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Southern California Patient Safety Collaborative

Southern California Patient Safety Collaborative - Track III

Patient Safety First...
a California Partnership for Health

Anthem

T.R.U.S.T.
Putting It All Together for Perinatal Safety

COVERYS
We understand healthcare

Larry Veltman, MD
HASC Perinatal Safety Track
October 23, 2012

Coverys Risk Management

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What is L & D Really Like?

- Normal clinical care on L and D is dynamic:
  - Each physician and nurse must often juggle several tasks concurrently.
  - Linear operations are frequently interrupted.
  - External demands arrive at unpredictable moments.
  - Conditions sometimes force task elements to be performed out of normal sequence.
  - At times people are operating under conditions of fatigue.
  - There are often “distractions” that must be negotiated.

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Traditional Depiction of Task Management

- **Linear**: task A ⊠ task B ⊠ task C in a fixed sequence.
  - Abn EFM, nurse recognizes, calls doctor, doctor comes, does a c-section, Apgars 9-9.
- **Controllable:** tasks are initiated by caregivers at their discretion.
- **Predictable:**
  - Information is available when needed.
  - Individuals can communicate effectively as needed.
- **Overall picture: operations are individually driven and under moment-to-moment control of team members…**

Right?

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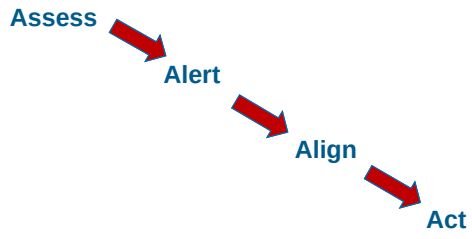
Getting The Job Done: The Four "A"s The Linear Model



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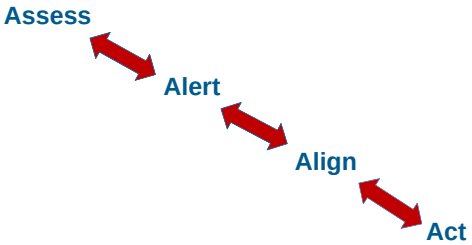
Getting The Job Done: The Four "A"s The Linear Model with 1:1 Feedback



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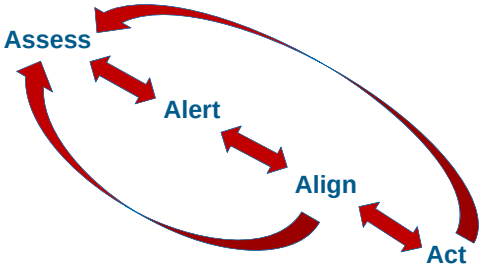
Getting The Job Done: The Four "A"s The Real Time, Dynamic Model



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What Are The Components of A Safe Perinatal Team?

A Team That Can Manage The Real Time, Dynamic Model and Do It As Safely As Possible

A Team That Makes Up A High Reliability Prenatal Unit

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T.R.U.S.T.

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- T
- R
- U
- S
- T

The Components of a Safe Perinatal Unit

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A Checklist for T.R.U.S.T.

- ❑ Team Training
- ❑ Respect
- ❑ Unambiguous conversations
- ❑ Skillful anticipation / Situational awareness
  - ❑ Succinct policies and procedures that follow practice
- ❑ Technical expertise, judgment, and performance
  - ❑ Tracking and trending (data/quality)

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What Are The Components Of Team Training?

What Makes An Effective Perinatal Team?

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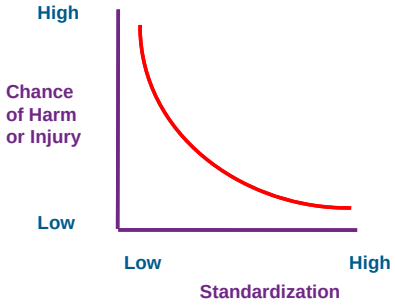
Chance of Injury



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Association Between Implementation of a Medical Team Training Program and Surgical Mortality

"The 74 facilities in the training program experienced an 18% reduction in annual mortality…compared with a 7% decrease amongst the 34 facilities that had yet undergone training…"

Source: J. Neily, P. D. Mills, Y. Young-Xu, et al., "Association Between Implementation of a Medical Team Training Program and Surgical Mortality," *JAMA*, Vol. 304, No. 15, 2010, pp. 1673-1700.

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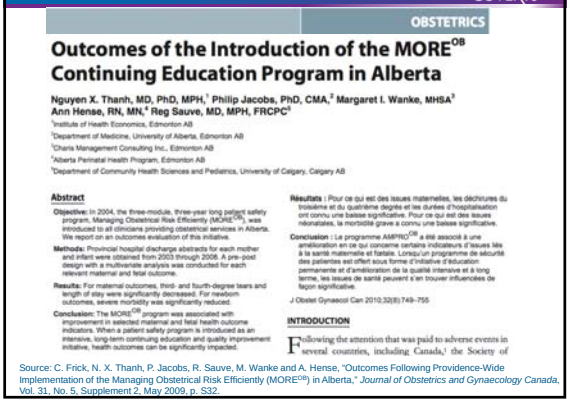

OBSTETRICS

Outcomes of the Introduction of the MORE^{OB} Continuing Education Program in Alberta

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Abstract

Objective: In 2004, the three-module, three-year long patient safety program, Managing Obstetrical Risk Efficiently (MORE^{OB}), was introduced to all clinicians providing obstetrical services in Alberta. We report on an outcomes evaluation of this initiative.

Methods: Provincial hospital discharge abstracts for each mother and infant were obtained from 2003 through 2008. A pre-post design with a multivariate analysis was conducted for each relevant maternal and fetal outcome.

Results: For maternal outcomes, third- and fourth-degree tears and length of stay were significantly decreased. For newborn outcomes, severe morbidity was significantly reduced.

Conclusion: The MORE^{OB} program was associated with improvement in selected maternal and fetal health outcome indicators. When a patient safety program is introduced as an intensive, long-term continuing education and quality improvement initiative, health outcomes can be significantly impacted.

Résultats : Pour ce qui est des issues maternelles, les déchirures du troisième et du quatrième degrés et les durées d'hospitalisation ont connu une baisse significative. Pour ce qui est des issues néonatales, la morbidité grave a connu une baisse significative.

Conclusion : Le programme AMPRO^{OB} a été associé à une amélioration en ce qui concerne certains indicateurs d'issues liés à la santé maternelle et fœtale. Lorsqu'un programme de sécurité des patientes est offert sous forme d'initiative d'éducation permanente et d'amélioration de la qualité intensive et à long terme, les issues de santé peuvent s'en trouver influencées de façon significative.

J Obstet Gynaecol Can 2010;32(8):749–755

INTRODUCTION

Following the attention that was paid to adverse events in several countries, including Canada,[1] the Society of

Source: C. Frick, N. X. Thanh, P. Jacobs, R. Sauve, M. Wanke and A. Hense, "Outcomes Following Providence-Wide Implementation of the Managing Obstetrical Risk Efficiently (MORE^{OB}) in Alberta," *Journal of Obstetrics and Gynaecology Canada*, Vol. 31, No. 5, Supplement 2, May 2009, p. S32.

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What are the Components of Respect?

- Flatten hierarchy
- Eliminate incivility, intimidation, disruptive behavior
- Eliminate horizontal hostility
- Conflict resolution with neutral language
- Trusting each other

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What Is Necessary for Unambiguous Conversations?

- SBAR-R
- P.U.R.E. Conversations
- Speak up!

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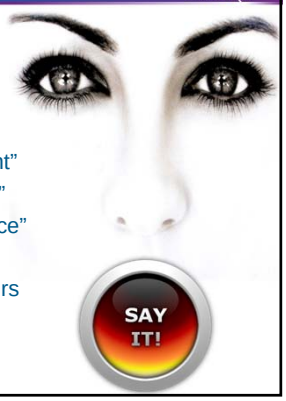
- If you see it, SAY it
  - "Silence Kills"
  - "The Silent Treatment"
  - "Speak up for Safety"
  - "From Silence to Voice"
  - "Stop the line"
- Be a safety net for others



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Influences on "Speaking Up"

- Personal
  - Learned at home
  - Culture
  - Doing the right thing
  - Education
- Organizational
  - Peers
  - Managers
  - Administration/Executives
  - Organizational culture

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Skillful Anticipation / Situational Awareness / Succinct Policies and Procedures

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Components of Skillful Anticipation?

- TEM
- Being prepared
- Knowing the plan, the patient, colleagues
- Envisioning the whole picture, situational awareness
- Adequate staffing
- Taking initiative

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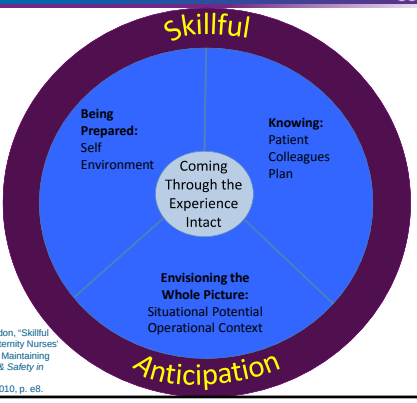

Source: A. Lyndon, "Skillful Anticipation: Maternity Nurses' Perspectives on Maintaining Safety," *Quality & Safety in Health Care*, Vol. 19, No. 5, 2010, p. e8.

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SITUATIONAL AWARENESS

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Situational Awareness

"…continuously monitoring what is happening in the … environment in order to understand what is going on and what might happen in the next minutes or hours…"

- What's going on?
- So what?
- Now what?

Source: M. R. Endsley, "Toward a Theory of Situation Awareness in Dynamic Systems," *Human Factors*, Vol. 37, No. 1, 1995, pp. 32-64.

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Technical Expertise & Judgment Associated With Perinatal Safety

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Technical

- OVD
- Ultrasound
- Twin delivery
- IUPC, FSE
- Cesarean delivery
- Perinatology and neonatology availability
- Resuscitation skills

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Judgment

- When to initiate oxytocin
- When to call for a cesarean delivery
- When to terminate the second stage
- When to call the doctor
- When to work when fatigued
- When to "stop the line" for safety
- When to initiate the chain of command

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Add an "H" To T.R.U.S.T.

T.H.R.U.S.T.

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Human Performance Issues

- Fatigue
- Alarm Fatigue
- Noise
- Distraction
- Stress
- Fear
- Inattention blindness
- Multitasking
- Rushing
- Complacency
- Bias
- Personal issues
- Others?

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Doctor Saturn to Earth:

"I've got bad news. I'm afraid you have humans"

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Relationships Matter!

We must pay attention to "the everyday human contact and social formation of friendships and conflicts that occur when individuals work in groups."

Source: S. Espin, L. Lingard, G. R. Baker and G. Regehr, "Persistence of Unsafe Practice in Everyday Work: An Exploration of Organizational and Psychological Factors Constraining Safety in the Operation Room," *Quality and Safety in Healthcare*, Vol. 15, No. 3, June 2006, pp. 165-170.

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Human Performance Factors and Perinatal Safety

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The Joint Commission

Root Cause Information for Maternal Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 1Q 2012 (N=99) *The majority of events have multiple root causes*	
Human Factors	52
Communication	51
Assessment	45
Leadership	42
Information Management	21
No Root Cause Identified	20
Physical Environment	16
Continuum of Care	14
Care Planning	12
Medication Use	12

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The Joint Commission

Root Cause Information for Perinatal Events Reviewed by The Joint Commission

(Full-term infant 2500g or > and absence of obvious congenital abnormality; resulting in death or permanent loss of function)

2004 through 1Q 2012 (N=209) *The majority of events have multiple root causes*	
Human Factors	151
Communication	141
Assessment	138
Leadership	124
Information Management	46
Physical Environment	38
Care Planning	24
Continuum of Care	17
Medication Use	17
Operative Care	7

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The Joint Commission

- Human Factors
  - Staffing levels, staffing skill mix, staff orientation, in-service education, competency assessment, staff supervision, resident supervision, medical staff credentialing/privileging, medical staff peer review, other (e.g., rushing, fatigue, distraction, complacency, bias)

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The Joint Commission

- Communication
  - Oral, written, electronic, among staff, with/among physicians, with administration, with patient or family
- Assessment
  - Adequacy, timing, or scope of; assessment; pediatric, psychiatric, alcohol/drug, and/or abuse/neglect assessments; patient observation; clinical laboratory testing; care decisions

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The Joint Commission

- Leadership

  Organizational planning, organizational culture, community relations, service availability, priority setting, resource allocation, complaint resolution, leadership collaboration, standardization (e.g., clinical practice guidelines), directing department/services, integration of services, inadequate policies and procedures, non-compliance with policies and procedures, performance improvement, medical staff organization, nursing leadership

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Some Additional Definitions

- Human factors is an academic discipline that focuses on the interaction between humans and devices, processes or technology.
  - the term refers to the role of humans in the evolution of error.
  - the application of principles of human factors in the design of technology is called human factors engineering.
  - ergonomics, the design of devices to maximize safety and efficiency.
- Human performance, the study of cognition, attention, memory, perception, communication.

Source: G. G. Porto, "Safety by Design: Ten Lessons from Human Factors Research," *Journal of Healthcare Risk Management*, Vol. 21, No. 4, 2001, pp. 45-52.

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Because We Are Humans:

We have:

- Limitations in memory capacity
- Limited ability to deal with multiple competing demands
- Weakened mental abilities, including decision-making, by things such as fear and fatigue
- Influence from the effect of group dynamics and culture

Source: R. Helmreich, D. Musson and B. Sexton, "Applying Aviation Safety Initiatives to Medicine," *Focus on Patient Safety*, Vol. 4, No. 2, Winter 2001.

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When I'm Fatigued…

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"Even when fatigued, I perform effectively during critical phases of operations/patient care"

- Nurse anesthetists - 55%
- Anesthesia residents - 57%
- Anesthesiologists - 47%
- Surgical nurses - 60%
- Surgical residents – 56%
- **Surgeons - 70%**
- Intensive care nurses - 64%
- Intensivists - 64%
- **Pilots - 28%**

Source: J. B. Sexton, E. J. Thomas and R. L. Helmreich, "Error, Stress, and Teamwork in Medicine and Aviation: Cross Sectional Surveys," *BMJ*, Vol. 320, 2000, p. 745-749.

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Human Factors and Impaired Vigilance: "Taking Your Eye Off the Ball"

- Definition: The Ability to Sustain Attention
- Vigilance can be impaired with:
  - Fatigue (3 a.m.=0.05, 7 a.m.=0.1)*
  - Illness (in oneself or a family member)
  - Feeling rushed
  - Stress
  - Financial losses or worries
  - Anger
  - Drugs or gambling
  - Feelings of invulnerability (hubris)
  - Lack of motivation

Source: D. Dawson and K. Reid, "Fatigue, Alcohol, and Performance Impairment," *Nature*, 388, July 1997, p. 235.

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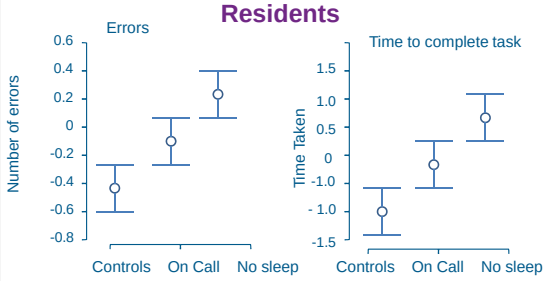
The Effect of Sleep Deprivation: Laparoscopic Simulator and Surgical Residents



Source: N. J. Taffinder, et al., "Effect of Sleep Deprivation on Surgeons' Dexterity on Laparoscopy Simulator," *Lancet*, Vol. 352, 1998, p. 1191.

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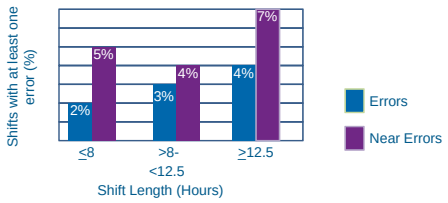
Nurses, Fatigue, Vigilance and Errors

Risk of error almost doubled when nurses worked ≥ 12.5 consecutive hours



Source: L. Scott, A. E. Rogers, W. Hwang and Y. Zhang, "Effects of Critical Care Nurses' Work Hours on Vigilance and Patients' Safety," *American Journal of Critical Care*, Vol. 15, 2006, pp. 30-37.

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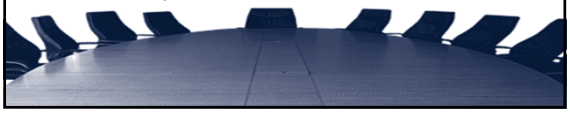
Exercise

- A human performance issue will be assigned to your table – fatigue, alarm fatigue, noise, distraction, stress, fear, multitasking, rushing, complacency, bias, personal issues
- Give a concrete example of this issue in your organization and discuss what was done, what was not done, or what you plan to do about it.
- Select a representative to tell the audience.



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Multitasking

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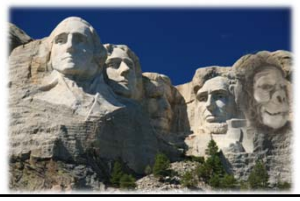
Inattention Blindness:
"I can't believe they missed that!"
"It was right in front of them!"

The brain refuses to see what is right in front of you



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"IV Epidural Mix Up Leads to Maternal Death"

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Heparin vials in different strengths (left and center) and an example of new labeling for heparin (right).

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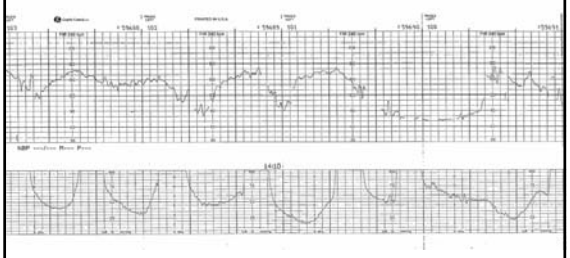

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Inattention Blindness

Low expectation of a bad outcome PLUS a high mental workload

For Example:

- Three patients arrive at once with preeclampsia
- Physician fails to come when called
- Holiday weekend with lot of "sick" calls
- Inconsistent interpretation of EFM tracing
- Lack of standard approach to using vacuum
- Someone pushing pit
- Particular nurse-physician relationship conflict
- Methergine shortage

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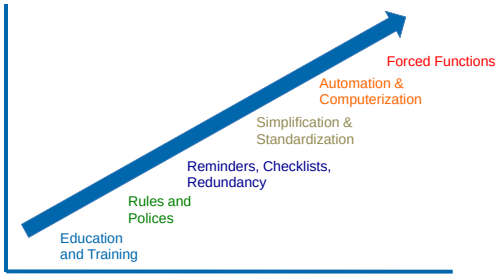
Overcoming Human Error



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Questions

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Thank You

It's Been A Pleasure Working With You All For The Last Three Years

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Contact Information

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