receive well-coordinated care within and across all health care organizations, settings and levels of care  

• PCPI of the AMA has proposed a measurement set on CC\textsuperscript{1}  

• CMS: 9\textsuperscript{th} Statement of Work  
• Joint Commission: National Patient Safety Goals\textsuperscript{12}
PCPI Care Transitions Work Group\(^1\)

- **Members:** ABIM Foundation, American College of Physicians, Society of Hospital Medicine, Physician Consortium for Performance Improvement of AMA

- **Bundled measures 1-3:**
  - Reconciled Medication List received by discharged patients
  - Transition Record with specified elements received by discharged patients
  - Timely transmission of Transition Record (to facility or primary physician for follow up care)
Hypothesis: that a workable Care Transition Program could be developed for my practice setting using PDSA Cycle Methods

• Past background—Institute for Healthcare Improvement “Improvement Advisor” Wave 3—project: Reduction of Mortality During First 90 Days of Hemodialysis
• Previous development of CKD Wellness toolkit, Outreach to PMD Program, and HD Clinic application of RightStart Program using the Model for Improvement
• Recognition that over 40% of new HD starts have no prior directed CKD care and that initiation of such “late referral” patients on HD leaves a gap in care between the hospital and clinic
**The Plan-Do-Study-Act Cycle**

Based on the Scientific Method

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**Plan** - A change or a test, aimed at improvement.

**Do** - Carry out the change or the test (preferably on a small scale).

**Act** - Adopt the change, or abandon it, or run through the cycle again.

**Study** the results. What did we learn? What went wrong?

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A flow diagram for learning and for improvement of a product or of a process.

Evolution of the Science of Improvement - Draft

Intro to the Scientific Method
Philosophy of Science

The First Scientist
Ibn al-Haytham 995

Father of Modern Science
Galileo 1610

Inductive Learning
Francis Bacon 1620

Historian
Inductive Reasoning
William Whewell 1837

Pragmatism
Charles Pierce
William James
Harvard 1872

How We Think
John Dewey 1919

Integration of Pragmatism & Empiricism
C I Lewis 1929

Shewhart Cycle
Walter Shewhart 1939

Deming 8 Part Wheel
W Edwards Deming 1951

Production Viewed as a System
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PDCA
Japanese 1962

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Integration of Scientific Method
Methods to Learn, Improve & Manage Social Systems

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Draft paper
By Ron Moen and Cliff Norman (2009)

The stages of the process are:
• feeling difficulty,
• doubting what one has taken for granted,
• defining the problem,
• forming a hypothesis,
• inferring possible consequences,
• discovering a counter stance,
• revising and broadening the hypothesis to explain the counter stance, and
• applying the revised hypothesis to a life situation.
PDSA Components
(as defined by API)

ACT
- What changes are to be made?
- Next cycle?

PLAN
- Objective
- Questions and predictions
- Plan to answer the questions (who, what, where, when)

STUDY
- Complete the analysis of the data
- Compare data to predictions
- Summarize what was learned

DO
- Carry out the plan
- Collect the data
- Begin analysis of the data
The Need for Scientific Thinking

The scientific method consists of the use of procedures designed to show not that our predictions and hypotheses are right, *but that they might be wrong*. Scientific reasoning is useful to anyone in any job because it makes us face the possibility, even the dire reality, that we were mistaken. It forces us to confront our self-justifications and put them on public display for others to puncture. At its core, therefore, science is a form of arrogance control.

*Mistakes Were Made (But Not by Me)*, Tavris & Aronson, 2007
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Knowledge for Improvement and the Model for Improvement

 Appreciation of a System

 Deming’s Profound Knowledge

 Psychology

 Understanding Variation

 Theory of Knowledge

 Associates in Process Improvement, 1994
Theory Building

Christensen & Carlisle, 1995 modified by Cliff Norman, API

Statements Of Causality

Categorization of the circumstances in which we may find ourselves

Observe, describe and measure the phenomena (data)

Act

Plan

Study

Do

Anomaly

Inductive Thinking

Deductive Thinking

Match Prediction

Predict
Application of the PDSA Cycle in Healthcare

1994  Donald Berwick, MD

Quality By Design: A Clinical Microsystems Approach
2007
Eugene C. Nelson,
Paul B. Batalden,
Marjorie M. Godfrey

Forward by Donald Berwick
Type of Change:
Reactionary and Fundamental

- Fundamental Change: that required to change outcomes to those beyond historical levels
  - They are necessary for the improvement of the system as a whole
  - They fundamentally alter how the system works and what people do
  - They often result in improvement of several measures simultaneously
  - Their impact is felt into the future
The Waterfall Model of Problem Solution\textsuperscript{16}
Actual Designer/Subject Process of Problem Solution^16
Simple Solutions for Complex Systems

I would pay no money at all for ideas made simple to me on this side of complexity. However, I would pay great sums of money for ideas made simple to me on the other side of complexity.

- Disraeli
Parts of AMI:

1. General Description of the Project  
   (Taken from charter draft)
2. Improvement Objectives and Measures  
   (From the charter draft)
3. Questions  
   (From team members for Learning and Improvement Cycles)
4. Change Concepts
Level of Detail

Ref: API QBS 5-9
Overview

- **General Description**: The project aims to improve the customer experience by reducing costs while maintaining or enhancing service quality. Specifically, it targets a 25% reduction in FY 20-21, with a focus on reducing supplier costs and improving supplier performance.

- **Process Description**: The process involves redesigning existing support processes to reduce costs and improve service delivery. It includes several steps:
  1. Redesign existing support processes for assisted and self-service.
  2. Improve the self-service process by providing a differentiated experience, more basic experience for non-supplier customers, and effective support.
  3. Work with suppliers to reduce costs and improve service delivery.
  4. Reduce support costs for older versions of products.

- **Project Objectives**:
  1. Reduce classifications by 7%.
  2. Match amount to the need: 80%.
  3. Change targets by 7%.
  5. Product or service delivery costs.
Use of Macro Ami for “Nested Charters”
(Macro Ami)

<table>
<thead>
<tr>
<th>What are we trying to accomplish?</th>
<th>How will we know a change is an improvement?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Describe Project:</strong> (check one) (How portion)</td>
<td></td>
</tr>
<tr>
<td>Redesign existing product, process or service</td>
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<td>Design new product, process or service</td>
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<td>Improve system as a whole (drivers, mainstay, support)</td>
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</tr>
<tr>
<td>Collaborate and share an existing working improvement to diffuse the ideas</td>
<td></td>
</tr>
<tr>
<td><strong>Brief Description:</strong> What/How (put into above limit 2 sentences)</td>
<td></td>
</tr>
<tr>
<td><strong>Objectives:</strong></td>
<td></td>
</tr>
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</table>

| Sponsor(s): |
| Core Team Members: |
Each Improvement Effort will have its Own Charter Integrated into the Overall Plan
2008 Ami Form
Eliminates Written Charter

What are we trying to accomplish?

Describe Project: (check one) (How portion)

- Redesign existing product, process or service
- Design new product, process or service
- Improve system as a whole (drivers, mainstay, support)
- Collaborate and share an existing working improvement to diffuse the innovation

Brief Description: What/How (abstract above-limit 2 sentences)

Boundaries:

Sponsor(s):

Core Team Members:

How will we know a change is an improvement?

Objective:

Measure(s):

Objective:

Measure(s):

Objective:

Measure(s):

Objective:

Measure(s):

Objective:

Measure(s):

Questions To Consider

Change Concepts to consider

- What are the potential impacts of the change?
- How will the change be implemented?
- What resources are needed for the change?

- What are the potential risks of the change?
- How will the change be monitored?
- What are the potential benefits of the change?

- What are the potential drawbacks of the change?
Format for Concise Charter Descriptions for Redesign, Design or Using a Known Solution

- **Redesign** an existing process, product, or service
  - Redesign the referral process in order to improve access.

- **Design** a new process, product, service
  - Create a new process which will collaborate with patients in order to give patients the opportunity to understand test results and treatment alternatives in a better way.

- **Use a known solution**
  - Use the Jonkoping scheduling process as a method to redesign the Varnamos scheduling process in order to reduce cycle time and improve access.
    OR
  - Create a new process in Jonkoping using the patient collaboration system from MD Anderson in Houston in order to give patients the opportunity to understand test results and treatment alternatives in a better way.
How will we know a change is an improvement?

• Objectives
• Measures
  – Outcome Measures
  – Process Measures
  – Balancing Measures (downstream in the system)
Consider Change Concepts to Develop Test Questions

Grouping:

A. Eliminate Waste
B. Improve Work Flow
C. Optimize Inventory
D. Change the Work Environment
E. Enhance the Producer/Customer Relationship
F. Manage Time
G. Manage Variation
H. Design Systems to Avoid Mistakes
I. Focus on a Product/Service

<table>
<thead>
<tr>
<th>Grouping</th>
<th># of Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eliminate Waste</td>
<td>11</td>
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</tr>
<tr>
<td>Change the Work Environment</td>
<td>4</td>
</tr>
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<td>Enhance the Producer/Customer Relationship</td>
<td>11</td>
</tr>
<tr>
<td>Manage Time</td>
<td>8</td>
</tr>
<tr>
<td>Manage Variation</td>
<td>5</td>
</tr>
<tr>
<td>Design Systems to Avoid Mistakes</td>
<td>8</td>
</tr>
<tr>
<td>Focus on a Product/Service</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>8</td>
</tr>
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</table>
Creating Useful Questions for Learning (PDSA)

1. What are our assumptions? List below.
2. How do we know these assumptions are correct? How can we test whether these assumptions are valid currently? List below.
3. What solutions have people suggested? List below.
4. How can we test these solutions quickly? List below.
5. What change concepts apply to our improvement effort? List below.
6. Are there other change concepts we should consider? List below.
7. For each change concept, what specifically could be changed and tested? Copy and paste the change concepts which apply to the improvement effort and identify a specific change which could be tested.
## Improvement Project Questions to Answer

<table>
<thead>
<tr>
<th>Cycle # (Plan)</th>
<th>Questions to answer during the Project</th>
<th>Predictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What Training can we currently provide for Care Providers?</td>
<td>Professional, claim management</td>
</tr>
<tr>
<td>2</td>
<td>What training will they need for the new Engagement tool?</td>
<td>Unknown until the tool is found.</td>
</tr>
<tr>
<td>3</td>
<td>What training will they need for improvement?</td>
<td>How to identify and complete a project.</td>
</tr>
<tr>
<td>4</td>
<td>What internal training do we need to support improvement efforts internally and externally?</td>
<td>We don’t know until the plan is developed.</td>
</tr>
<tr>
<td>B</td>
<td>What improvements do we currently have teams working?</td>
<td>Several are in progress now. Some are going well, others are stagnant.</td>
</tr>
<tr>
<td>A</td>
<td>How do we measure effectiveness of training?</td>
<td>Number of courses started, number of people trained, training budget.</td>
</tr>
<tr>
<td>A</td>
<td>Are there current measures in Human Resources to measure training effectiveness?</td>
<td>Yes, we create a yearly training plan for just CareOregon. We should be able to start with their measures.</td>
</tr>
<tr>
<td>A</td>
<td>What did our training plan look like last year? How many people are trainers and what are they certified to train?</td>
<td>Well defined.</td>
</tr>
<tr>
<td>A</td>
<td>What do our Care Providers want training in?</td>
<td>Professional issues, use of software and improvement</td>
</tr>
<tr>
<td>5</td>
<td>How do we conduct the training to minimize the impact of the training time on the operations of the care provider?</td>
<td>Unknown. We will need to talk with the Care Providers and identify what they are willing to do.</td>
</tr>
<tr>
<td>5</td>
<td>What new training has to be developed?</td>
<td>Improvement, use of the empowerment tool, management of cases, roles, how the system works since all of these are new to the Care Provider.</td>
</tr>
<tr>
<td>B</td>
<td>What have we learned from doing improvement internally? What do we think we need to improve internally? How is that similar to what the Care Providers need?</td>
<td>We don’t have the expertise in this area. We are good at the professional training.</td>
</tr>
</tbody>
</table>
All Components of the Ami™ Working Charter Transferred
PDSA Hints

- Most Learning Cycles have less than 5 questions
- Learning Cycles generally relate to one data collection source with multiple analysis (stratification)
- Conduct tests ASAP to Learn
- “Tests” are TEMPORARY not phased implementation
- Test on a very small scale in a wide range of conditions!
- We learn the most when results do NOT match our predictions!
- Implementation has multiple Learning Cycles
The Role of Data in the PDSA Cycle

Model for Improvement
- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What change can we make that will result in improvement?

DATA

Changes that result in improvement

Implementation of change

Wide-scale tests of change

Follow-up tests

Very small scale test

Hunches theories ideas

APSD

APSD

APSD

APSD
Bridging the Gap in Care
Overall Project Description

• Design of a new product, process, or service
• To define key information about a non-CKD while still in hospital where dialysis initiation occurs, gather this information in a defined document and hand-off that information to the patient’s new HD clinic by first outpatient dialysis day
• To receive and properly use the new non-CKD patient’s HOF in a way that efficiently integrates the patient into the FMS Ultracare System
Timeline of Transitions

Self-care
HHC
Rehab
LTCF

Hospital Side Process
↑
Adm
5-7 days
↑
D/C
Facility Side Process
↑
↑
↑
1st Opt HD
30 days
ICT
↑
CCP
Bridging the Gap in Care
Hospital Side Project Description

✓ To define key information about a non-CKD new ESRD patient while still in hospital where HD initiation occurs, gather same information in a defined document and hand-off that information to the patient’s new HD outpatient clinic by first outpatient dialysis day
Bridging the Gap in Care
Hospital Side AMI Form

Objective A: to identify the non-CKD prepared new ESRD patient during the hospital stay when HD is initiated and to make the care team aware of the high risk status of that patient.

Measure: % of potential hand-off forms completed per month

- In what ways can the MD refine the selection process whereby a high risk non-CKD pt is approved for ESRD care?
- What protocols & lines of communication need to be established for the Acute Manager (AM) to identify such a patient and what channels should be pursued?
- What duties should the hospital SW be relied on to carry out beyond scheduling the outpt HD?
- How can the case manager at Princeton Hospital be brought into this line of communication and workflow?
- In the absence of the AM, who should be responsible for identification of the high-risk patient and the initiation of this phase of the protocol?
Objective B: to establish a list of co-morbid diagnoses by time of discharge and to complete the co-morbid portion of the hand-off form (HOF).

✓ Who besides the Nephrologist should be authorized to edit this form?
✓ How would we know if inclusion of hospital procedures on this form is helpful to subsequent dialysis clinic care and not excessively burdensome to include?
✓ What type of reminder systems could be put in place to ensure compliance by the Nephrology MD seeing the patient? What affordances could be used?
### Bridging the Gap in Care
#### Hospital Side AMI Form

**Objective C:**

| to modify in-patient care protocols to incorporate selected portions of Stage IV/V CKD Protocol |

- ✅ What type of check list could be used and could this qualify as an official hospital order form?
- ✅ Which of those protocol elements should be included?
Objective D:

to establish an accurate list of prescribed outpatient medications at time of discharge & to include this information in the HOF

| ✓How can we enlist the cooperation of the hospital PharmD to carry out this portion of the HOF? |
| ✓Should the MD or the Acute Manager contact the PharmD at time of discharge to request this be completed? |
Objective E: to write Standing Orders for the outpatient dialysis clinic by time of discharge and to reliably transmit those orders to the dialysis clinic by the first outpatient day of dialysis for that patient

• Measures:
  • Time between 1st outpt HD and initiation of Anemia Protocol
  • Time between 1st outpt HD and initiation of Metabolic Bone Protocol

✓ What templates exist for standing orders and will each outpatient dialysis clinic involved agree to use the selected version?
✓ How can the AM be involved in this portion of the protocol?
✓ What are the current protocols being used in the outpatient clinic for ESA and Vit D analog meds and can those protocols be incorporated in this protocol without further change?
✓ How can compliance by Nephrology MD be assured? Affordances?
Bridging the Gap in Care
Hospital Side AMI Form

Objective F: to determine & communicate special short-term medications in order to hand-off from hospital to outpatient clinic

Measure: % of all antibiotic orders that were missed for this subgroup of high risk patients

✓ What special form should be used, or should it be a supplement to Standing Orders?
✓ Should ID MD be the proper person to complete this section of orders, or Nephrology MD or either?
✓ How can this be conveyed as an order?
Objective G: to carry out initial VA placement & begin plans for more permanent VA while hospitalized then to communicate the short term and long term VA plans to outpatient HD clinic by day of first outpt HD

Measure: Total and average per patient days with plastic catheter for first 90 day non-CKD patients

- What form should be used to convey this information via the HOF?
- How can the compliance by the Nephrology MD be assured in completing this section of the form?
- Are any physician extenders possible to help with this or other sections of the HOF?
- Can the VAC plan the expedited vessel mapping protocol prior to the patient’s discharge?
Bridging the Gap in Care Hospital Side AMI Form

Objective H: to initiate a robust education effort for the high-risk patient and family while still an in-patient and to document then transfer this effort to the outpatient dialysis clinic via the HOF

✓ What elements of education and training could the hospital dietician become responsible for in this process?
✓ How do we enlist the help then carry out in-service training for the hospital dietician?
✓ Who would carry out modality training?
✓ How do we develop a checklist form that would quality as an official hospital order so that duplication could be avoided?
To receive & properly use the new non-CKD HD patient’s HOF in a way that efficiently integrates the patient into the FMS Ultracare System, providing the best chance of patient safety and survival
Bridging the Gap in Care
Clinic Side AMI Form

Objective A: Proper distribution of HOF material to appropriate staff on or before 1st outpatient HD day

Measure: % of non-CKD pts with Hand-off Forms available for use on 1st day of outpatient HD

✓ Which staff members are assigned primary responsibility for this distribution?
✓ Who are the staff recipients of this material?
✓ How are standing orders to be entered into the system?
✓ How can Brenda Hinton’s role fit into the workflow for this HOF?
✓ What are the unintended consequences?
✓ When does the RSM become involved in this workflow?
Objective B: to review VA plan from HOF and to intervene per protocol

- Measures:
  - # of catheter days starting with first outpatient dialysis day
  - hospital readmission rate
  - fistula prevalence rate

- How do we in-service personnel at multiple outpatient clinics and ensure standard care across all centers involved?
- How could we model the approach at BKC and have the dietician (or SW) serve as the vascular access coordinator? What would be the consequences of this?
- Who has authority to act on this portion of the workflow?
- How do we work with the VAC to create an expedited vessel mapping protocol so that catheter days can be minimized?
Bridging the Gap in Care
Clinic Side AMI Form

Objective C: To best use the HOF outpatient medication list to accomplish medication reconciliation by time of first IDCT meeting

Measure:
Time between 1st outpatient HD day and medication reconciliation being accomplished

✓ Who should handle this form?
✓ How should it be incorporated into the patient’s FMS record?
✓ Who is responsible for getting the patient &/or family to bring in all home meds?
✓ Who is responsible for completing the medication reconciliation?
Bridging the Gap in Care
Clinic Side AMI Form

Objective D: To most effectively use the co-morbid conditions portion of HOF for the benefit of the patient

Measure: Hospital readmission rate

- How can this be incorporated into the FMS clinical record?
- How can or should it be used prior to the first IDCT meeting?
- How can it be used at the first IDCT meeting?
- How can it be used after the first IDCT meeting in a way that it is incorporated into ongoing care?
- What are key items which if present should be brought to medical director’s attention during the first 7-10 days of outpatient dialysis?
Objective E: To utilize standing orders and special medication form in a way that no orders or prescribed medications are missed during care in the outpatient dialysis clinic

Measure:
# % Antibiotic doses missed during 1st 90 days HD for non-CKD pts

- Who should be authorized to act on standing orders and special medication orders?
- How can the standing orders and special medication orders be entered into the system on or before the first outpatient HD day?
- How can these orders be entered electronically at the acute dialysis room in a way that they transfer into the outpatient FMS system?
Bridging the Gap in Care
Clinic Side AMI Form

Objective F: To utilize the RSM in a manner demonstrated to show the most reduction in 1st 90 day mortality, working with as high % of non-CKD patients possible

Measures:
✓ 1st 90 day mortality
✓ % non-CKD pts with corrected Hct & Alb on day 91
✓ hospital re-admission rate

✓ How do we coordinate the RSM schedule so that the RSM attends the first IDCT meeting for each new non-CKD HD patient?
✓ How do we ensure that the RSM is involved in all appropriate sections of the HOF?
✓ What new channels of communication need to be opened for the RSM and what existing channels of communication need to be enhanced?
Macro Ami Example

What are we trying to accomplish?

Describe Project:
(check one) (How portion)
___ Redesign existing process, product, or service
___ Design new product, process, or service
___ Improve system as a whole (covers, mainstay, support)
___ Collaborate and share an existing working improvement to diffuse the innovation

Brief Description: What/How (include above- limit 2 sentences)

To define key information about a non-CKD new ESRD patient while hospitalized, gather same information in a defined document and hand-off that info to the patient’s new HD clinic by first outpatient dialysis day.

Observed a property of the new HD pt's HOF in a way that efficiently integrates the pt into the System, providing the best chance of pt safety and survival.

How will we know a change is an improvement?

Objective A: to identify the non-CKD patient who will initiate and make the care team aware of the high risk status of that patient.

Measure: % of potential hand-off forms completed over 3 month time interval

Objective B: to establish a list of comorbid diagnoses by time of discharge and to complete the comorbid portion of the hand-off form (HOF).

Objective C: to modify inpatient care protocols to incorporate selected portions of Stage M/V CKD Protocol

Objective D: to establish an accurate list of prescribed outpatient medications at time of discharge & to include this information in the HOF.

Objective E: to write standing orders for the outpatient dialysis clinic by time of discharge and to transmit those orders to the dialysis clinic in a reliable manner by the first outpatient day of dialysis for that patient.

Measure:
1. Time between 1st outpatient HD and Initiation of Anemia Protocol
2. Time between 1st outpatient HD and Initiation of Metabolic Bone Protocol

Objective F: to determine & communicate special short-term medications to pass on from hospital to outpatient clinic

Measure: % of all antibiotic orders that were missed for this subgroup of high risk patients over 3 months

Objective G: to carry out initial VA placement & begin plans for more permanent VA while hospitalized then to communicate the short term and long term VA plans to outpatient HD clinic by day of first outpatient HD

Objective H: to initiate a robust education effort for the High-Risk patient and family while still an inpatient and to document then transfer this effort to the outpatient dialysis clinic via the HOF.

Objective I: Proper distribution of HOF material to appropriate staff on or before 1st outpatient HD day

Objective J: Review VA plan from HOF and to intervene per protocol

Measure:
1. # of catheter days starting with first outpatient dialysis day
2. Hospital readmission rate
3. GFR prevalence rate

Objective K: To best use the HOF outpatient medication list to accomplish medication reconciliation by time of first IDCT meeting

Measure: Time between 1st outpatient HD day and medication reconciliation being accomplished

Objective L: To most effectively use the co-morbid conditions portion of HOF for the benefit of the patient

Measure: Hospital readmission rate

Objective M: To utilize standing orders and special medication form in a way that no orders or prescribed medications are missed during care in the outpatient dialysis clinic

Measure: % of doses missed total doses during 3 months

Objective N: To utilize the RSM in a manner demonstrated to show the most reduction in 180 day mortality, working as high % or non-CKD patients possible.
Examples of Connecting Processes Across a Gap in Care

**Objective H-4**: to conduct a proper MedRecon Process while newly initiated HD pt is still an inpatient and to complete MedRecon HOF prior to d/c

**Objective C-3**: to best utilize the MedRecon HOF in order to avoid medication related errors in the outpt care of the new high-risk HD patient

**Objective H-6**: to establish the need for short-term continuation of special medications after d/c and to convey those medication orders using the Special Short-Term Medication HOF

**Objective C-5**: To use the Special Short-Term Medication HOF in a reliable manner so that all such medications are properly administered to the new high-risk HD pt in the clinic

**Objective H-7**: to make long-term VA plan while pt is still an inpatient and to complete VA HOF prior to d/c

**Objective C-2**: to review the VA HOF for new high-risk HD pt on first treatment day and to implement directed portion of VA protocol
Process H4: to conduct a proper MedRecon Process while the newly initiated HD patient is still an inpatient.

Questions to Answer, Predictions, and other Planning

**Question to Answer:**
1. How can we enlist the hosp PharmD to assist in the completion of this process?
2. What guiding principles and existing documents can guide this process?
3. At what stage of the hospitalization would it be best to consult the PharmD?
4. What data is needed to assist the process workers in completing the MedRecon accurately?

**Predictions:**
1. offering this as an opportunity to meet JC requirements and to offer this as a win-win opportunity
2. AMA PCPI document, Forum MAC MedRecon Toolkit, other MedRecon documents from Hosp PharmD
3. as soon as dx of ESRD made and dialysis initiation planned
4. All home meds brought in, list of prescribed meds at adm, hosp orders and MAR, med list at d/c, verification of med education given pt/family and Rx given at d/c

**Who:** Hospital Neph, PMD, PharmD

**What:** % HOF 1st opt dialysis with MedRecon completed

**When:**

**Where:** Outpatient clinics fed by _ Hospital
### Questions to Answer:

1. Who should utilize this portion of the HOF in order to integrate the new HD pt into the clinic's system of care?
2. What elements of the form should be incorporated into the clinic's medical record for this patient and how should that be accomplished?
3. Who is responsible for having the pt/family bring in all meds for clinic review and reconciliation?
4. Who should be responsible for completing the clinic side MedRecon process and in what time-frame should that be finalized in order to achieve no medication related errors?

### Predictions:

1. CM, NP/PA, MD

2. Discharge Medication List, initially hand-written by one of the ones in #1--but to be modified by EHR when available and to be validated after resolution of differences found in #3

3. CM, NP/PA, MD, RSM

4. NP/PA, MD at least by time of first ICT meeting, preferably by end of week 1

### Who: RSM

### What: % new HD high-risk HD pts with MedRecon Process by first ICT

### Where: Clinics fed by _ Hosp

### When:
HOSPITAL SIDE CARE TRANSITION PROCESS

on behalf of The Forum of ESRD Networks
Jerry W. Jackson, MD

Yes

Dx of ESRD & Determination of Urgent Need for RRT

Application of Idealized Medical Care:
- volume control
- BP regulation
- If diabetic, tight control
- Identify and control CV Risks
- Nutritional Assessment & Rx
- Metabolic Bone Assessment & Rx
- Anemia Assessment & Rx
- Dx & Rx of Infections

Initiate HD

No

Place Venous Catheter

Establish Status of Chronic Conditions

Complete: Status of Chronic Conditions
- HOF: PCP or Neph

Yes

Formulate Vascular Access Plan

Complete VA HOF: Neph

No

HOSPITAL SIDE CARE TRANSITION PROCESS

Yes

Prior AVG/AVF

No

Place Venous Catheter

Complete: VA HOF: Neph

Surgical Access--AVF Preferred

Vessel Mapping

No

Complete: Vascular Access Plan

Yes

Surgical Consultation for PD Cath Placement

Complete: Vascular Access Plan

No

Complete: Surgical Access--AVF Preferred

Complete: Vascular Access Plan

Pt & Family Education:
- Modality Options
- Dietary
- Volume Control

Yes

CAPD Selected

No

Discharge Planning:
- Facility & Schedule
- Transportation
- DME
- HHC
- Self Care vs. Alternative Disposition
- Insurance & Financial Support

Determine Hepatitis Status

Consult Hospital PharmD

Complete: Vascular Access Plan

Ensure Transmission of All HOFs to Outpt Facility

Transmit Demographic Info & Designated Chart Components Per Protocol: DCP

Medication Reconciliation Process

Complete: Med Recon HOF: PharmD

Complete: Primary MD & Consulting MD HOF: PCP or Neph

Complete: Advanced Care Form: DCP

Complete: Short-Term IV Meds for Outpt Dialysis Admin HOF: Neph

Complete: Discharge Planning Pending at D/C
- HOF: PCP or Neph

Complete: Results of Studies

No

Yes

Consult Hospital PharmD

No

Yes

Ensure Transmission of All HOFs to Outpt Facility

Transmit Demographic Info & Designated Chart Components Per Protocol: DCP
Facility Side Care Transition Process

on behalf of The Forum of ESRD Networks

Jerry W. Jackson, MD

Verification Checklist of HOFs
- Received:
  - Standing Orders
  - Short Term IV Meds
  - Med Recon
  - Vascular Access Plan
  - Status of Chronic Conditions
  - Advanced Care
  - Studies Pending at D/C
  - Primary & Consulting MDs
  - Diabetic Care Plan
  - Demographic & Other DCP Material

Incorporate HOF Material into Patient's Medical Record

Social Work
- Continuation of Insurance & Financial Assessment

Transition
- Nutritional Assessment & Interventions

Initiate Education Protocols

Transition Meds
- Anemia Plan

Transition
- Immunization History & Plan

Transition
- BP Control Plan

Update
- Standing Orders to Incorporate Short Term IV Meds

Implement Vascular Access Plan from HOF

Transition
- Volume Status & Control Plan

Transition Diabetic Care Plan Using Network MAC Model

Establish Expedited VAC Appt for Mapping or Evaluation of Immature AVF/AVG

Directed Surgical Referral

Yes

No

Initially Use and Assess Catheter

Trial Use of AVF/AVG

Access Works

Yes

No

Continue Access Use Under Close Surveillance

Refer for Catheter Removal

Ready for Use

Yes

No

Previous AVF/AVG

Yes

No

Facility Side Care Transition Process.igx
Reality

“No matter what method you use, sooner or later it boils down to hard work.”

Cliff Norman

“Plans are only good intentions unless they immediately degenerate into hard work.”

Peter F. Drucker
References