


LEHIGH VALLEY HEALTH NETWORK

Are You In or Out-Patient?

Partnering With the House to Reduce ED LOS

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 Lehigh Valley Health Network

A PASSION FOR BETTER MEDICINE™




610-402-CARE LVHN.org

LEHIGH VALLEY HEALTH NETWORK

Who We Are

- Largest academic community hospital in PA
- Largest Level 1 Trauma Center in PA
- Certified Stroke Center
- Employees – 9,656
 Medical Staff – 1,100+
 Nurses – 2,334
- Magnet Hospital
- 154,792 ED visits / 63,743 admissions
- 988 acute care beds
- 3 hospital campuses
- Revenues over \$1 Billion



Cedar Crest 17th Street Muhlenberg 8 Health Centers

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Quality Milestones

2006	2007	2008	2009	2010
<ul style="list-style-type: none"> America's Best Hospitals for cancer care, digestive disorders, cardiovascular heart care and heart surgery, kidney disease, orthopedics, respiratory disorders and urology. U.S. News & World Report Best heart bypass surgery results in Pennsylvania. Pennsylvania Health Care Cost Containment Council (PHCC) One of the best network cancer programs in U.S. - Commission on Cancer Primary Stroke Center - Joint Commission Magnet Hospital Recognition for nursing excellence. American Nursing Credentialing Center Three HAP Achievement Awards - Hospital and HealthSystem Association of Pennsylvania Associate Membership - National Association of Children & Hospitals and Related Institutions (NACHRI) Top 100 Integrated Health Networks - Vantage 100 Most Wired and 25 Most Wireless Hospitals & Health Networks Innovative Award - Hospitals & Health Networks 	<ul style="list-style-type: none"> America's Best Hospitals for cancer care, digestive disorders, cardiovascular heart care and heart surgery, kidney disease, orthopedics. U.S. News & World Report Lehigh Valley Health Network - Primary Stroke Center - Joint Commission Best 100 Companies to Work For - FORTUNE Top 100 Integrated Health Networks - Vantage 100 Most Wired and 25 Most Wireless Hospitals & Health Networks 	<ul style="list-style-type: none"> America's Best Hospitals for digestive disorders, genetics, and heart care and heart surgery. U.S. News & World Report Nation's Highest Heart Attack Survival Rate - Centers for Medicare and Medicaid Services (CMS) Lehigh Valley Hospital - The Lehigh Group Burn Care Re-verification for Adults and Children - American Burn Association and the American College of Surgeons Best 100 Companies to Work For - FORTUNE 100 Best Places to Work in Healthcare - Modern Healthcare Blue Cross/Blue Shield Center for Complex and Rare Cancer - Highmark Blue Shield Top 100 Integrated Health Networks - Vantage 100 Most Wired and 25 Most Wireless Hospitals, Hospitals & Health Networks First LEED-Certified Inpatient Facility in Pa. - U.S. Green Building Council 	<ul style="list-style-type: none"> America's Best Hospitals for geriatrics, and urology. U.S. News & World Report Pennsylvania's Highest Heart Attack Survival Rate - Centers for Medicare and Medicaid Services (CMS) Accredited Chest Pain Center - Society of Chest Pain Centers Best 100 Companies to Work For - FORTUNE Lehigh Valley Hospital - The Lehigh Group Full Accreditation - Association for the Accreditation of Human Research Protection Programs (AAHRPP) Outstanding Program Achievement Award - American College of Surgeons' Commission on Cancer (CCC) Get With the Guidelines - Stroke Gold Performance Achievement Award - American Stroke Association 100 Most Wired and 25 Most Wireless Hospitals, Hospitals & Health Networks EPA Mid-Atlantic Region Environmental Achievement Award - U.S. Environmental Protection Agency One of the 10 Best Hospitals in America - Becker's Hospital Review 	<ul style="list-style-type: none"> America's Best Hospitals for geriatrics. U.S. News & World Report No. 1 in PA and No. 2 in the Nation for Heart Attack Results - Centers for Medicare and Medicaid Services (CMS) No. 1 in Overall Mortality Rate among DMC Hospitals - University HealthSystem Consortium (UHC) NCI Community Cancer Centers Program - National Cancer Institute. U.S. National Institutes of Health 100 Most Wired and 25 Most Wireless Hospitals, Hospitals & Health Networks Top 100 Integrated Health Networks - Vantage Lehigh Valley Hospital - The Lehigh Group One of the 35 Best Hospitals in America - Becker's Hospital Review 100 Best Places to Work in Healthcare - Becker's Hospital Review

Why are we here today...

- Give three examples of admitting process changes that may significantly improve flow, and how Information Technology (IT) can support these.
- Describe the impact of CPOE and emergency physician admission order writing on Emergency Department (ED) patient flow.
- Explain the effects of inpatient bed management on the ED.

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Are You Stuck?

- Story about a **black hole**.

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Who Loves You, Baby?

- Can you relate to being “managed down?”



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Evidence Based Practice

- There is NO silver bullet!
- Many articles illustrate the failure of an apparent single solution.

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Our Philosophy



Patient Care

Research

Education

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Evidence Based Practice

- Building a bigger ED does not eliminate markers of overcrowding.

Han, J.H. et al.
The Effect of ED Expansion on ED Overcrowding
Academic Emergency Medicine, 2007

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Evidence Based Practice

- The consistent attention to ending overcrowding at an institutional level with the willingness to do what is necessary could be considered the root cause of success.

*MacKenzie, R. et al.
Growing Organizational Capacity Through A Systems Approach
Joint Commission Journal on Quality and Patient Safety, 2008.*

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Where Were We?



Alignment and incentivized goals

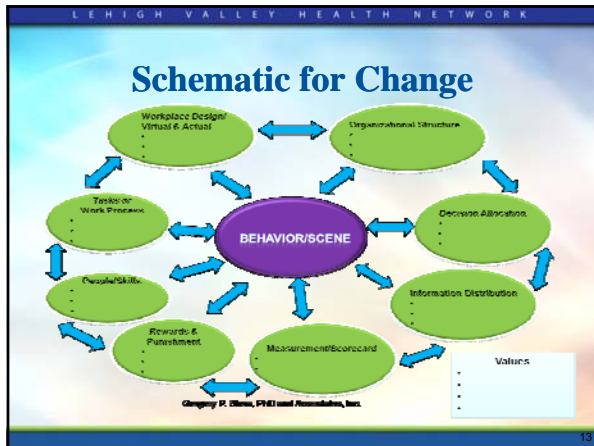
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Where Were We?

- Data suggested we needed to react:
 - Total average ED LOS = 280 minutes
 - Admit hold LOS = 189 minutes
 - LWBS = 1.46%
 - Diversion hours/month = 124 hours
 - House ALOS = 5.42

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The Journey

- We have either implemented or partially implemented **27** interventions.
- Some of the highlights of INPATIENT assistance will be discussed today.

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Let's Roll


- It takes a village.
- Without the help of the house, you will fail.

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Let's Roll

- ED staff = SWAB
- C-Suite support!



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The Badge

- Growing Organizational Capacity (GOC)
- It's the culture.
- Results are measured and reported at all levels – in five pillars.



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Key Learning's

- **PULL** this!
 - Stolen from manufacturing.
 - It works.

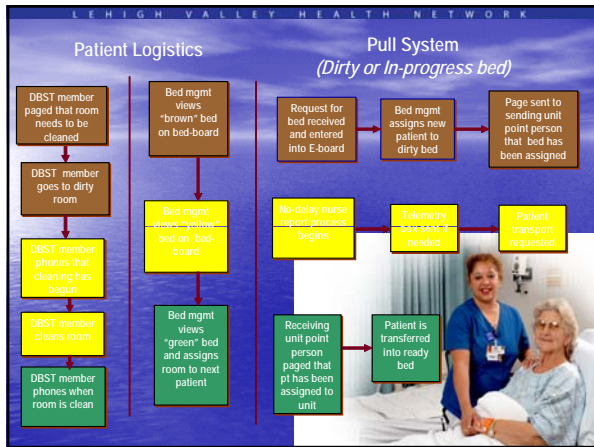
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Key Learning's

- No Delay Nurse Report
 - Eliminate the push system.

- Bottom line: Staff cannot control the stop cock to their workload.



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Key Learning's

Get on down...move on brown!

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Key Learning's

- Organization Development Study:
 - Paradox: Bigger space = less efficient.
 - THE pearl of this presentation we learned from our colleagues in surgical services...

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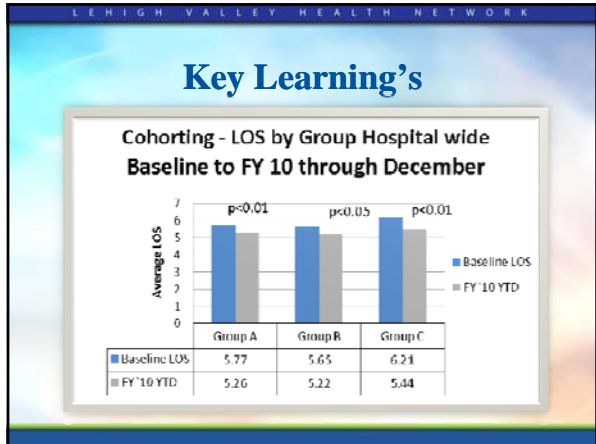
COHORTING for Medicine

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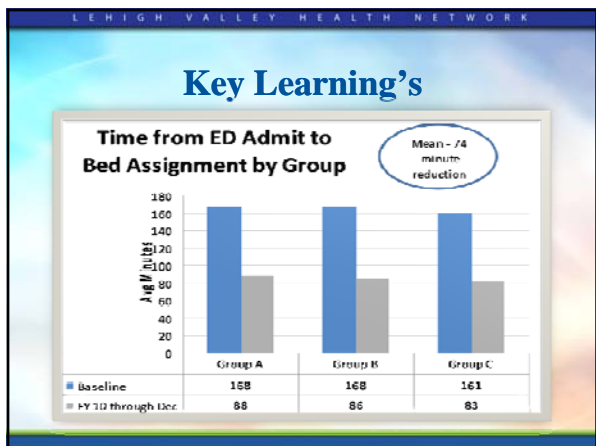
Key Learning's

Hospital Average Length of Stay

Date	Avg LOS (Approximate)
Jul-06	4.90
Sep-06	5.10
Nov-06	5.30
Jan-07	5.50
Mar-07	5.20
May-07	5.40
Jul-07	5.50
Sep-07	5.30
Nov-07	5.40
Jan-08	5.50
Mar-08	5.30
May-08	5.40
Jul-08	5.20
Sep-08	5.30
Nov-08	5.40
Jan-09	5.20
Mar-09	5.30
May-09	5.10
Jul-09	5.20
Sep-09	5.30
Nov-09	5.20



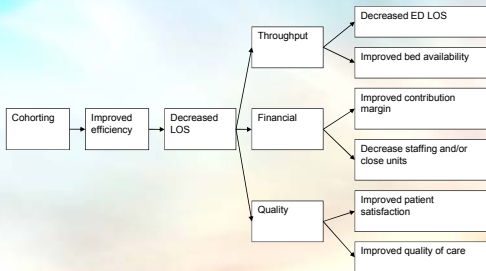
- LEHIGH VALLEY HEALTH NETWORK
- ### Key Learning's
- Improved communication with entire team.
 - Improved Press, Ganey scores.
 - Unexpected Results:
 - They have someone assigned to the ED to do admissions.



Key Learning's

- 0.10 day drop in ALOS =
– \$1.9 Million/annually
- Note: Revenue generation and cost savings cannot be achieved together.

Key Learning's



Key Learning's

- Horizon Business Insight
- Metrics, metrics, metrics.

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Key Learning's

- Super Cohorting
 - Pilot @ LVH-M (acuity)
 - Merged two groups
 - Still in trial phase

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Key Learning's

- Outcomes to date:
 - Reduction in ALOS = 0.12 days
 - ED admission process improved
 - PA-C stationed in the ED
 - Parallel versus sequential admit orders
 - Improved communication w/ colleagues
 - IRB approved quality project

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Key Learning's

- Virtual Huddles:
 - Flexibly increase capacity
 - 7-Tower
 - EAU
 - 2-South
 - Cardiac Cath Lab
 - Peri-operative Services
 - Must be fluid.

Immediate Next Steps

- Move On Team:
 - Time from admit decision to bed assignment
 - Get 'em out on green
 - Mobile Express Admission Unit
 - Physicians assigning beds?
- Rounding culture shift
 - Sickest, OBV/AO, Acute (I/S)

In or Out?



Outcomes Achieved – With the Help of IT

- Successes...
 - Total average ED LOS = 224 minutes (280)
 - Admit hold LOS = 79 minutes (189)
 - LWBS = 0.43% (1.46)
 - Diversion hours/month = 0 hours (124)
 - House ALOS = 5.14 days (5.42)

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So What?

- No cost
- Increase bed capacity without adding beds
- Improve member satisfaction
- Improve bottom line (ROI)



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Questions?

Contact Information:
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