Forum Excursion to the Central Florida Zoo

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FE5
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These presenters have nothing to disclose

Agenda for the Day

- Welcome and Introductions
  - Divide into three groups
- Travel to the Zoo
- Getting Started
- Site Visits (2)
- Lunch
- Site Visit (1)
- Review and Application
- Free Time
- Travel to Hotels
Objectives

- Identify examples of large-scale operations and patient care in an out-of-healthcare industry that can be compared to, and applied in, their own work environment
- Recognize and analyze key concepts of staff engagement and patient care from various settings
- Develop ideas for change for improving organization-wide operations and patient care processes in their own work environment

Welcome and Introductions

*Name, role, organization or region and what you hope to learn today?*
Design Strategies for Reliability

- Prevent Initial Failure
  - using intent and standardization

- Identify failure and mitigate
  - redundancy function

- Redesign from failure modes
  - identify critical failures and then redesign
Why Standardize?

- Contributes to building an infrastructure
  - Who does what, when, where, how and with what?
- Supports training and competency testing to sustain the process
- Achieve front line articulation of key processes by staff
- Allows the appropriate application of evidence-based medicine consistently
- Feedback about defects and application of learning to design is possible

Improvement concepts to prevent initial failure (intent, vigilance, hard work)

- Common equipment, standard order sheets, multiple choice protocols, and written policies/procedures
- Personal check lists
- Feedback of information on compliance
- Suggestions of working harder next time
- Awareness and training emphasis

Most healthcare organizations currently perform at this level
What if the first step fails?

- Even the best designed systems will not work 100% of the time

- A step to capture and fix each time the first step fails
  - Detection and mitigation
  - Develop standardized process

Design Strategy for Reliability

- Prevent Initial Failure: using intent and standardization

- Identify failure and mitigate: redundancy function
Redundancy Function

- Develop a strategy to:
  - Identify prevention failures
  - Mitigate the failures identified

- Develop a metric to measure redundancy effectiveness

Improvement Concepts: Redundancy

- Decision aids and reminders built into the system (Identification triggers)
- Desired action the default (based on scientific evidence)
- Redundant processes utilized
- Scheduling used in design development
- Habits and patterns known and taken advantage of in the design
- Standardization of process based on clear specification and articulation is the norm
Lessons from Human Factors

- Reliance on memory
- Distractions / interruptions
- Fatigue
- Sleep deprivation
- Shift work
- Lack of training and experience
- Overload
- Psychosocial factors

Now – Hang up your lab coats!
Take Note of the Following:

- Examples of:
  - Safety
  - Reliable design
  - Teamwork
  - Communication
  - Standardization

- How do these relate to effective management of large-scale operations?
- How does this knowledge transfer to health care operations?

Framing Our Thinking

- Eliminate waste
- Improve the work flow
- Improve the work environment
- Manage time
- Manage variation
- Design systems to avoid mistakes
And We’re Back!

Have Fun?

What was the most interesting/unexpected thing you saw?

- Big Cat Story
- Herpetarium
- Medical Building
- ZooLab

- Safety
- Reliable design
- Teamwork
- Communication
- Standardization
Design Strategy for Reliability

- Prevent initial failure
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- Identify failure and mitigate
  - Redundancy function
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Framing Our Thinking

- **Eliminate waste**
- Improve the work flow
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- Manage time
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- Design systems to avoid mistakes
Eliminate Waste

- They did a lot with little – having fixed resources increases emphasis on safety
- Decreased reliance on technology (cards, plastic boxes, lanyards)
- Insurance premiums decreased due to structure around drills and training
- Secondary schedule of animals to fill holes in Vet’s time
- Reduce number of “annual” exams needed
- Preventative care on site, using residents and volunteers
Framing Our Thinking

- Eliminate waste
- Improve the work flow

Improve Work Flow
Improve Work Flow

- Specific role definitions
- Teams seemed very flat - no hierarchy
- Trained the animals for needed tasks as part of their daily routine - squeezer, chambers designed for diversion, etc
- Knew the medication adaptations for different animals. Do it right the first time with no waste and no handoffs
- Decreased handoffs - keeper stays with the animal for procedures so is aware what has been done and what they need

Framing Our Thinking

- Eliminate waste
- Improve the work flow
- Improve the work environment
Improve the Work Environment

- Cross training of like staff
- Use of students
- Treatment guide for anti-venom treatment and training with the local hospitals
- Buddy system with the dangerous animals
- No tolerance for personnel who did not comply with safety procedures
- Staff felt accountable and responsible for their area and the Zoo.
- Drills were highly valued by staff
Improve the Work Environment

- Feedback for improvement not judgment
- Actual simulations (loaded dart guns and some active participation)
- Extensive volunteer base
- Long term employees

Framing Our Thinking

- Eliminate waste
- Improve the work flow
- Improve the work environment
- Manage time
Manage Time

- Vet Day the staff came in early to get things ready and set up early.
- Timed drills and the staff knew their response times and so did the hospital (could articulate the data)
- Use of volunteers to assist staff
Framing Our Thinking

- Eliminate waste
- Improve the work flow
- Improve the work environment
- Manage time
- Manage variation

Manage Variation
Manage Variation

- Standardization - plans for emergencies, drills, real and table top drills
- Simple coding system - red/yellow/green and had operational definitions
- Like surgical species together for the Vet Day (grouping of animals for species and complexity)
- Variation if different Vet (similar to surgical preference cards)

Framing Our Thinking

- Eliminate waste
- Improve the work flow
- Improve the work environment
- Manage time
- Manage variation
- **Design systems to avoid mistakes**
Design Systems to Avoid Mistakes

- Locks on venomous cages
- Lanyards with anti-venom information including dose and snake ID
- Different colors on snake cages
- Only 3 coding lists (1-2-3) of anti-venom
- Gun safe- meds for take down and reversal with dosages and where to hit them.
Design Systems to Avoid Mistakes

- Barrels - red/green label
- Alarms in Snake area (3 areas with alarm equipment)
- Boxes labeled with use - i.e. take to hospital
- Behavior cues for safety - “this snake likes to stay close to door”
- Turtle eggs marked with an “X” so they are not turned
- Buddy system when handling dangerous animals
- Safety of people came before animals
- Volunteers were highly competent
- Shared learning within and outside about critical events and best-practice

Key Learnings – What can you do?
Questions?

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Final Details

- CEUs are available online
  - Please check the Forum Onsite Guide for more details

- Please provide us with feedback by filling out the End-of-Event Evaluations

Be back at the bus by 3:55