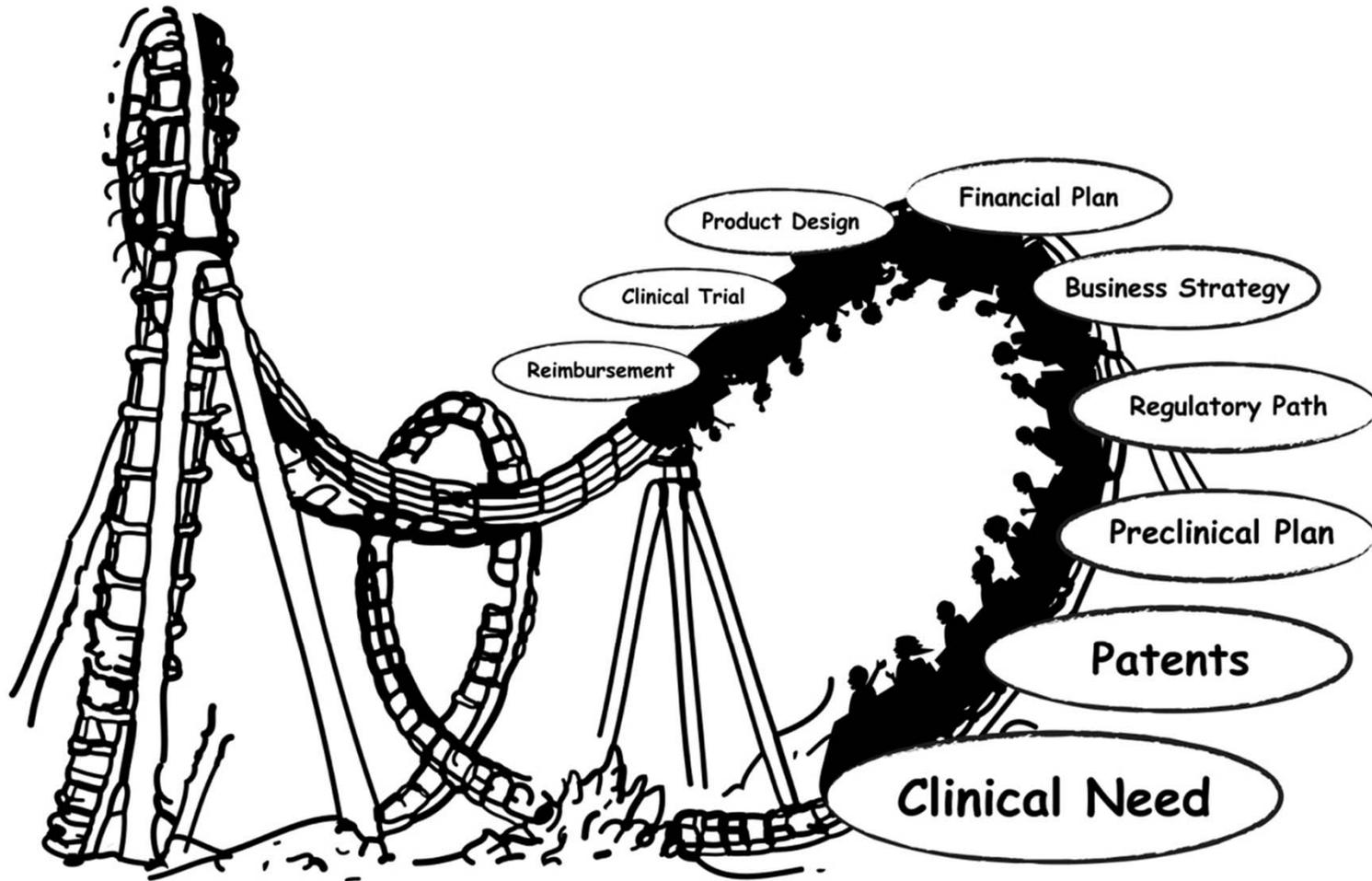


# Translational Medicine Symposium 2013: *The Roller Coaster Ride to the Clinic*



# Translational Medicine Connects the Problem to the Solution



- *Every step in developing a device or drug must be evaluated in light of the clinical problem*

Meet the  
**Entrepreneurial Faculty Scholars**

# Translational Medicine Symposium 2013

## Identifying the Clinical Problem

Bench to Business to Bedside:  
The Roller Coaster Ride to the Clinic

# Introductions

- Moderator:
  - John Langell, MD, PhD, MPH  
(Executive Director, Center for Medical Innovation)
- Panelists:
  - Kathy Peterson, MD  
(Associate Professor of Gastroenterology, University of Utah)
  - Robert Hitchcock, PhD  
(Associate Professor of Bioengineering, University of Utah)

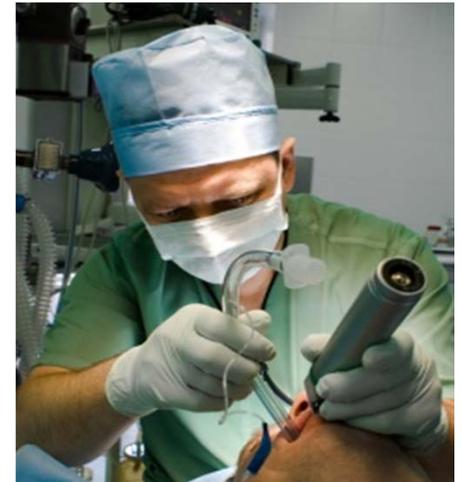
# Introductions

## HOW DO I IDENTIFY A VALID CLINICAL PROBLEM?



# *Clinical Problem Identification*

- Methodology
  - Observation
    - Watch the entire care pathway
    - Create an observation statement  
(what you saw...not what perceive to be the problem)
  - Problem Identification and Validation
    - Create a Problem statement from recurring observations
    - Is it really a problem?
    - Stakeholder validation
  - Need Shaping
    - Identifies a desired change in outcome
    - Stay out of the Solution Space



# *Conducting Observations*

- Ethnographic Research
  - “Way of life of living human beings”
  - Immersion to obtain an in-depth perspective
- Become part of the team
  - Gain acceptance and credibility
  - Reduce “observer Effect” through repetition
  - Do not attempt to make treatment recommendations
- Watch for unexpected clues
  - Times of struggle
  - Identify “Work-Arounds”
  - DOGMA: “It’s how I was trained”
  - DOGMA: “Its how I've always done it”
  - Look for variation
  - Look for delays and impediments



# *Observational Perspectives*

- **Observe each component of care**
  - 360 degree cycle of care
- **Have a foundational knowledge**
  - Anatomy, physiology, treatment concepts
- **Know who the stakeholders are**
  - Observe first, then ask basic question
  - Do not bias your observation or the question!
- **Stakeholders have different perspectives**
- The Patient
- The Family
- The Physician
- The Trainee
- The Nurse
- The Facility
- The Payer



Early colonoscopy

# *Conducting Observation*

- **Critical Clues**

- Patient Perspective: Pain, Death, Stress
- Provider Perspective: Risk, Malfunction, Uncertainty, Dogma
- System Perspective: Cost, Inefficiency, Work absence

- **Documentation of Observations**

- Innovation notebook
  - Format, process, authentication, additions, blank space, deletions
- Do not editorialize
- Note: questions/answers, times, procedure details, observations

# *Conducting Observation*

- Study all Possible Scenarios
  - Different patient types with different needs
  - Different provider stakeholders
  - Different treatment approaches
  - Different Treatment Settings



# *Observation Case*

**RESPIRONICS<sup>®</sup>**



# *Conducting Observation*

- Study Team Assignment
  - How do we increase Patient Compliance?
  - Foundational knowledge
  - Ethnographic research
    - Clinical immersion
  - Ideation

Result: Three personas....not one solution

- 1) The Hipster- Young, single, socially motivated, appearance-driven
- 2) The Metro- Health conscious, spiritual, personal fulfillment focused
- 3) The Dude- non-hygienic, unconcerned with appearance, convenience focused