Welcome

• Today’s presenter does not have any relevant financial interests or endorsements of products.

Learning Objectives

• Understand the need for change in our healthcare delivery system.
• Discuss how vision drives Innovation and outcomes.
• Understand how the model of care was developed.
• Describe challenges and opportunities that innovation and technology afford nursing and impact outcomes.
Who is Inova?

Inova is a not-for-profit health care system based in Northern Virginia that serves more than 2 million people each year from the Washington, DC, metro area and beyond.

Key Statistics
License hospital beds: 1,753
- Inpatient admissions: 96,849
- Births: 20,136
- ED visits: 391,809
- Outpatient visits: 538,957
- Home Care visits: 81,541
- Nurses: 4,385
- Affiliated physicians: 3,720
- Employees: 15,500

- Net Operating Revenue $ 2.3 B
- Net Operating Income $ 215 M

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Cost of health care is escalating and not sustainable. Cost of health care is impacting the communities we serve.

Inova’s Vision – Be the Best in the World

Inova Health System, as a major healthcare provider, is in the best position and has the responsibility to reinvent the way care is delivered.
"Efforts and courage are not enough without purpose and direction."
-- JFK

Taking the bull by the horns......
How We Began.....

- Vision 2015 called on all of us to reinvent the way we deliver hospital-based care to ensure a high quality, safe and excellent patient experience. This includes partnering with patients and families both in our facilities and during transitions out of our hospitals.

Characteristics of Current Model of Care

- Silos within units and departments

- Primary Care/Modified Primary Care

- Nurses function as “human” interfaces for fragmented IT systems

Characteristics of Current Model (continued)

- Nurses have become very task oriented

- Nurses are not taught leadership skills in school or in orientation

- Lack delegation skills, do not use ancillary staff appropriately or may be an issue of limited ancillary resources
Characteristic of Current Model (continued)

- Environment is not set up to be patient and family centered, set up for what is convenient for staff and MDs
- Environment is fraught with “work arounds” and redundancy
- Lost focus on what is of “value” to the patient and family
- 12 hour shifts have added to “nurse fatigue” and burnout- ageing workforce
- Interventions evidence-based practice
- Some practitioners have forgotten their commitment and obligation to “life long” learning: “I have been a nurse for 20 years... why do I need to go back to school or learn something different?”
- Stagnant culture

Inova Care Delivery Model

- Patient Care
- Ambulatory Care
- Transitional Care/Medical Home

LEADERSHIP

Transitional Care/Medical Home

Inpatient Care

Leadership

Team Based Care

Inter-Professional Education

Project Goals

- Design processes and work flows around patient needs/preferences
- Eliminate waste, improve efficiency, reduce cost (8-9% reduction in FTE cost per day)
- Create team-based model of care
- Redesign the role of the Professional Nurse
Review of Plan

- Transformation of Care Kaizen Scheduled (A focused team approach towards eliminating waste in operations)
- Addressed issues based on current literature for implementing new care delivery models
- Develop standard work for care team members in the new care delivery model
- Use simulation to understand the current care model and propose and evaluate transformational care models

Characteristics of Our New Care Model

- Patient and Family Centered
- Quality outcomes
- Safe
- Bridges continuum of care
- Delineates the task and role of providers
- Leverages technology, training, process improvement and available resources (Lean)
- Enables healthful practice environments
- Demonstrates adaptability and sustainability

Requirement: Collaboration and Teamwork

- A new level of collaboration and teamwork between physicians, nurses, clinical technicians, case managers, and all disciplines will be required to reinvent seamless care delivery in the 21st century.
Transformation Process

• Utilizing Lean methodology, the following can be accomplished; remove waste, redundancy and address barriers in workflow

• Create a more collaborative “healthy” environment through interdisciplinary rounding, team-based approach using relationship-based care model

• Redesign/Reinvent Roles

A3 Problem Solving Team

Problem Owner: Process Owner
Problem-Solving Team: Cross-functional team of people who do the work and experience the problems

It is very hard to achieve objectives by making one big single improvement

Good Continuous Improvement is achieved through teamwork

Data-Driven Clinical Care Simulation

Objective:
• Use simulation to understand the current care model and to propose and evaluate transformational care models

Plan Overview:
• Develop and validate current-state
• Collaborate to design “future-state” care-delivery model alternatives
• Evaluate “future-state” care model alternatives
• Design optimal “future-state” care model using insights from simulation results
Simulation Process


RN Activities (Continued)
Results

<table>
<thead>
<tr>
<th>Experiment</th>
<th>Mean Census</th>
<th>Number RNs</th>
<th>Number LPNs</th>
<th>Number UAP</th>
<th>Professional Practice Technique</th>
<th>Mean Wait</th>
<th>Professional Practice Technique</th>
<th>Cost ($)</th>
<th>Value Added</th>
<th>Value Added</th>
<th>Value Added</th>
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<td>3.95</td>
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</tr>
</tbody>
</table>

Figure 6: Results for 9 experiments in the simulation study testing the impact of variations in staffing and professional practice techniques on patient wait times. Experiment names use the following naming convention: mean census, number of RNs, number of LPNs, number of UAP, and professional practice technique. For example, experiment 45.5.4.4. RN had a mean census of 45 and had 5 RNs, 4 LPNs, and 4 UAP and the RNs only performed RN-specific services.

Application of Simulation Technology

Kaisen to address Transformation of Care

- Addressed issues that literature suggested for implementing new care deliver models
- Outcome: Standard Work for care team members of the new care model.
  1. Care Team Member Responsibilities
  2. Care Team Delegation, Communication, and Trust
  3. Care Team Shift Schedule

AONE's Guiding Principles: The Role of the Nurse in Future Patient Care Delivery

- The Core of Nursing is Knowledge and Caring and Care coordination
- Care is Patient and Family Centered
- Knowledge is Access-Based
- Knowledge is Synthesized
- Relationships of Care
- Managing the Journey
- Quality and Safety
Change Management Strategy

1. Implementation Focus Groups:
   • Purpose is to gather feedback from staff implementing change to identify what can easily be implemented, what will take more planning to implement and what barriers their department may face during implementation.
   • Participants: Identified by CNO; should include RN, CT, CNS and Nurse Manager.

2. Leadership Implementation Strategy Session
   • Purpose is for OU leadership to strategize about how to implement the Care Delivery Model on their unit. Leaders will be asked to review the model and discuss what their team is currently doing well, what they are currently doing that needs improvement, what are they not doing that they will need to start.
   • Participants: All OU Nurse Leadership, one staff level champion identified by each unit, physician leaders and OU Patient Experience Leader.

3. Management Team Meeting Presentation by CNO
   • Purpose is to introduce the Care Delivery Model to all OU leaders

Staff Education

• Develop RN curriculum; working with O&T on Leadership Modules for staff RNs
  • Communicating with Impact
  • Influencing others
  • High Impact Feedback and Listening
  • Leadership Performance trains
  • Getting started as a new leader
  • Team building

• Create educational plan for higher level assistants/techs based on new model and may differ by specialty
• Educate to the new model of care-Relationship Based Care Model

Pilot Solution On Selected Units

• Present the “future-state” simulation results of tested scenarios / ideas
• Create plan for pilot implementation
• Execute pilot per plan
• Re-measure to ensure outcomes realization

Clinical Technician Refresher

• All existing Clinical Technicians at Inova were retrained and tested.
  Highlights include:
  • Communication and delegation
  • Indwelling catheter insertion
  • Urine specimen collection from catheter
  • Blood specimen collection
  • Starting a peripheral IV
TEAM Training for RNs

- TEAM training is the staff level equivalent of basic leadership module. It teaches nurses how to effectively communicate with each other and the entire team.
- All Medical-Surgical and Emergency Department Nurses assigned TEAM training. Goal is to send all RNs to TEAM training.

Delegation, Communication and Trust

- Delegation, communication and trust training and review discussions are integrated in:
  - Clinical Technician Academy and Refresher
  - Centralized Nursing Orientation
  - Novice Nurse Orientation
  - Specialty Nursing Orientation
  - TEAM training for RNs

In-patient Care Delivery Model Graphic

The model consists of 3 concentric circles. Each circle contains its own elements beginning with the inner or core circle of CARING.
Elements requiring **PARTNERSHIP** with Patients

- ISHAPED
- Hourly Rounding
- Multidisciplinary Rounds (or Bedside Rounds)
- Discharge Planning

Example of Standard Work

Example of Assessment
Elements that SUSTAIN Partnership

- Safety Huddles
- Mid-Shift Huddles
- Creative Solutions Boards
- Kensa 5 Audits
- Team Training

Example of Trio Standard Work

Trio Round Video
Metrics (Pre and Post) Collected on Pilot Unit

- Quality of Care
  - Falls
  - Pressure Ulcers
  - Elisions
  - Treatment Delays
  - medication errors that reach the patient
- Patient Satisfaction: Selected questions from the existing patient satisfaction effort
  - Nurses’ instruction of treatments
  - The overall teamwork between doctors, nurses and staff
  - Education that you received from the nursing staff
- Nursing Satisfaction: Selected questions from NDNQI Practice Environment Scale
  - Perception of quality of care on their unit
  - How would you rate your unit in the past year what has happened with quality of care on your unit
  - Overall, my last shift was good
  - I have enough time with my patients
  - Discharged patients have received complete education
  - On my last shift, important things did not get done for my patients
- Finance
  - LOS
  - Cost per day on the pilot unit

Where we are today ...

Initial System Wide Outcomes
Change in Skill Mix

- RN skill mix was reduced from 82% to 73% yielding in a 23 million dollar annual savings across the health system.
- YTD 2016, skill mix average is holding around 73%, partially related to the number of critical care units which are staffed at 95% RN skill mix.

Characteristics of Our New Care Model

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Redesign Roles

- Roles of Nursing Leadership
  24/7 Nurse Manager Accountability-outcomes are unit focused
- Professional Nurse
  “Nurse of the Future”
  Shared leadership, begins at the bedside-outcomes are patient focused
- Our care partners on the team
Redesigned Role: Nurse Manager/Clinical Director

- Coordinates safe delivery of care for their area
- Provides clinical and administrative leadership
- Assures the implementation of the vision, mission, plans and standards of Inova Health System and nursing services within their defined areas
- Contributes to the competence and engagement of the professional nurses

Redesigned Role: Professional Nurse

- Integrator: must have and utilize critical thinking and synthesis
- Assessment
- Communication
- Delegation/Oversight
- Chief Colleague of MD
- Patient Outcomes/Surveillance Interpretation and Intervention
- 24/7 Accountability for: Quality, Safety, Patient and Family Centeredness, Evidence-Based Practice, Mentoring, "Managing the total patient care experience"

Leadership Competencies: Project Manager
Leadership Lessons Learned

- Establish key relationships prior to implementing a major change
- Never assume that others are communicating your message
- Never assume that just because people say they are on board it doesn’t mean that they really are.....
- People do not like change
- Carefully assess each hospital’s culture and readiness for change
- Communicate potential impact of other major projects on your project’s progress (EPIC)

Use of Technology to Support the Care Model
Patricia Mook, CNIO

Current
- Complete EHR
- Bar code Med admin
- Bar code Specimen collection
- Device integration
- Smart Pumps
- Nurse Call Integration
- Teletracking
- ePrescribing
- Electronic Nurse Scheduling and Staffing

Future
- More integration
- Patient PHI in patient portal
- Acuity System
- Enhanced reporting
- Dashboards
- Population Health
- Secure Messaging
- Increased Mobility
Inova Leadership in conjunction with their Staff Nurses responded to feedback about the inconsistent way we were discharging patients, which began a LEAN A3 initiative to address and improve their discharge process.

**Problem:**
Lack of clear and effective communication to our patients and their families was identified as a problem contributing to effective discharge planning throughout the patient’s stay. Through the A3 problem analysis and root cause investigation multiple causative factors were identified.

**Who do we want to lead the team?**

**Key Leaders**

- **The Executive Owners:**
  - Patricia Bloed (CNIO)
  - Patricia Brodfuehrer, Director of Professional Practice and Innovation

- **Leaders of Problem solving team:**
  - Carolyn Lopez, Manager of Informatics
  - Mehdi Zadeh Mohammadi, Lean process Improvement Engineer

**A3 Problem Solving Team**

- **Problem Owner:** Process Owner
- **Problem-Solving Team:** Cross-functional team of people who do the work and experience the problems

It is very hard to achieve objectives by making one big single improvement

Good Continuous Improvement is achieved through teamwork
Putting the team together?

Problem solving Team:

- Five Managers
- 10 RN staff
- 6 CNEs Adhoc advisory team
- Informatics Analyst
- Reporting team
- Clinical Documentation build team members

5 Why Root Cause Analysis

All problems typically relate to these root causes

- No Standard
- Inadequate Standard
- No Visual Indicator
- Inadequate System

Problem Analysis/ Root Cause Investigation

- Perception of great D/C is all about the process steps taking place from time of admission through discharge
- Not incorporating tools in Epic designed to improve the Quality of patient care
- There was a need to Create more efficient workflow into current nursing standard work.
  - SHARED
  - Worklist
  - D/C Navigator
  - IDA
- Inconsistent use of Whiteboards
- 100% compliance with Bedside handoff
- 100% use of Discharge Navigator
Defects and Outliers – What’s going wrong?

Project Goals
- Conduct a LEAN Process Improvement Initiative that would identify outliers and areas for improvement related to communication.
- Create RN/MD Standard work during the patient stay leading up to discharge in order to improve communication with Patients and Staff.
- Create a consistent bedside handoffs.
- Create consistent Standard Discharge folders across all 5 hospitals on every unit.
- Improve Clinical Documentation required during the Discharge process to ensure patients receive accurate information upon discharge.

Going in a Positive Direction...

Hand-Off
- LDA
- Shift Chart Check
- White Board Review

My Pt Folder
- D/C Navigator
- AVS
- My Chart Activation
Levels of Solutions

**Level 4**
Elimination by Design

**Level 3**
Mistake Proofing

**Level 2**
Standardization

**Level 1**
Training

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**What did we do?**

<table>
<thead>
<tr>
<th>Task</th>
<th>What</th>
<th>When</th>
<th>Who</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revised Hand-off Standard Work to improve PE and include Epic tools in order to improve the Quality of care</td>
<td>Apr 6th Team</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Proposed suggestions to improve the Standard Work of My Hospital Stay Folder (ID standard elements across the system and declutter the folder to improve communication)</td>
<td>Apr 6th Pat</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Identified 5 Pt care units to Pilot the improved Standard Work ILH-Observation (5/29); IFMC-Medical A&amp;B (7/20); IFOH-Telemetry (7/6); IAH-IMCU N/S (7/6); IMVH-Medical 3B (6/22)</td>
<td>Apr 6th Team</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Begin Pilot Training May 2016</td>
<td>Team</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Audit all Units July – August</td>
<td>Interns</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Report out for Managers CNEs for direction September</td>
<td>P. Mook C. Lopez</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

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**Levels of Solutions**

**Most Effective**

- Level 4: Elimination by Design
- Level 3: Mistake Proofing
- Level 2: Standardization
- Level 1: Training

**Least Effective**

- Levels of Solutions are ranked from Most Effective to Least Effective.
The team intends to measure the following KPI's:

- ISHAPED Handoff compliance for 5 pilot units – Press Graney
- Audit My Patient Folder utilization rate for 5 pilot units
- Audit the utilization of Worklist during the time of pilot for 5 units
- Audit LDA documentation for the 5 units during the pilot
Direct Observation Results (continued)

- RN Standard Work at Discharge

- Staff Questionaire

- Verify Results

| During the A3 we learned more about our process and other opportunities |
| => Capture on CSB |
| => Pick the next biggest opportunity to solve |
Next Steps

- Worklist Optimization
- Care Act Designee – Transitions of Care
- Build a Chart Checks Report and add to the Nurse Managers Dashboard
- Roll out to all units in 5 hospitals

THANK YOU!!!