

Emergency Situations: Serving Public Health

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Behavioral-Based Improvement Solutions

Sealing Antifac
gnosed with the deadly disease, Norma Wallace was determined to survive



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PUBLIC HEALTH HAS MANY HEROES

WHICH ONE(S) ARE YOU?

- A. LEGENDARY FIGURE ENDOWED WITH GREAT STRENGTH OR ABILITY**
- B. AN ILLUSTRIOUS WARRIOR**
- C. A PERSON ADMIRER FOR ACHIEVEMENTS AND NOBLE QUALITIES**
- D. ONE WHO SHOWS GREAT COURAGE**
- E. THE CENTRAL FIGURE IN AN EVENT, PERIOD, OR MOVEMENT**
- F. AN OBJECT OF EXTREME ADMIRATION AND DEVOTION**



**HEROES ARE FOR REAL.
MANY WILL RISK THEIR LIVES FOR THOSE THEY SERVE.**

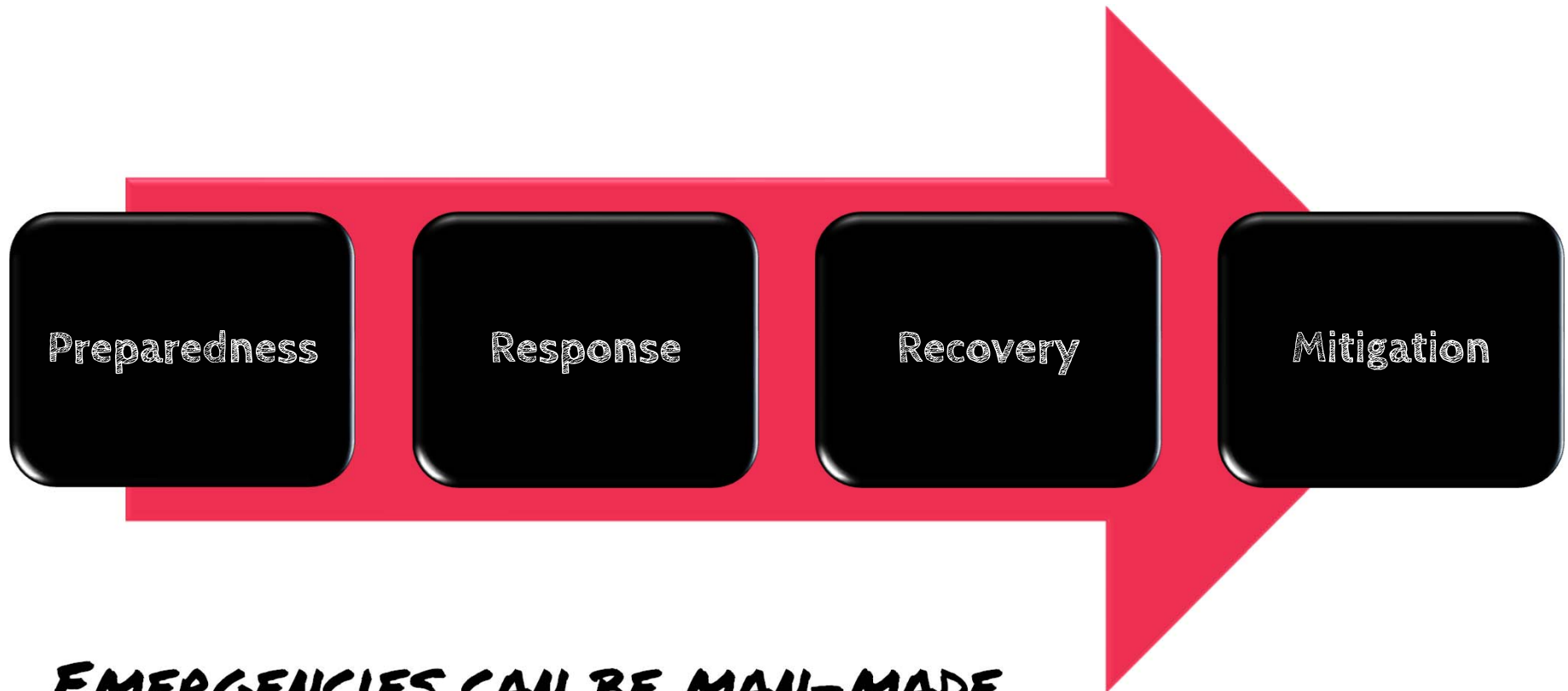


Defining Emergency

WHAT IS AN EMERGENCY?

**AN UNFORESEEN COMBINATION OF
CIRCUMSTANCES OR THE RESULTING STATE
THAT CALLS FOR IMMEDIATE ACTION**

Stages of an Emergency



**EMERGENCIES CAN BE MAN-MADE
OR NATURAL. MAN-MADE
(BEFORE) AND NATURAL (AFTER)**



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CHANGE.

“Insanity: Doing the same thing over and over again expecting different results.”



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WHEN AN EMERGENCY OCCURS - WHAT CAN WE EXPECT?



Is the Noise Natural or Artificial?

**EBOLA IN THE US - (ARTIFICIAL):
FEAR -> STIGMA - > DENIAL**

**EBOLA IN WEST AFRICA - (NATURAL):
DENIAL -> FEAR -> STIGMA**

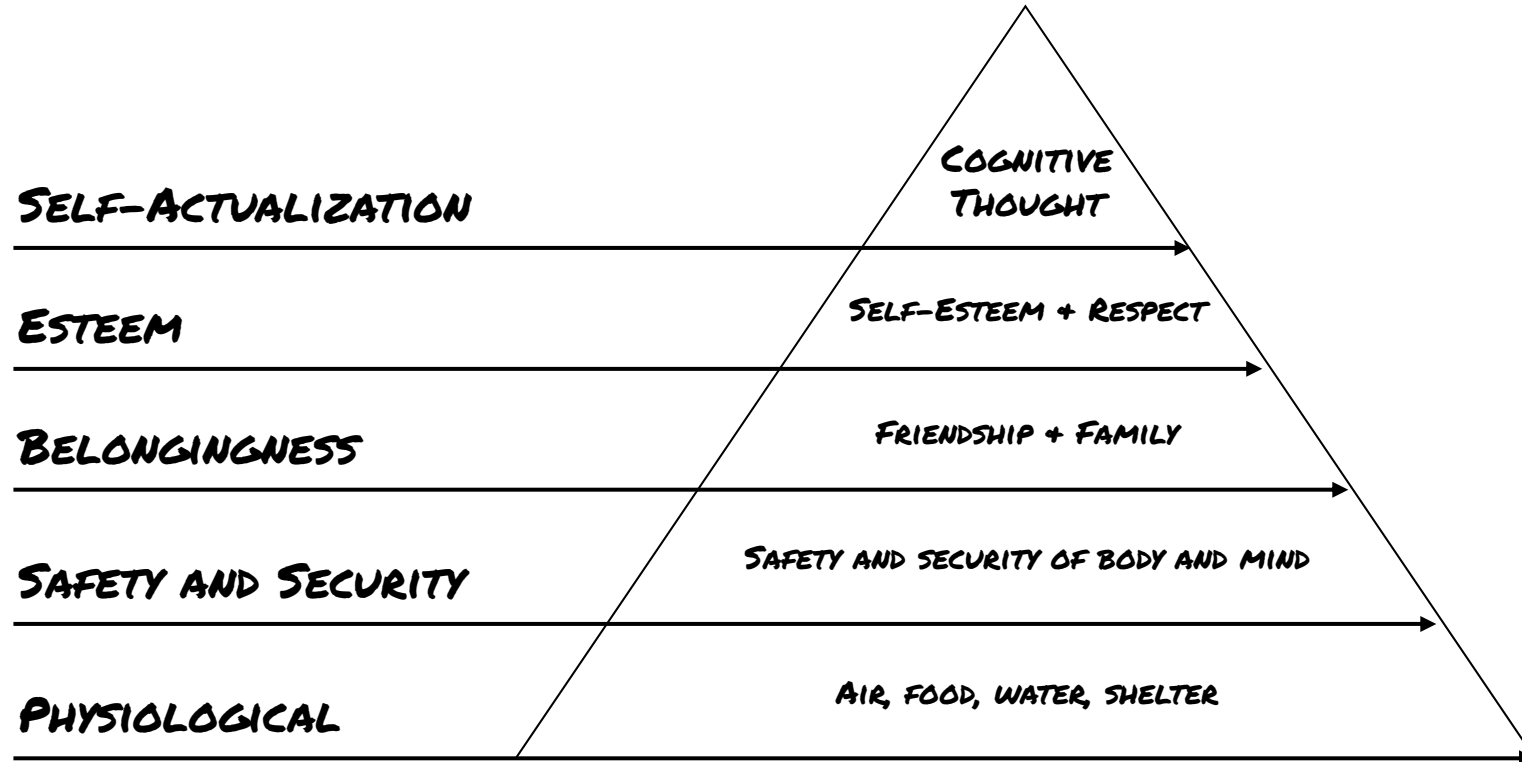


Understanding the Effects of Mental Noise

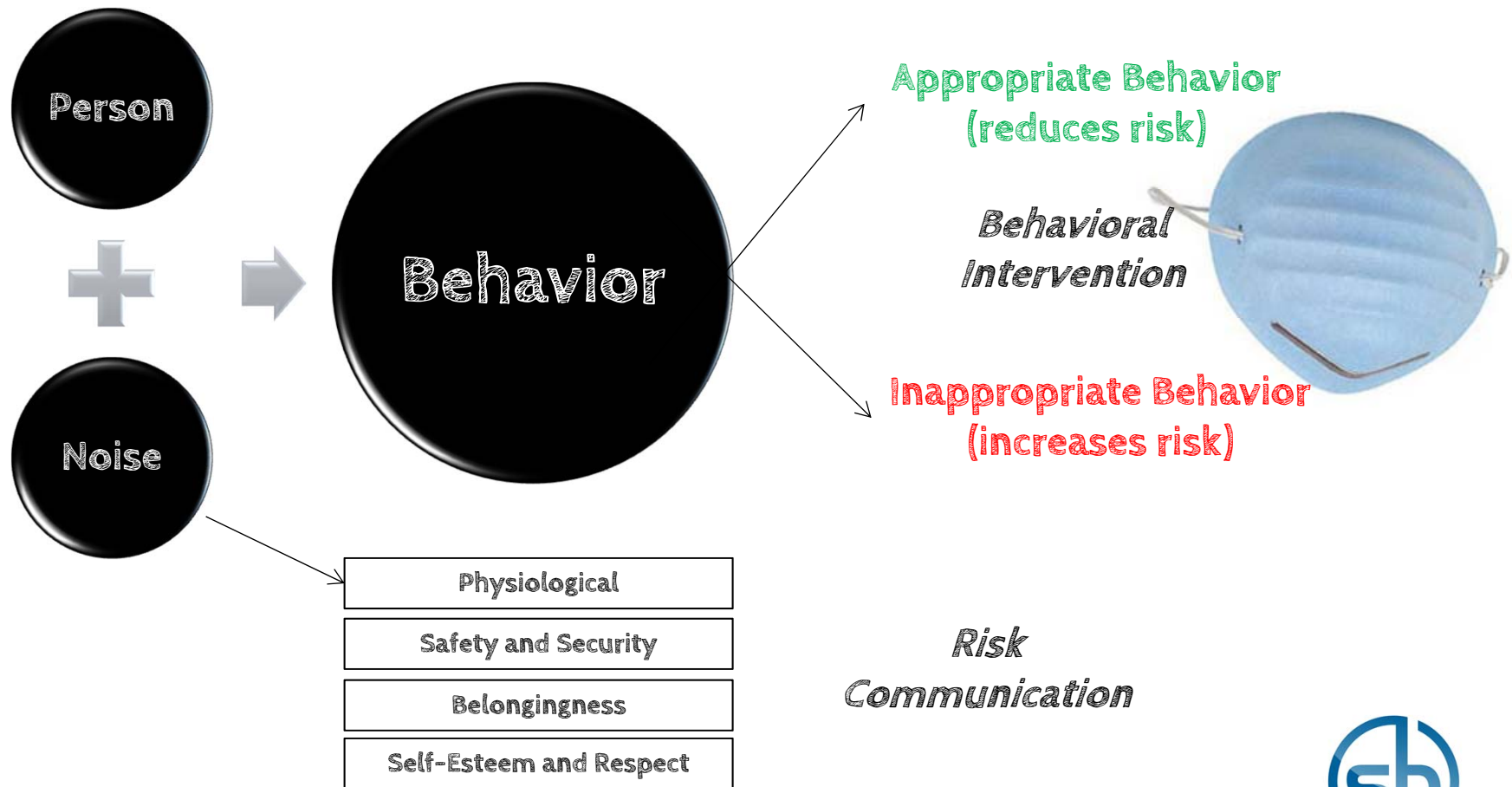


Understanding Mental Noise

During emergency situations, it is important to understand what driving behavior. Abraham Maslow provides a map for both increasing and decreasing behaviors during emergency situations.



Understanding Mental Noise



We Must Have Prepared Messages

If we do not have canned messages – the general public will begin behaving in ways which could increase risk – rather than decrease it.

- 1. DRINK PLENTY OF WATER.**
- 2. EXERCISE.**
- 3. WASH HANDS FREQUENTLY.**
- 4. SANITIZE HANDS.**
- 5. PRACTICE SOCIAL DISTANCING.**
- 6. PRACTICE SOCIAL RESPONSIBILITY.**

Risk Mitigation Process



**RISK IS NOT STATIC -
IT IS CONSTANTLY
CHANGING AS A RESULT
OF THE INTERACTION
BETWEEN RISK,
INDIVIDUAL, AND
ENVIRONMENT.**

The Scientist vs. The General Public



Human **RISK FACTORS**

One or two of these alone may not be a problem – combine three or four of them – and an incident, accident, or injury is right around the corner.

Physical State

Mental State

Emotional State

Capabilities

Limitations

Agent-Human Interface

Environmental
Conditions



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Responsible Leadership

EQUAL ≠ FAIR

Compliance + Accountability = Responsible

All staff are treated equally and provided the same opportunity to comply.
Based on their level of compliance they will be held accountable.

It is not FAIR to treat staff who comply and staff who do not comply the same...that's not RESPONSIBLE LEADERSHIP.



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PUNISHMENT VS. REINFORCEMENT



**WHAT DO YOU DO TO YOUR STAFF
WHEN THEY REPORT AN INCIDENT,
ACCIDENT, INJURY, OR ILLNESS?**



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Are you “Fit for Duty”

YES

NO

MAYBE

Compromised Immune System

Current Medications

Temporary Medical Conditions

Chronic Medical Conditions

Family Health Conditions



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Flexibility and Strength



Individuals must be able to don and doff PPE – requiring flexibility, balance, and strength. If they do not have these physical capabilities – they may put themselves and others at risk.



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Basic Needs

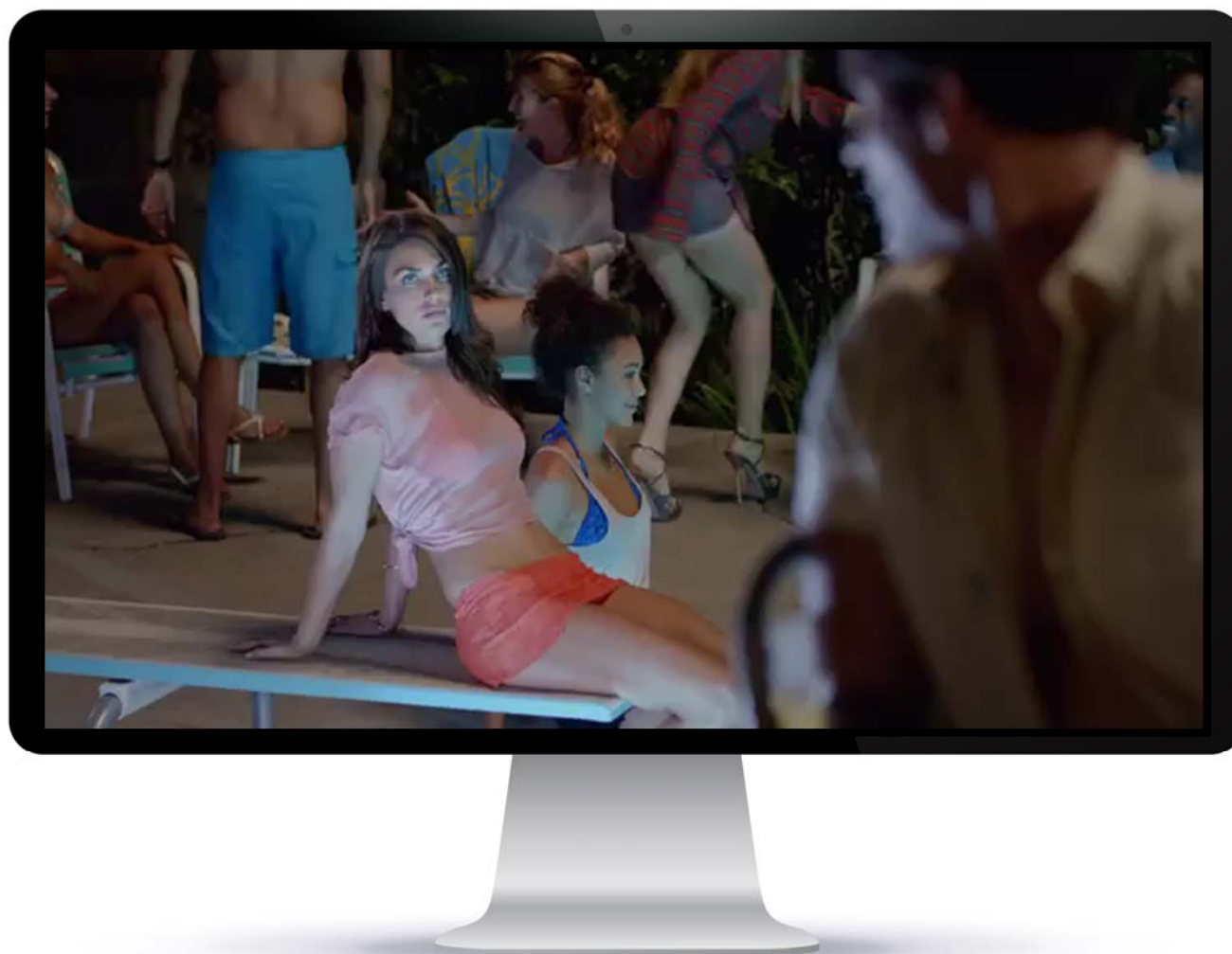


When people have a basic need which is challenged – they begin behaving – sometimes doing things which look “stupid” but in reality make sense to them.

This kind of impulsive behavior occurs when the need to behave happens as a result of a challenge to a basic need?

WHY DID YOU FAIL TO REPORT AN INCIDENT?

Most Common Human Risk Factor





Time to take a break!

HOW DO WE PROACTIVELY PREPARE?

The Set-Up

Being prepared means knowing what you have, what you can do, how quickly you can do it – and the relationships across multiple professions.

- **SET A DATE**
- **SECURE A BREAKFAST/LUNCH BUDGET**
- **INVITE ALL RESPONDERS**
- **FACILITATE AN EXERCISE**



Phase 1

THE RESPONSIBLE OFFICIAL (RO) RESPONDS TO CALL ABOUT AN EMPLOYEE WHO IS SERIOUSLY ILL AT SOUTHERN RESEARCH. THE SCIENTIST IS REPORTING A HIGH FEVER, SEVERE HEADACHE, AND IS TOO WEAK TO WALK.

HE TELLS THE RO ABOUT AN UNREPORTED INCIDENT IN THE LABORATORY - WHERE TWO OTHER SCIENTISTS WERE INVOLVED. ALL THREE SCIENTISTS WORK IN A LABORATORY WITH SARS AND MERS.



Phase 2

THE RO ARRANGES FOR TRANSPORT OF THE PATIENT AT SOUTHERN RESEARCH. SHE IS ABLE TO GET IN TOUCH WITH ONE SCIENTIST - WHO IS AT HOME - AND IS REPORTING SIMILAR SYMPTOMS.

THE FAMILY OF THE SCIENTIST IS CONCERNED AND WANTS TO TAKE THEM TO AN URGENT CARE FACILITY.



Phase 3

DURING THE CONVERSATION WITH THE SCIENTIST AT HOME, THE RO DISCOVERS THE OTHER SCIENTIST IS ON A FAMILY VACATION IN ORLANDO, FLORIDA.

UNFORTUNATELY, THE RO IS NOT ABLE TO CONTACT THE SCIENTIST VIA CELL PHONE, TEXT OR EMAIL.

STAFF REPORT THE SCIENTIST FLEW ON DELTA AIRLINES, PLANNED ON RENTING A CAR, AND VISITING MAJOR THEME PARKS.



Basic Formula of Safety

Plans + Behaviors = Outcomes

Plans

What is a Plan?

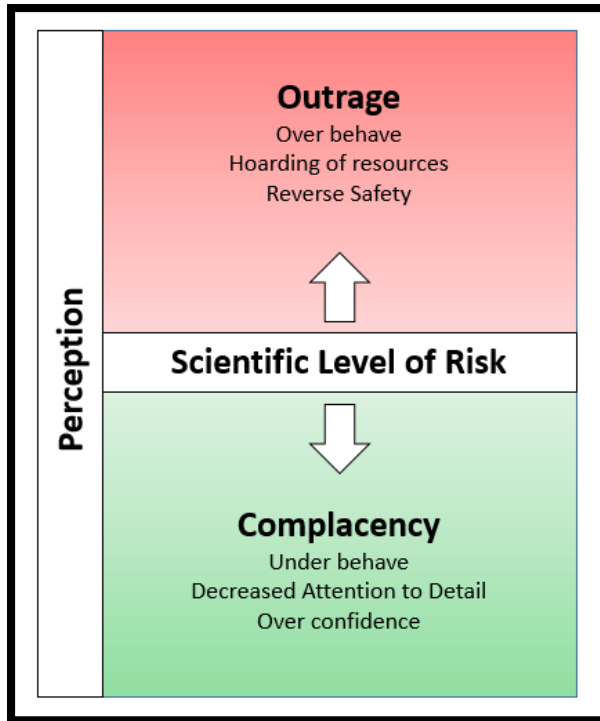
A STANDARD OPERATING PROCEDURE (SOP) IS TWO OR MORE PEOPLE DOING THE SAME THING – THE SAME WAY – ACHIEVING THE SAME RESULT.

A VARIED OPERATING PROCEDURE (VOP) IS TWO OR MORE PEOPLE DOING THE SAME THING – IN A DIFFERENT WAY – ACHIEVING DIFFERENT RESULTS.



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Why Do We Need a Plan?



PEOPLE HAVE DIFFERENT EDUCATION AND EXPERIENCE LEVELS – THEY DO NOT ALWAYS SEE A HAZARD IN THE SAME WAY.

A Plan is Born...



**RISK IS NOT STATIC -
IT IS CONSTANTLY
CHANGING AS A RESULT
OF THE INTERACTION
BETWEEN RISK,
INDIVIDUAL, AND
ENVIRONMENT.**

How Good is Your Plan?

Evaluation	Validation	Verification
Language	Internal	Cognitive
Can individuals understand the language of the SOP?	Are behaviors matching the author's intent?	Can the individual list the steps of the SOP? (with no SOP present)
Effectiveness	External	Behavioral
Does the plan reduce risk?	Do the behaviors lead to consistent outcomes among different individuals?	Can the individual demonstrate the steps of the SOP? (with no SOP present)
Physical Capability		
Can individuals physically do the SOP?		

SOMETIMES THE PROBLEM IS NOT WITH THE WORKFORCE - IT IS WITH THE PLAN.



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Focusing on the Plus Sign!



Let's Focus on the Plus!

**Safety Climate:
WHAT WE SAY WE DO.**

**Safety CULTURE:
WHAT WE REALLY
DO.**

**The gap between
what we say we do
and what we really
do is the true
measure of safety.**



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Behaviors



Items Needed for Behavior

A plan alone.

Doesn't mean one is capable of doing.



UNDERSTAND RISK
UNDERSTAND BENEFIT
HAVE RESOURCES
HAVE SKILLS
BELIEF YOU CAN DO IT!



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Establish Workforce Expectations

1. I will follow all SOPs to the best of my ability.
2. I will ensure others follow SOPs to the best of their ability.
3. I will report all near-misses, accidents, incidents, and injuries.
4. I will report any symptom which matches the clinical presentation of pathogens I am working with in the laboratory.
5. I will report any new medical conditions
(including but not limited to diabetes, heart disease, pregnancy, medications which may cause seizures/compromised immune functions, and chronic asthmatic conditions).

Establish Safety Officer Expectations

1. Read and understand the current biosafety guidelines.
2. Accurately communicate the three levels of applied biosafety and support leadership/scientist decision.
3. Facilitate safety with scientists and by scientists – not for them and to them.
4. Serve scientists – acknowledging there is not one way of being safe – demonstrating flexibility – and finding a way to do science safely.
5. Replace risky behaviors with new – alternative – safer behaviors – rather than attempting to STOP them.



Focusing on the Equal Sign!



A Call for Leadership



LEADERSHIP HAS THE RIGHT TO EXPECT THE WORKFORCE TO BEHAVE – BUT THE WORKFORCE HAS THE RIGHT TO EXPECT LEADERSHIP TO PREPARE, PROTECT, AND PROMOTE THEM.

Apply the Leadership Philosophy

1. **Prepare** the scientists by providing resources and training needed to work safely.
2. **Protect** the safety official and scientists from scrutiny, dismissal, and abuse by recognizing issues of human error and addressing insubordinate behaviors.
3. **Promote** the safety official by supporting safety initiatives and demonstrating compliance to safety protocols.

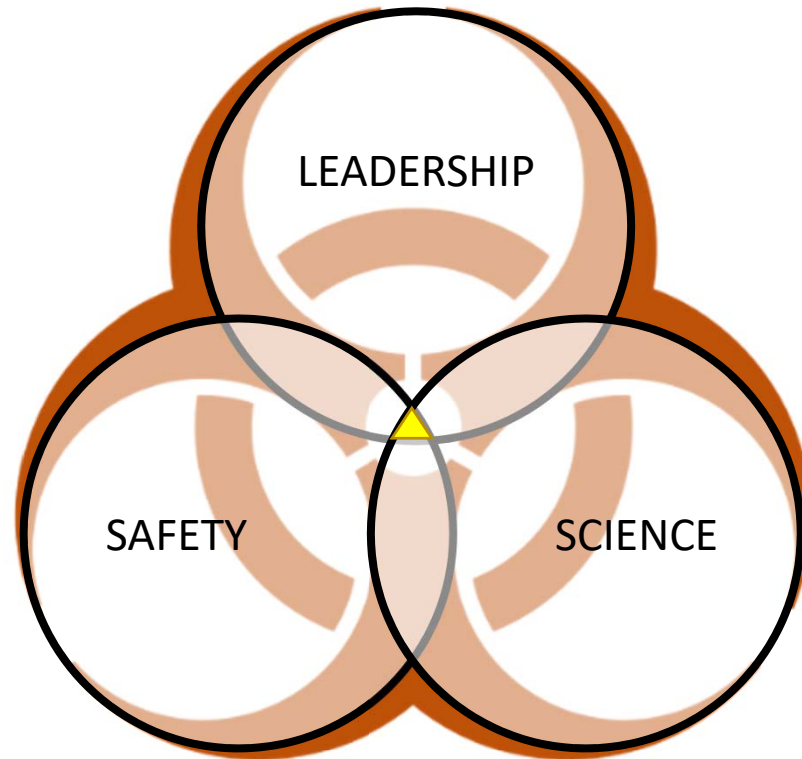


Outcomes



A "ONE SAFE" Culture

**A "ONE SAFE" CULTURE BLENDS
LEADERSHIP, SAFETY, AND SCIENCE.**





**A "ONE SAFE" culture shares
common risks, rules, and rituals.**



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Without science – there is
no leadership or safety.

**The loss of science
is the common risk.**





"ONE SAFE"



All risks must be managed.

**Standard Operating
Procedures are the
common rules.**



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"ONE SAFE"



Without behavior – plans
are nothing.

**Adherence to plans
produce common
rituals.**



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Being together and doing together are very different concepts.



Let's do safety together.





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