

# MAINTAIN FOCUS ON



HUMAN  
BEHAVIOR

Kentucky Professional Engineers In Mining Seminar  
September 15, 2017 - Lexington, KY



# Remember why we take risks while we work:

- We were taught that way
- We saw others do it
- It's easier or inconvenient
- Don't realize it's risky
- In a hurry to get more production
- Pride, ego, or fear of appearing incompetent
- Working alone and won't ask for help

Human behavior flows from three main sources: desire, emotion, and knowledge.

Plato

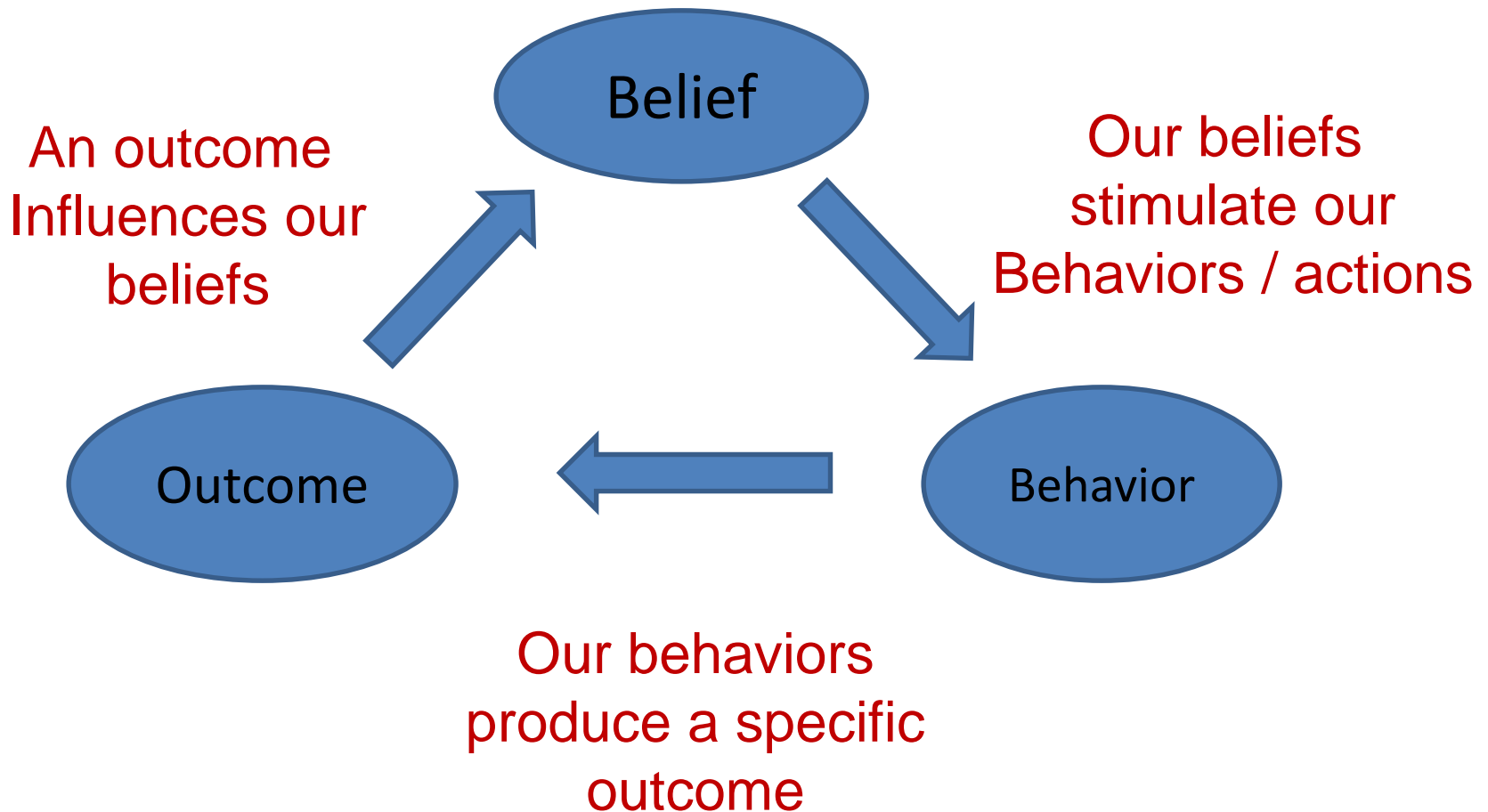


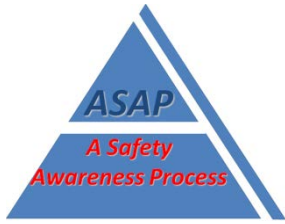
Ask Yourself:  
**“WHAT IF”**



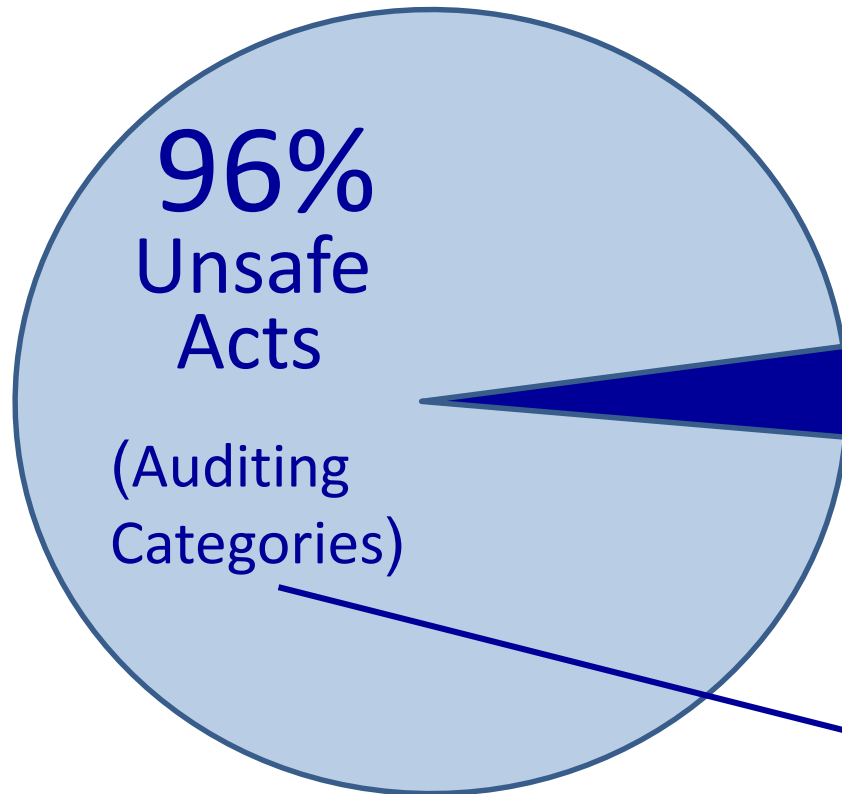


# Remember How Behavior Works...





# How Are Injuries Related to Behavior?



4% Unsafe Conditions  
(Inspect and correct)

## AUDIT FOR....

- Reactions of people
- PPE
- Positions of people
- Tools and Equipment
- Procedures / Housekeeping

# Human Behavior – Common Theme

- Human Behavior is the most common “Contributory Factor” associated with accidents / injuries.....
- In order for “Human Behavior” to qualify as a true “Contributory Factor” to an incident, one of two criteria must be met:
  - ✓ If the Human Behavior was different, the incident would not have occurred; **OR**
  - ✓ If the Human Behavior was different, the incident would have been less severe.

# 2016 Coal Mining Fatal #1

On January 4, a 53 year-old belt foreman, with over 34 years of mining experience, received fatal injuries when he became entangled in a moving underground belt. The victim was preparing to change out a hold up roller when he was caught by the moving belt and roller.



# Contributory Factors Involving “Human Behavior”

- The victim had over 34 years of mining experience.
- The belt was not locked out and blocked against motion before performing maintenance or repairs.
- The victim and/or co-workers removed guarding to access the area where the work was being performed.
- There were NO violations issued for inadequate training during the accident investigation.
- The victim and/or co-workers performed unsafe acts that were contrary to the training they received.

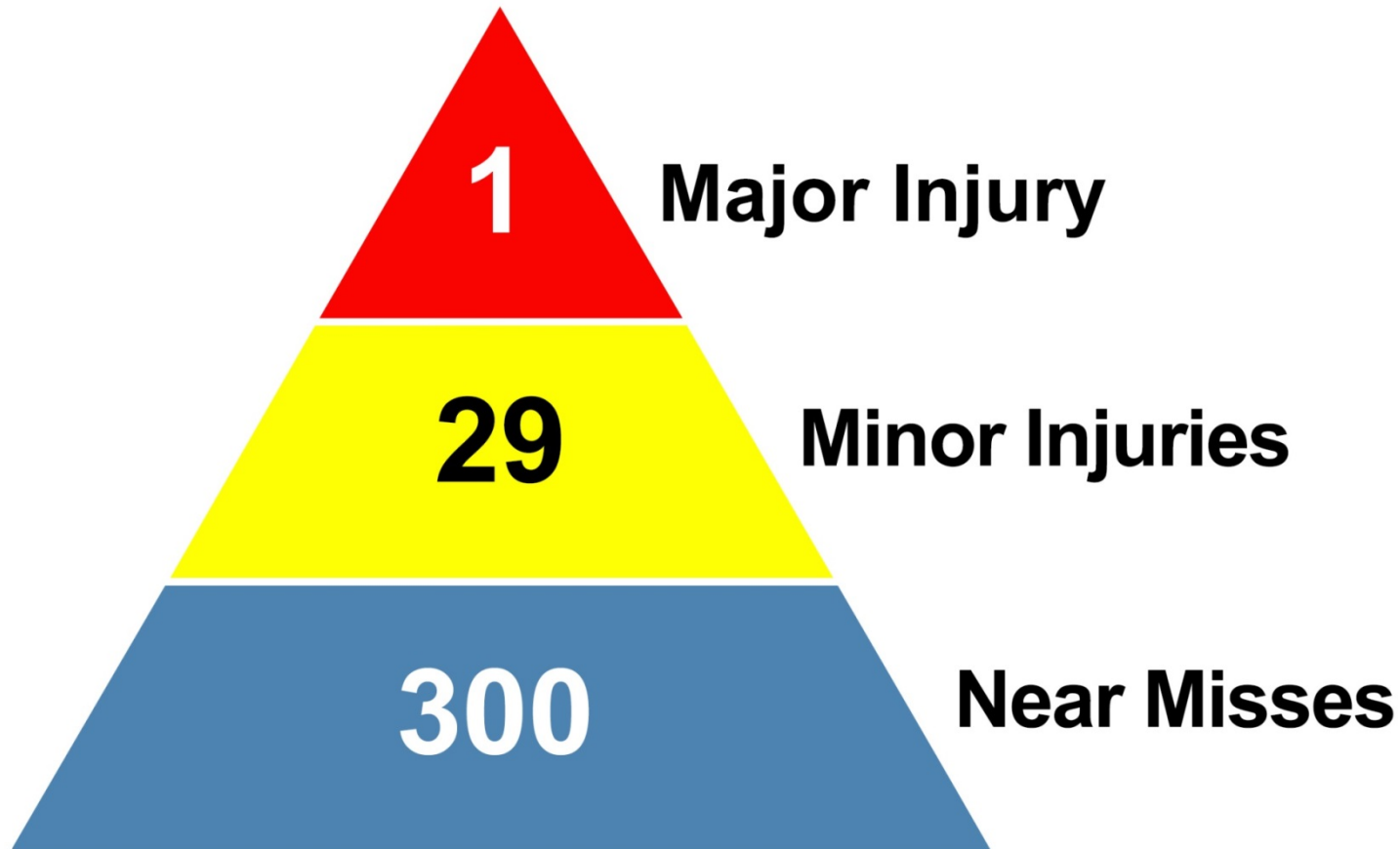


# Observe Human Behavior

- We must observe the work habits of the miners on a routine basis in order to:
  - ✓ Identify **'AT RISK'** Behavior....Correct / Train
  - ✓ Identify **'SAFE'** Behavior....Encourage / Reward
  - ✓ Identify / Remove Potential Hazards
  - ✓ Prioritize Training

Identify “At Risk” Behavior Early.....

## H. W. Heinrich Safety Triangle



**Heinrich 300-29-1 Model**

# Address Near Misses / Minor Injuries Before They Become “Serious Events” .....

## ICEBERG THEORY

- SERIOUS EVENTS
- LOST TIME ACCIDENTS
- MEDICAL TREATMENT INJURIES

- FIRST AID TREATMENT INJURIES
- FILE ONLY INJURIES
- UNSAFE ACTS
- UNSAFE CONDITIONS
- HAZARDS
- RISKS



# The “KEY” To Health & Safety:



**Observe & “MEASURE” Human Behavior**

