



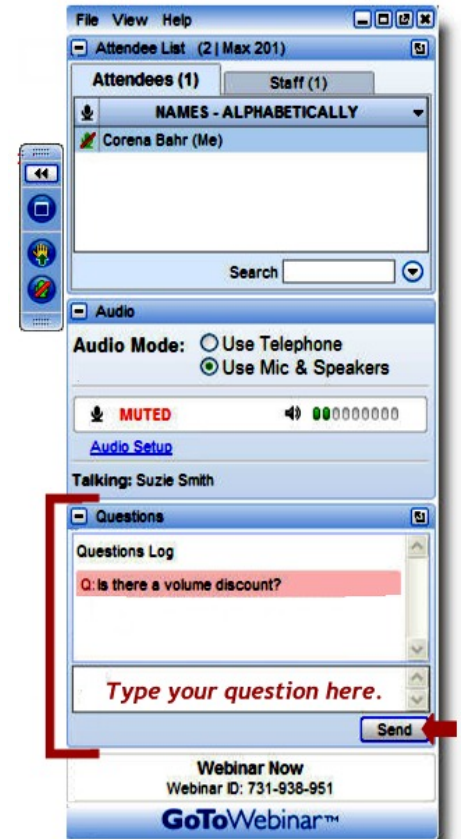
How Long is the Wait? Analyzing Flow in the Emergency Department

Michelle Johnson, Covidien
April 19, 2012

Agenda



- Welcome
- Introduction of MBB Webcast Series
 - Larry Goldman, MoreSteam.com
- How Long is the Wait? Analyzing Flow in the Emergency Dept.
 - Michelle Johnson, Covidien
- Open Discussion and Questions



MoreSteam.com – Company Background

- Founded 2000
- Over 350,000 Lean Six Sigma professionals trained
- Serving over 50% of the Fortune 500
- First firm to offer the complete Black Belt curriculum online
- Courses reviewed and approved by ASQ
- Registered education provider of Project Management Institute (PMI)



Today's Presenter

Michelle Johnson

*Global Director of Business Process Excellence
Covidien*

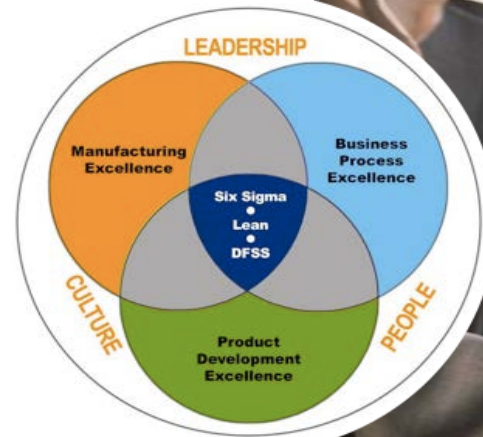


- Responsible for deployment of LSS-based improvement programs at select Covidien client hospitals in the Northeast
- Master Black Belt and Sensei certifications
- B.S. in Chemistry from Brandeis University; MBA from Worcester Polytechnic Institute

Operational Excellence – A Success Strategy

Operational Excellence is a strategy of leadership, teamwork, and problem-solving, which results in sustainable process and cultural transformations by:

- Focusing on and satisfying the needs of the customer
- Empowering employees
- Optimizing value within an organization by eliminating waste, improving quality, and delivering consistency through Lean and Six Sigma methodologies



A Strategic Approach To Organizational Transformation

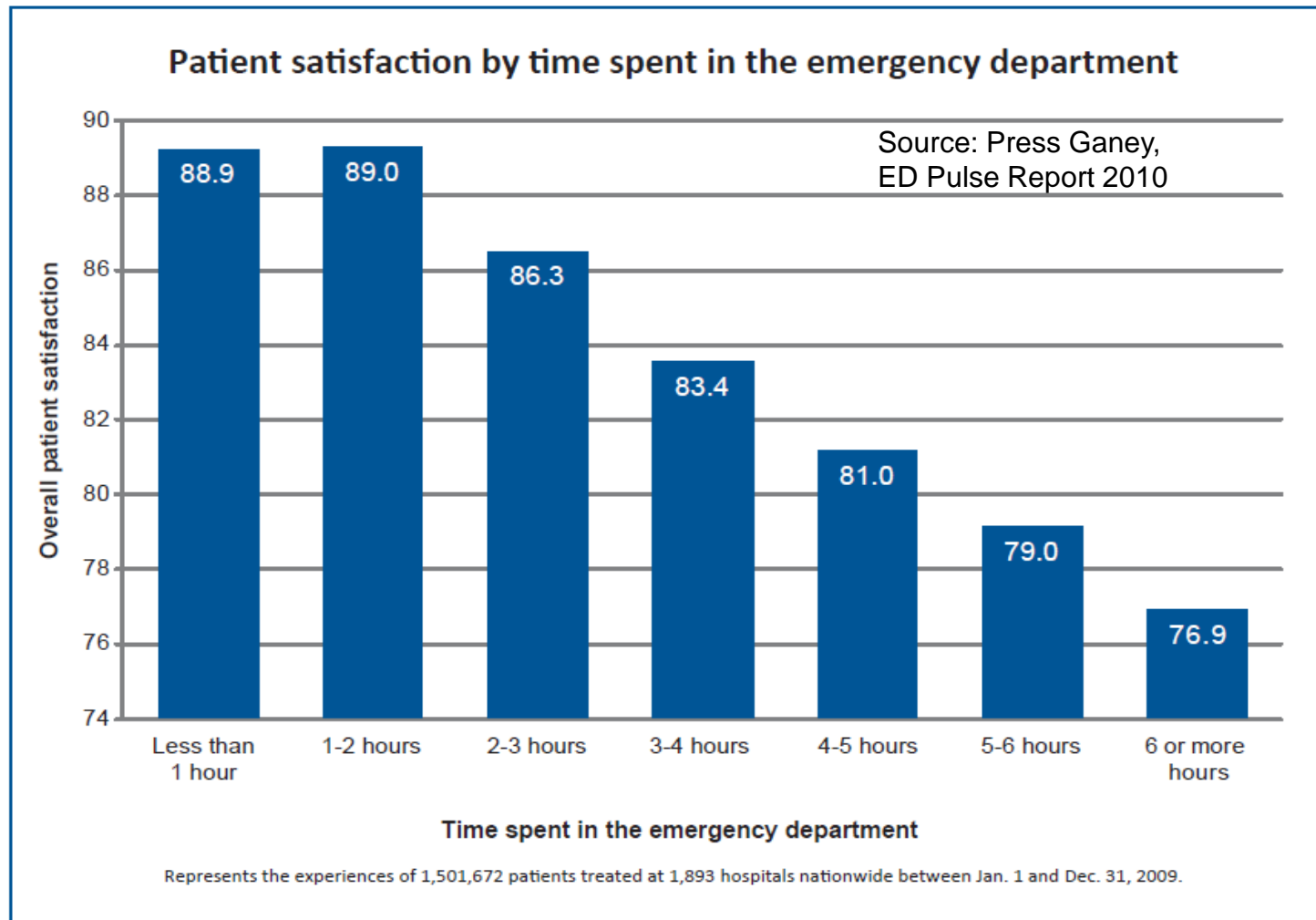
Customer Excellence – Adding Value

- ***We will be a passionate partner in process transformations to target excellence in healthcare by delivering repeatable improvement methodologies***
- ***We will build customer capability to drive continual excellence in patient, employee and physician satisfaction, through development of engaged organizations, physician alignment, and adaptive leadership***
- ***We will help customers meet the needs of today and promises of tomorrow through measurable improvements in patient quality, safety and flow.***

Understanding Emergency Room Flow

- From 1997 to 2007, Emergency Room visits increased by >37% across the US
- In the past few years, Emergency Room volumes have increased 5-10% annually
- Many hospitals face limited capital expansion opportunities
- Increased demand = longer wait times
 - 3 to 5 hours Wait Time

Wait Times Impact Patient Satisfaction



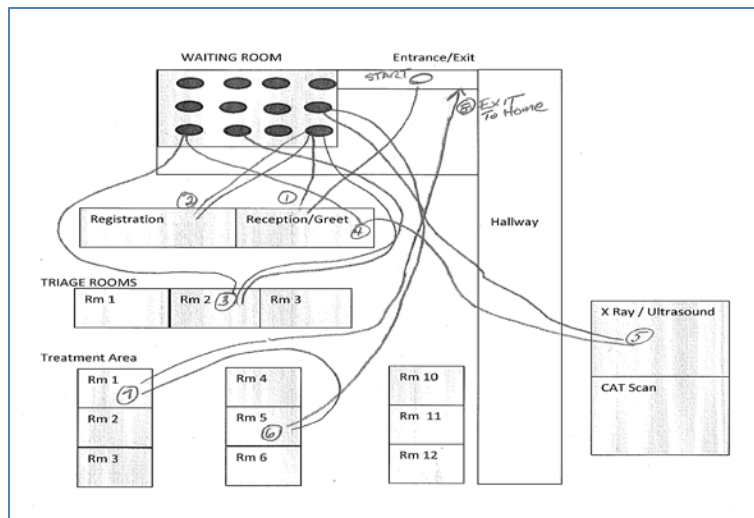
Diagnosing Emergency Room Flow

- Define the Current State
- Understand Demand Patterns
- Assess Process Capability
- Analyze Waste and Barriers to Flow
- Prioritize Improvements
- Implement Process and Flow Changes
- Measure Performance



Define the Current State

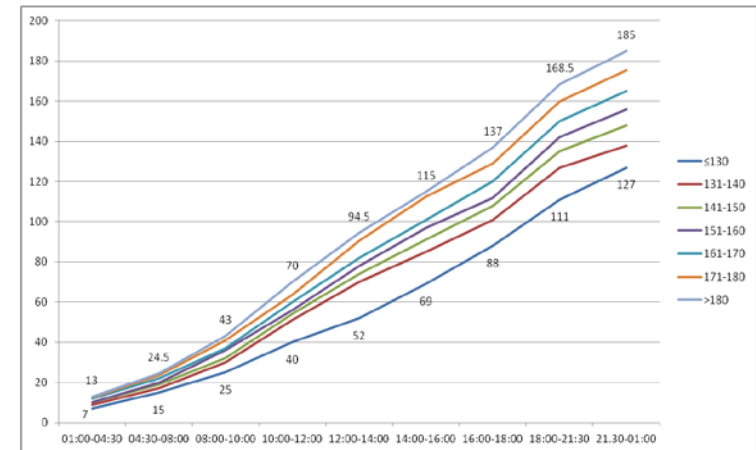
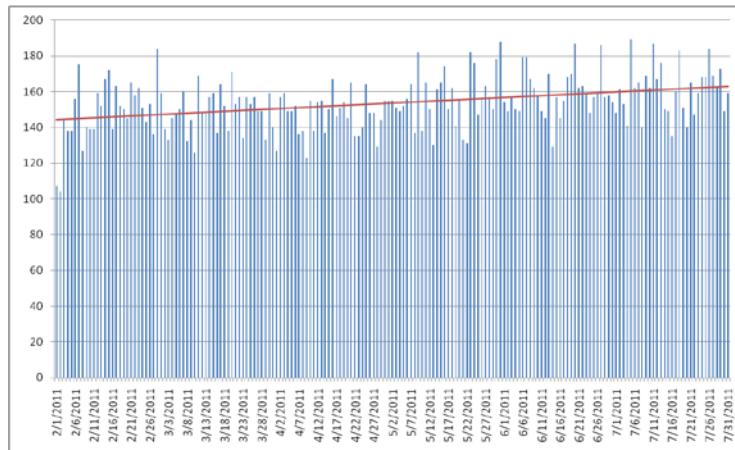
- Go and See – the power of observation
- Map the Flow
- Baseline Measurements



Understand Demand Patterns

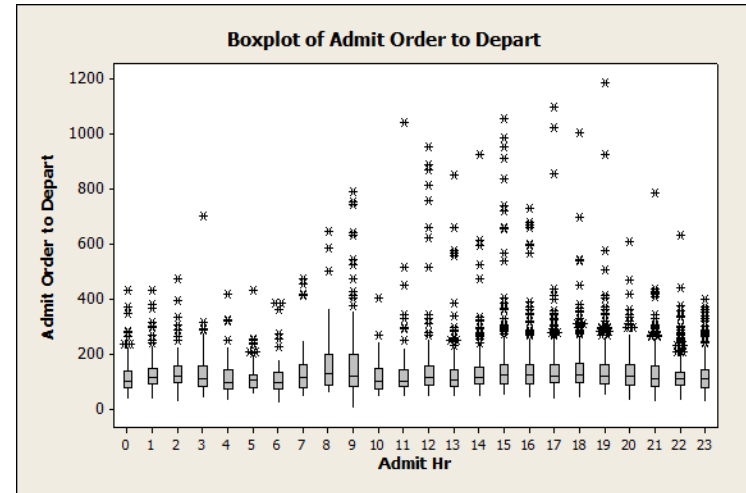
- Understand Patient Families
- Assess Seasonal Demand
- Assess Weekly and Daily Patterns
- Evaluate Surge Volumes and Capacity

Emergency Department Patient Vol/Mix					
Priority Level	Volume	% of Total	Admit Rate	ED Length of Stay (Hrs)	Admits
1	266	1%	76%	2.4	202
2	9248	21%	56%	3.5	5,179
3	20764	48%	26%	3.6	5,399
4	12651	29%	3%	2.4	380
5	350	1%	0.002%	1.5	0
TOTAL	43,279	100%			11,159



Assess Process Capability

- Time Studies
- Supply vs. Demand
- Modeling Tools



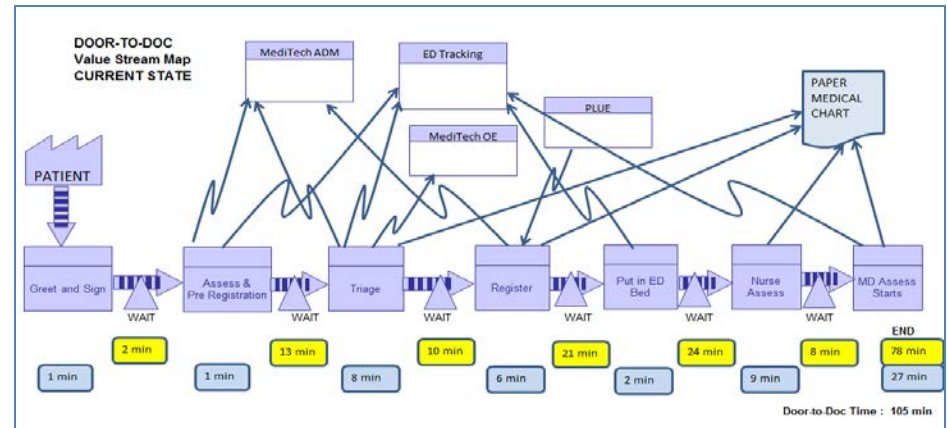
RESULTS

	Average	MAX	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Run 7	Run 8	Run 9	Run 10	Run 11
ESI 1 beds	1	1	1	1	1	1	1	1	1	1	1	1	1
ESI 2 beds	14	18	14	18	14	16	15	13	12	14	13	15	15
ESI 3 beds	47	56	44	56	50	49	45	43	47	43	42	45	40
ESI 4 beds	17	22	15	17	19	15	16	19	22	18	18	19	16
ESI 5 beds	4	7	4	4	5	3	4	3	4	5	4	3	4
All beds	83	96	78	96	89	84	81	79	86	81	78	83	76

Analyze Waste and Barriers to Flow

Value Stream Analysis

- Engage the right team



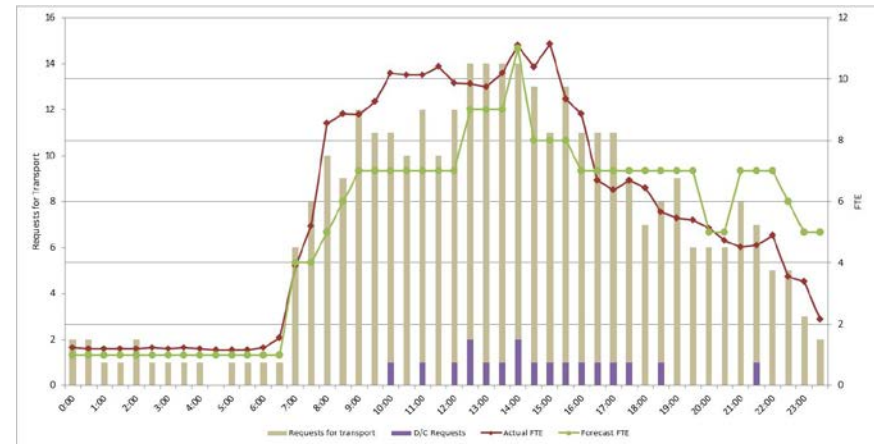
- Identify 8 Wastes
- Identify Rework
- Identify Inventory/Queues
- Identify Productivity Losses
- Brainstorm Improvements

Prioritize Improvements

- Mitigate Flow Constraints
 - Intake Process– reduce waiting room delays
 - Discharge Process – manage outgoing flow
 - Admit Process – minimize negotiations
- Streamline Length of Stay
 - Protocol Orders – available, appropriate, current
 - Support Service Response – SLAs and Priorities
 - Clear Communication – simple, visual

Implement Process and Flow Changes

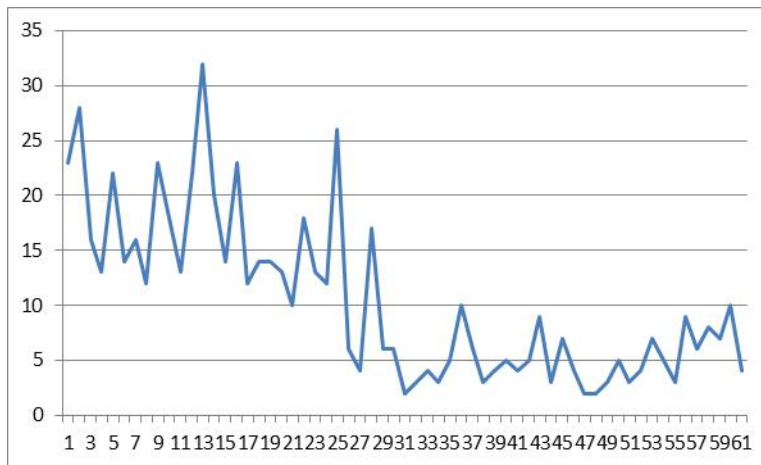
- Workplace Organization
- Set-up Reduction
- Standard Work
- Pull Systems
- Visual Management
- Communication Channels
- Staffing



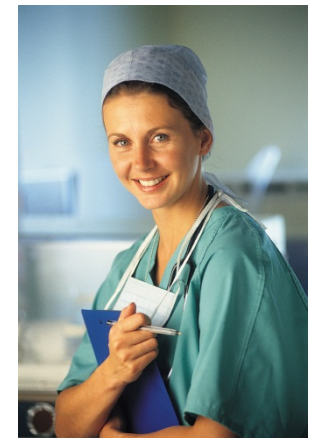
Measure Performance



Process Measures –
Internal and External



Patient Satisfaction



Employee Satisfaction

Lessons Learned

- Create the sense of urgency
- Identify the right Champions
- Engage a diverse team – be prepared to facilitate to remove functional silos, encourage dialogue
- Help the team “go and see” for themselves
- Use data to drive key decisions
- Inspire the spirit of Kaizen – manage the pilot, measure progress, adjust then stay the course

Thank you for joining us



Master Black Belt Program

- Offered in partnership with Fisher College of Business at [The Ohio State University](#)
- Employs a [Blended Learning model](#) with world-class instruction delivered in both the classroom and online
- Covers the [MBB Body of Knowledge](#), topics ranging from advanced *DOE* to *Leading Change* to *Finance for MBBs*



Resource Links and Contacts

Questions? Comments? We'd love to hear from you.

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Additional Resources

Archived presentation, slides and other materials:
<http://www.moresteam.com/presentations/>

Master Black Belt Program: <http://www.moresteam.com/master-black-belt.cfm>