



E3: Clinician Directed Performance Improvement

Lara Goitein, MD

Why clinicians?

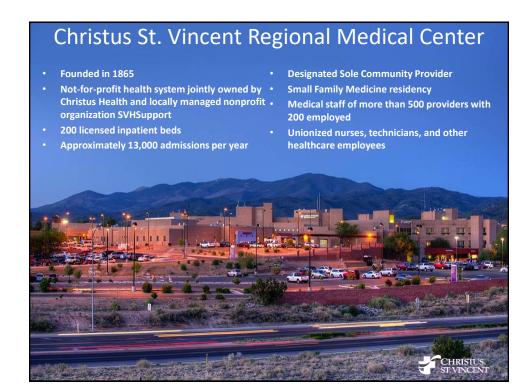
- Firsthand insight into opportunities for improvement and likely solutions
- Expertise and knowledge of evidence base
- Influence and authority to change peers' behavior
- Aptitude for scientific method and working with data
- High motivation to improve care for their patients



Why not clinicians?

- They're too busy
- We pay them to do something else
- Performance improvement is outside their training and comfort zone
- Institutions ask them to work on quality goals that may not be their priority
- Physicians are recalcitrent, self-important children who don't recognize the importance of systems
- They're sengaged





Where did our quality program start?

- Small quality department nearly fully occupied by maintaining compliance with reporting requirements, with little bandwith for actual improvement
- Near exclusive focus on metrics used for external reporting programs
- Little interaction of clinicians and quality department, with minimal participation by clinicians in quality initiatives and widespread distrust of reported data
- Lack of influence/authority of quality department staff to change behaviors on the wards



"The Letter"

- I. Improvement of communication between employed physicians and administration and increased physician role in decisions related to clinical processes
- II. Institutional commitment to real quality improvement with structural integration of physicians
- III. Improvement of nursing quality
- IV. Improvement of administration response to problems with operations identified by physicians
- Physician participation in development of policies and performance measures related to Value Based Purchasing and other externally reported metrics
- VI. Partnership between administration and physicians



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II. Institutional commitment to real quality improvement with structural integration of physicians

"Current quality improvement efforts seem largely reactive (e.g. to specific incidents and 'never events') rather than focused on proactive process improvement (PI). Physicians interested in PI are not given the necessary support or administrative time. Efforts to measure outcomes are focused almost exclusively on items affecting accreditation and reimbursement . . . and there is little translation of reported data to actual PI. In general the hospital quality improvement program seems to operate on a separate plane from the clinical program.

"We believe that meaningful quality improvement must be driven by practicing physicians, and that an institutional structure must be put in place that facilitates this The important principles are that practicing physicians should drive process improvement in our hospital, and be given the necessary institutional support to be successful."



Clinician-Directed Performance Improvement Program Initiated in September 2015

Mission statement

To give practicing clinicians at CSV hospital the protected time, support, and training needed to conduct successful performance improvement projects of their choosing

Quality
Department

Clinician-Directed
Performance
Improvement

Ten CDPI Service Lines

Each with part-time clinical dyad (usually a physician at 0.2FTE and nurse at 0.5FTE)

- Internal Medicine (2 teams)
- General surgery
- Obstetrics/Gynecology
- Intensive care
- Pediatrics
- Trauma surgery
- Pharmacy
- Respiratory Therapy
- Palliative Care

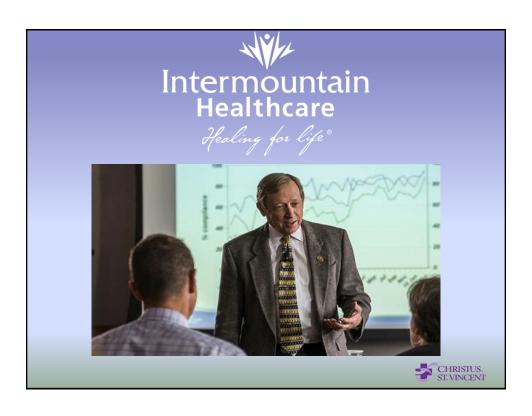
CENTRAL SUPPORTS

- Medical Director (0.6 FTE)
- · Electronic data collection
- Manual data collection (3.5 FTE)
- Statistical support
- · Graphics development
- Training in PI methods
- Nurse to support implementation on units (0.5 FTE)

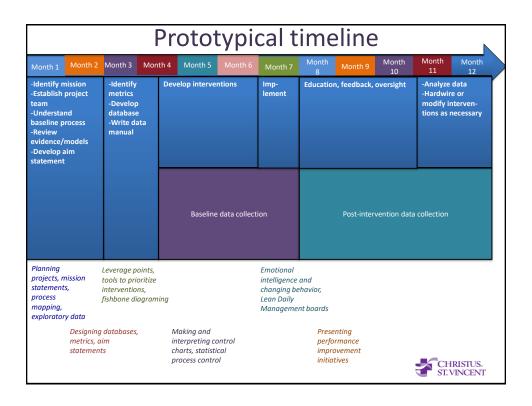




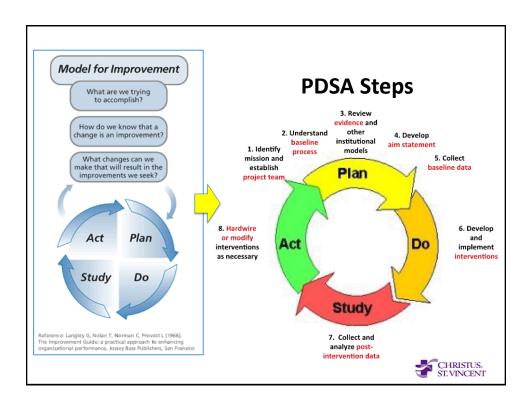
CHRISTUS ST. VINCENT



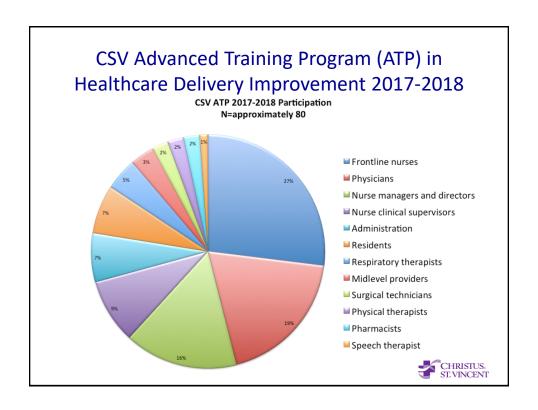
	CSV Advanced Training Prog	gram (ATP) in Healthcare Delivery Improveme	nt
Session	Theory	Practical instruction	Hands-on
Session I Week 0	Managing clinical processes Quality as a business strategy: relationship of quality and costs Intermountain as a case study	Project team structure and roles Mission statements Running a meeting Planning a project Exploratory data Researching best practices	Team meeting: Establish mission, assign roles, identify needed participants
Session II Week 3	Context for the national quality movement in healthcare Leading models of QI in healthcare (Lean, Six Sigma, PDSA, etc.)	 Process mapping and other common tools of PI 	Team meeting: Review the literature, begin process mapping
Session III Week 6	Uses of data in healthcare: Selection and accountability versus measurement for improvement Principles of database design	Brainstorming (affinity diagrams, interrelationship diagrams) Aim statements Primary, secondary, outcome and balance metrics	Team meeting: Finalize process map, Identify primary metric and write aim statement, begin designing database
Session IV Month 3	Variation and standardization High reliability in healthcare	Important Lean PI tools Leverage points and high impact interventions PI tools to prioritize interventions	Team meeting: Brainstorming/affinity and interrelationship diagrams and/or fishbone diagram
Session V Month 5	 Professionalism and PI Statistical process control	o Interpreting control charts	Group workshop: Control charts
Session VI Month 7	Hardwiring and sustaining initiatives Juran trilogy and quality control	Emotional intelligence and changing behavior Lean Daily Management boards	Team meeting: Design plan for data reporting and ongoing support of project
Session VII Month 9	o The relationship between access to healthcare and quality	o Preparing presentations of PI initiatives	Team meeting: Evaluate early post- intervention data and need for modification
Session VIII Month 11		Teams' presentations of projects	
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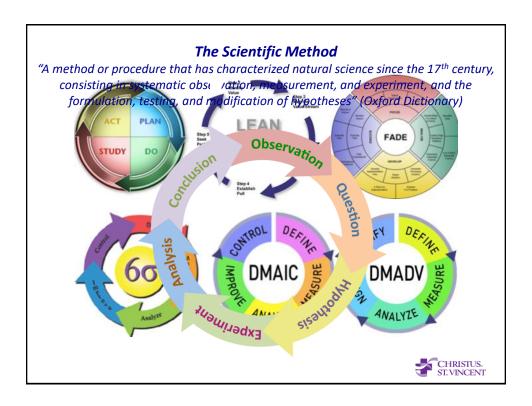




CSV Advanced Training Program (ATP) 2017-2018: Projects Initiating treatment of alcohol abuse in the hospital Reducing hospital-acquired delirium through optimization of sleep Instituting early mobility in the ICU Improving the safety and efficiency of obstetric surgical processes Improving the efficiency of operating room turnover Preventing neonatal readmissions through support of newborn feeding Preventing patient falls in the hospital Improving end of life care for high risk hospital populations Opioid stewardship Optimizing imaging for common surgical problems







Identifying projects

- Clinician insight and experience: "What makes you worry about your patients?"
- II. High clinical impact: frequency of process and anticipated effect on outcomes
- III. Robust evidence-base supporting best care
- IV. Documented poor performance relative to existing benchmarks or standard of care
- V. Likely opportunities for change: success at other institutions, high impact interventions to change default work flow
- VI. Clinical protocols rather than management
- VII. Relevant to metrics used in pay-for-performance, public reporting, or accreditation
- VIII. Potential financial savings





33 CDPI projects in first two and a half years

- · Increasing hand hygiene
- Reducing inappropriate gastric acid suppression in the ICU
- Antibiotic stewardship
- Reducing CLABSI in the ICU by improving central line maintenance practices
- Reducing CLABSI in the ICU by improving central line insertion practices
- Reducing CLABSI in the ICU by reducing central line use
- Reducing CAUTI in the ICU by reducing catheter use and interruptions of sterile catheter systems
- Improving use of prophylactic antibiotics in surgery to reduce SSI
- · Reducing the rate of early elective delivery
- · Opiate stewardship
- · Improving treatment of sepsis
- · Preventing ventilator-associated pneumonia
- · Improving pain management in labor
- Improving detection of ADEs using IHI Global Trigger Tool
- Improving accuracy of medicine reconciliation
- Reducing non-evidence based treatment of pediatric bronchiolitis

- Optimizing obstetric triage
- · Reducing time to transfusion
- Improving management of neonatal abstinence syndrome
- Improving safety and efficacy of insulin use
- · Optimizing sleep in hospitalized patients
- Improving treatment of fever in newborns
- Improving pain management in thoracic trauma
- Reducing the incidence of duplicate opioid orders
- Optimizing obstetric surgical processes
- Hospital-initiated treatment of alcohol abuse
- Reducing hospital-acquired delirium through preventive measures
- Instituting early mobility for ICU patients
- Preventing neonatal readmissions by optimizing newborn feeding
- Reducing operating room turnover times to increase efficiency and surgeon satisfaction
- Optimizing imaging for common surgical problems
- · Preventing patient falls in the hospital
- Improving end-of-life planning for high risk patient populations



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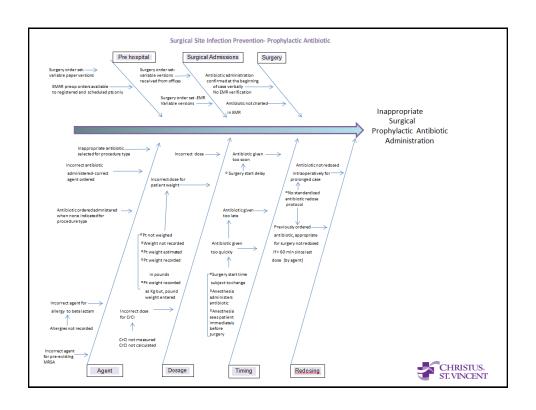
Improving the use of prophylactic antibiotics in surgery to prevent surgical site infection (SSI)

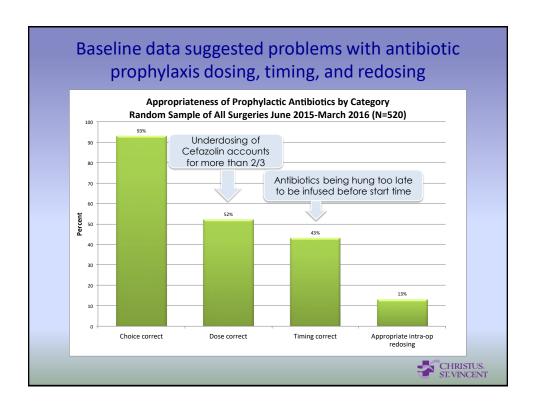
General Surgery
Cyrus Ali, MD and Melanie Smith, RN

Aim statement: To increase by 20% the proportion of surgery cases in which the patient receives totally appropriate prophylactic antibiotics (composite of choice, dose, timing, intraoperative redosing, and post-operative dosing) by October 2017





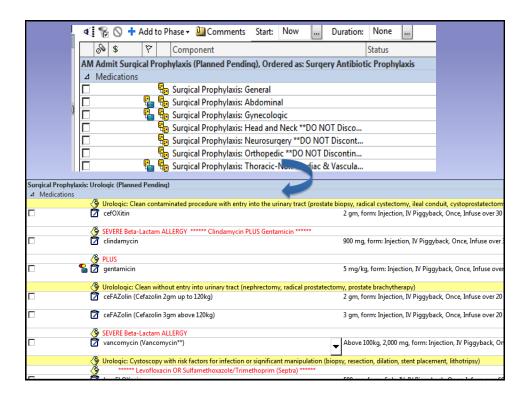


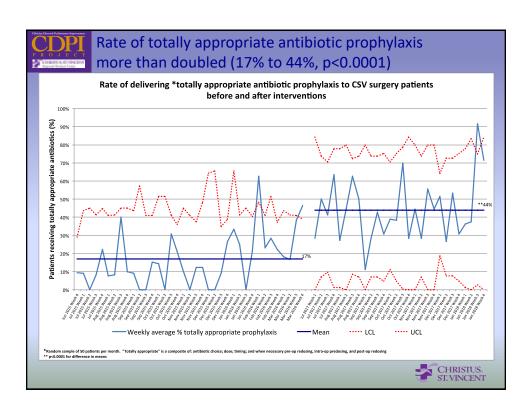


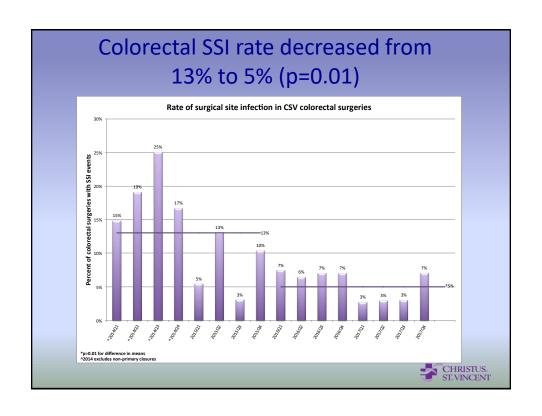
- Electronic orderset for surgical antibiotic prophylaxis stratified by specialty and procedure, consistent with consensus guidelines (IDSA, SHEA, ASHP, SIS)
- Parallel paper orders for surgical clinics not using EMR
- Modified workflow with responsibility shifted from anesthesia to preop nursing
- Provider and nurse education
- · Data feedback

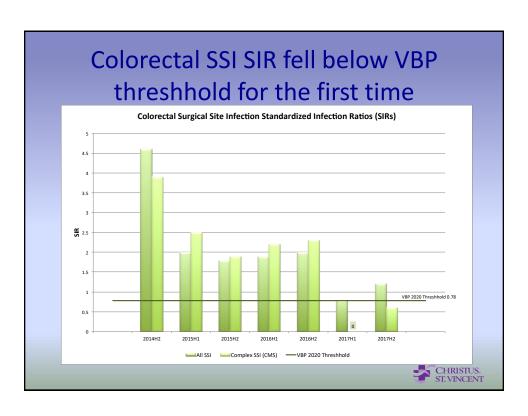












Collaboration with Quality Department to reduce hospital-acquired C. difficile infections: Three CDPI projects

- 1. Increasing rates of hand hygiene
- 2. Antibiotic stewardship
- 3. Reducing inappropriate use of gastric acid suppression in the ICU





Increasing Appropriate Hand Hygiene

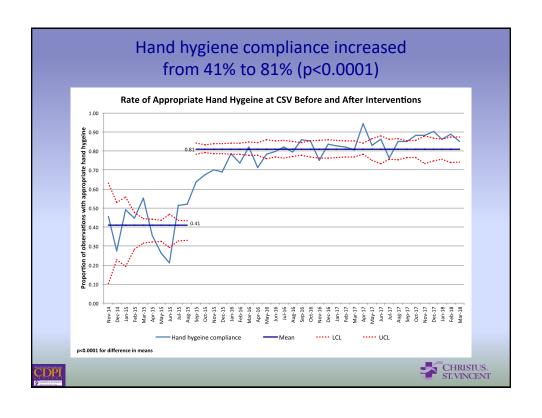
Internal Medicine
Ben Stricks MD and Dominick Armijo RN

Aim statement: To increase appropriate hand hygiene rates (as measured by handwashing or alcohol based sanitizer on entry and exit) among all people entering patient rooms at CSV hospital by 20%, when comparing the year beginning in October 2015 with the previous year.





Interventions YOUR HANDS CAN BE DANGEROUS! CLEAN WITH ALCOHOL BASED RUB OR WASH THEM WITH SOAP AND WARM WATER FOR 20 SECONDS TO KEEP BACTERIA AT BAY. Education (multidisciplinary) Run-charts with hand hygiene data displayed on units Feedback of data in huddles • Small incentives (e.g. Your 5 Moments movie ticket certificates) for Hand Hygiene to reward good hand hygiene and increase awareness Prominent signs CHRISTUS: ST. VINCENT



Antibiotic Stewardship

Internal Medicine and Pharmacy
Ben Stricks MD, Dominick Armijo RN, Jasmina Demirovic PharmD, and
Melinda Montoya PharmD

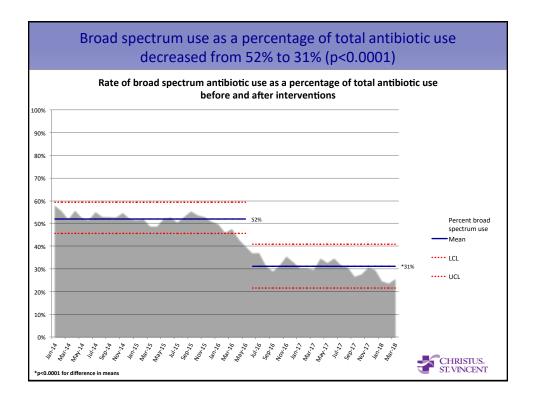
Aim Statement: To decrease use of broad spectrum antibiotics for hospitalized patients (as measured by percentage of total antibiotic use) by 25% when comparing the period of Jan 2014-May 2016 with June 2016-June 2017



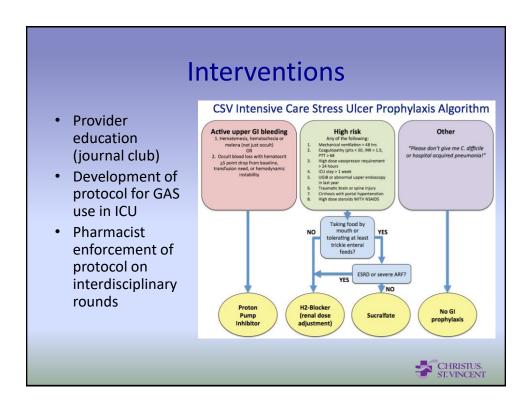


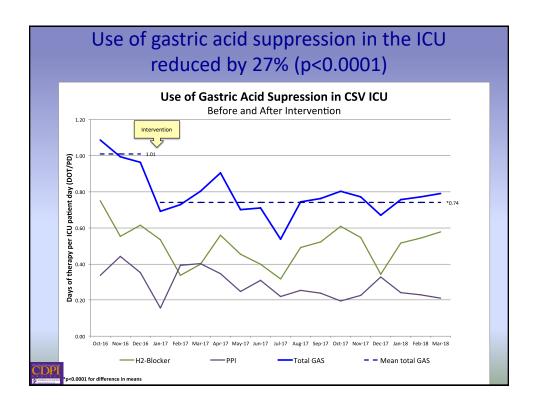
- Development of Antibiotic Stewardship Program with charter, committee, and 0.8FTE infectious disease pharmacy staff (2 pharmacists in CDPI program)
- Daily audit and feedback to providers about antibiotic use
 - 80 recommendations per month, ¾ deescalation
- Revision of multiple infection-specific ordersets to narrow coverage when appropriate
 - Critical care
 - Sepsis
 - Pneumonia (floor and ED)
 - Urinary tract (floor and ED)
 - Skin and soft tissue infection (floor and ED)
 - Surgery antibiotic prophylaxis

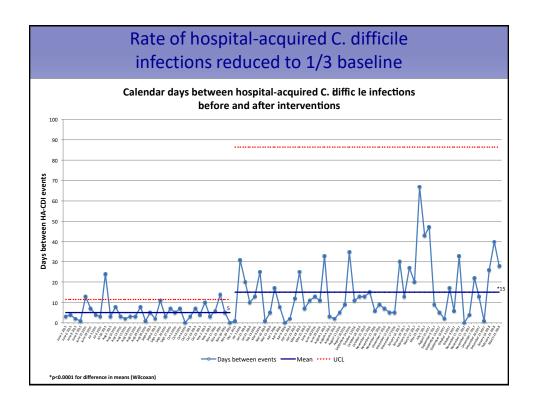


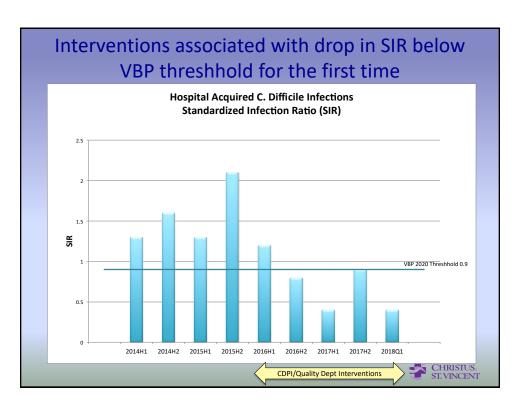


Reducing Inappropriate Gastric Acid Supression in the ICU Pharmacy and Respiratory Therapy Jasmina Demirovic PharmD, Melinda Montoya PharmD, Sarah Lyon RT Aim Statement • To reduce by 20% the use (days of therapy/patient day) of gastric acid suppressants (H2-blockers and proton pump inhibitors) in adult patients in the ICU, when comparing the periods October-December 2016 and January-August 2017









Increasing Detection of Adverse Drug Events

Jasmina Demirovic PharmD

Aim Statement: To increase detection of ADEs that cause harm by 20% by September 2015 and identify opportunities to reduce preventable ADEs

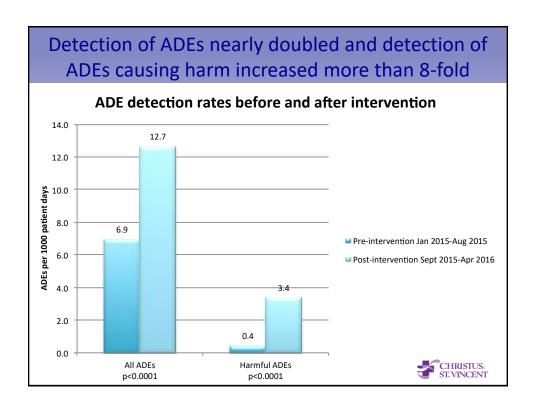


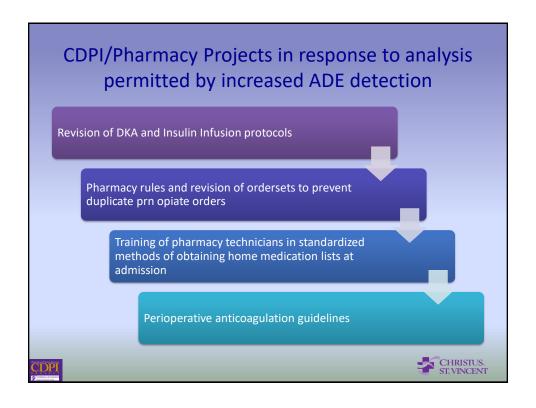


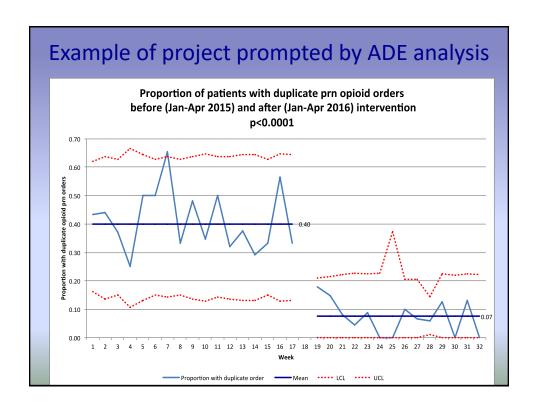
- Implement Modified Institute for Healthcare Improvement (IHI) Global Trigger Tool using the following triggers:
 - Diphenhydramine
 - Naloxone
 - Flumazenil
 - Blood glucose < 50mg/dL
 - -INR > 5
 - PTT > 100 sec + Heparin Infusion
- Triggers selected based on literature review and expert opinion (Pharmacy CDPI Team and PNT Committee)
- IHI Global Trigger Tool added to existing voluntary reporting method through EMR

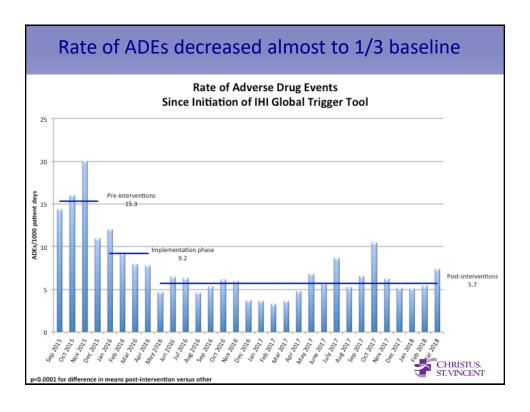












Improving the Management of Neonatal Abstinence Syndrome (NAS)

Pediatrics

Jennifer Achilles MD and Jennifer Castaneda-Lovato RN

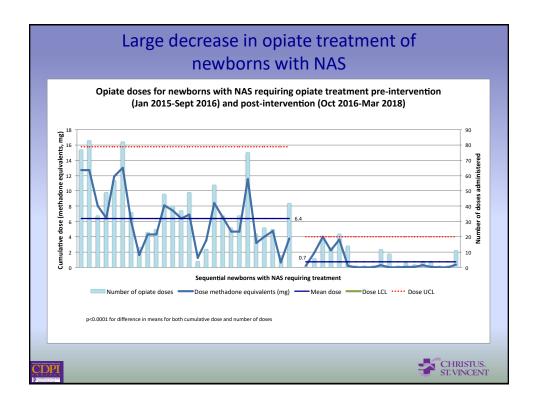
Aim statement: For newborns with NAS, we will decrease the amount of opiates (number of doses and cumulative dose) administered in the hospital by 25%, when comparing 6 months after intervention in October 2016 with the previous two years.

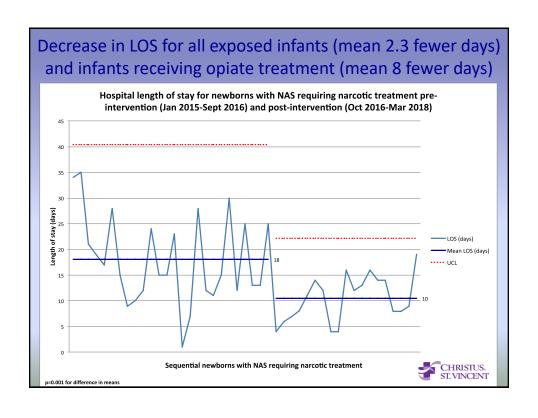


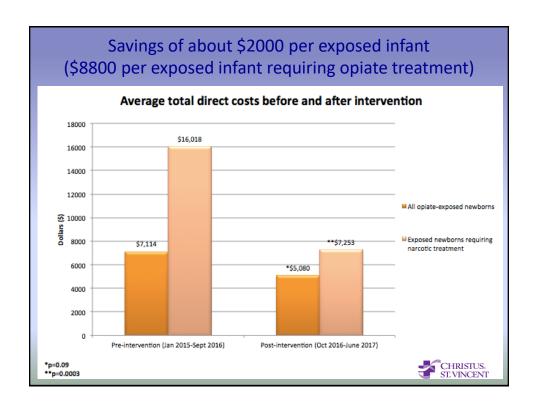


- Higher threshhold for treating newborns with opiates
 - Focus on non-pharmacologic treatment
 - Change from standard Finnegan scoring to Eat Sleep Console (ESC) scoring as criterion for opiate treatment
- Change from scheduled Methadone taper to as-needed, short-acting morphine
- Extensive staff education
- Family outreach and education
 - Prenatal pamphlet in OB and Subutex clinics
 - Admission packet for families
- Improved maternal and newborn drug screening

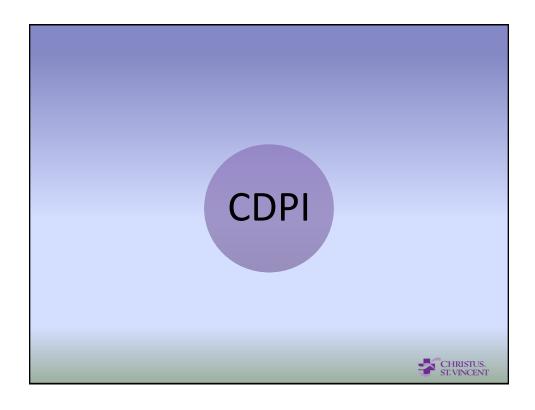


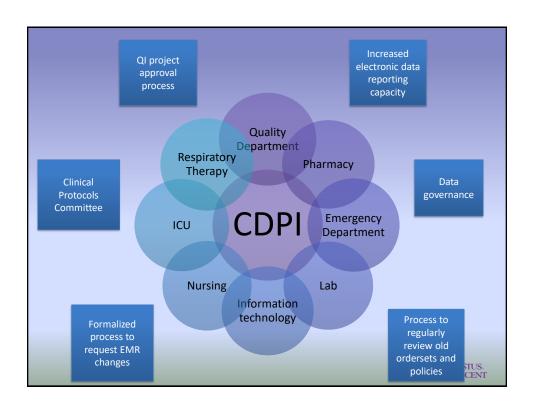






	Aim statement	Result
1	Improve hand hygeine compliance by 20%	Hand hygiene rate increased 41% to 81%, p<0.0001
2	Reduce gastric acid suppression in the ICU by 20%	Rate of use decreased from 1.01 to 0.74 DOT/PD, p=0.0001
3	Reduce use of broad spectrum antibiotics by 25%	Rate as a percentage of total decreased from 52% to 31%, p<0.0001
4	Improve compliance with 9 central line maintenance best practices by 20%	Compliance increased 81% to 96%, p<0.0001
5	Improve compliance with central line insertion checklist by 20%	Compliance doubled, p<0.0001
6	Reduce use of central lines in the ICU by 20%	Line use decreased from 0.37 to 0.28 lines days/patient day, p<0.0001
7	Reduce use of indwelling urinary catheters in the ICU by 20%	Catheter use decreased from .65 to 0.59 cath days/patient day, p=0.008
8	Reduce interruptions of sterile catheter systems in the ICU by 25%	Interruptions decreased by 27% to 16% (p=0.002)
9	Increase use of appropriate antibiotic prophylaxis for surgery	Rate of totally appropriate antibiotics increased 17% to 44% (p<0.0001)
10	Reduce the rate of early elective delivery from historical rate of 3-5% to 2% or less	Zero EEDs 2016-2018
11	Implement a ventilator bundle with >80% compliance with documentation	Implemented with 90% documentation of all elements
12	Reduce failure rate of epidurals for labor pain by 20%	Failure rate 27% to 13%, p=0.007
13	Reduce delays to epidural placement for labor pain by 20%	Delay rate 45% to 29%, p=0.03
14	Reduce average labor pain score by 20%	No decrease in averge score (6.6)
15	Increase detection of ADEs causing harm by 20%	Detection increased from 0.4 to 3.4 ADEs/1000 patient days, p<0.0001
16	Increase accuracy of medication history documentation on admission by 20%	Accuracy measured by composite score increased from 49% to 67%, p=0.02
17	Reduce non-evidence based treatment of pediatric bronchiolitis by 25%	Appropriateness of treatment (composite) increased 68% to 80%, p<0.0001
18	Reduce prolonged delays in obstetric triage by 25%	Prolonged stays reduced from 11% to 5%, p=0.0006
19	Reduce average time to transfusion of blood products on med-surg floors by 20%	Reduced by 18% (>1/2 hour), p<0.0001
20	Reduce the use of opiate treatment in newborns with NAS	Reduced cumulative dose methadone from 6mg to 1mg, p<0.0001
21	Reducing the incidence of duplicate prn opiate orders	Reduced from 40% to 7%, p<0.0001
22	Increase first testing "pass" rates on obstetric OR locations cleanliness (ATP Relative Light Unit testing) by 25\%	Pass rate increased from 28% to 66%, p<0.0001

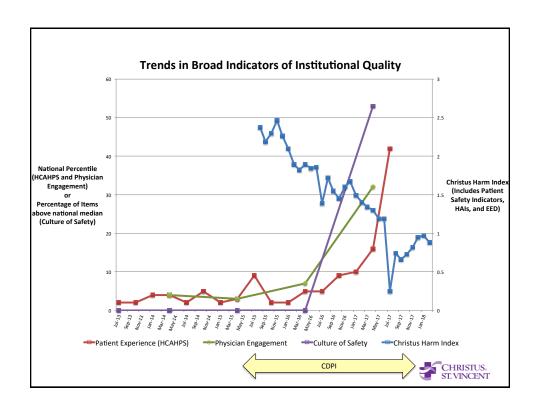




	Program Costs	*Clinical Savings	Net
FY2016	\$1,179,290	\$1,043,324	(\$135,966)
FY2017	\$1,189,887	\$1,861,177	\$671,290
Total	\$2,369,177	\$2,904,501	\$535,324







"The question we have been asking—'How can we engage physicians in the hospital's quality agenda?'— could also be rephrased as 'How can the hospital engage in the physicians' quality agenda?'"

IHI Whitepaper: Engaging Physicians in a Shared Quality Agenda

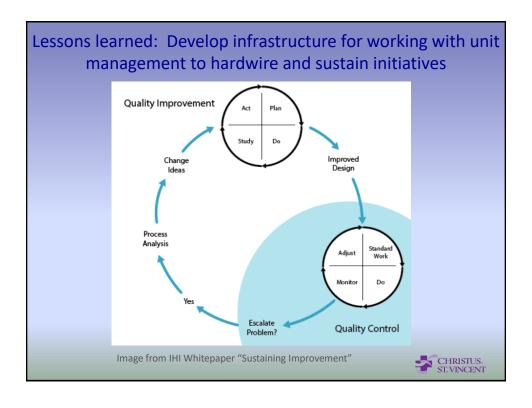
Reinertsen JL, Gosfield AG, Rupp W, Whittington JW. Engaging Physicians in a Shared Quality Agenda. IHI Innovation Series white paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2007. (Available on www.IHI.org)



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Physicians have a powerful voice when they speak together on behalf of their patients





Thank you

- Board of Directors and Senior
 Executive Team of Christus St. Vincent Regional Medical Center
- John Beeson, Chief Medical Officer
- Joahnna Bell, Executive Director of Quality
- Dr. Brent James





Thank you CDPI Teams





Thank You!

Thank you for your commitment to patient safety, and your dedication to improving health and health care worldwide.



How to Receive CE Credit

To be eligible for a continuing education certificate, you must select your sessions prior to the end of the conference.

- You will receive an email on Friday, May 25, with a link to complete a survey
- Complete the survey within 30 days to obtain your continuing education certificate

Visit the registration edits desk for assistance.



