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# A Change in Climate Can Lead to a Better Culture

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ABSA International –  $60^{\text{th}}$  Biological Safety Conference Albuquerque, NM

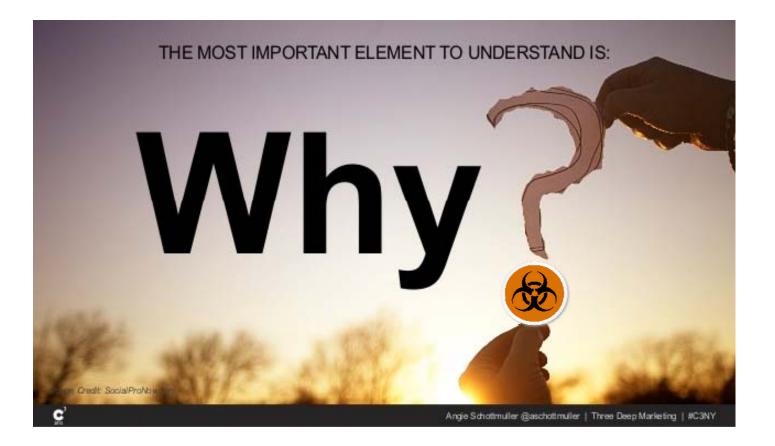
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Let's start with a story...





#### From researcher to biosafety professional



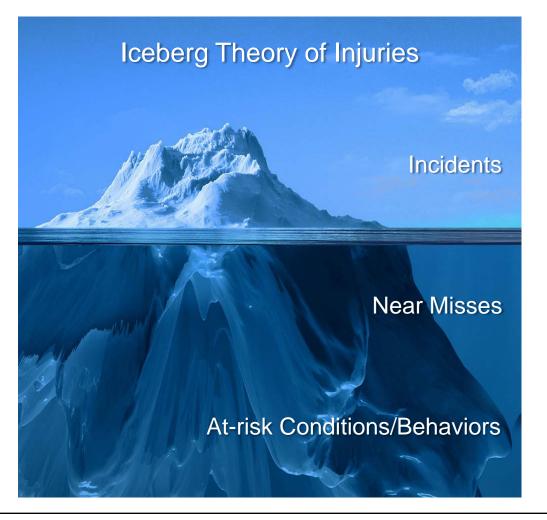
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### **Traditional vs Behavioral-based Safety (BeSHE)**



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### **Core Elements of BeSHE**



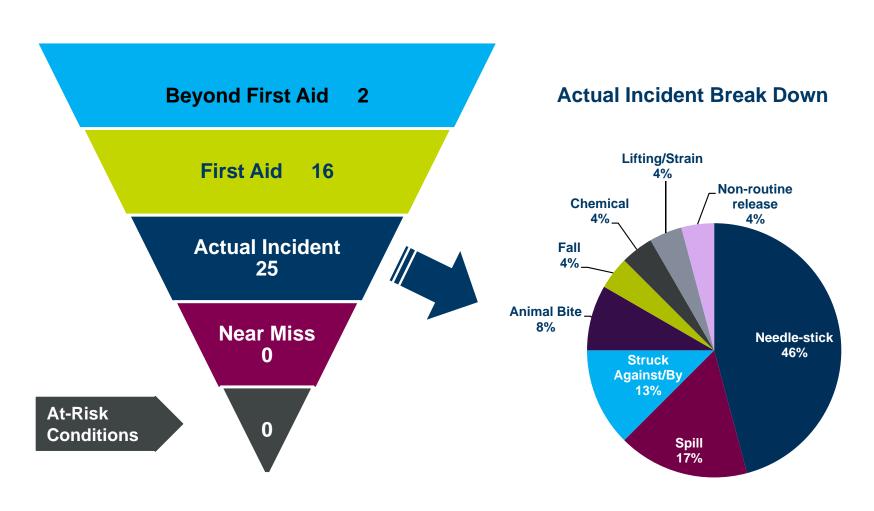
- Incidents (i.e. accidents) are the visual effect of many underlying issues.
- Hundreds of at-risk situations and behavioral errors are observed but unreported before an incident occurs
- Focus on Prevention Efforts and Actions





## BeSHE in MedImmune's Animal Barrier Facility

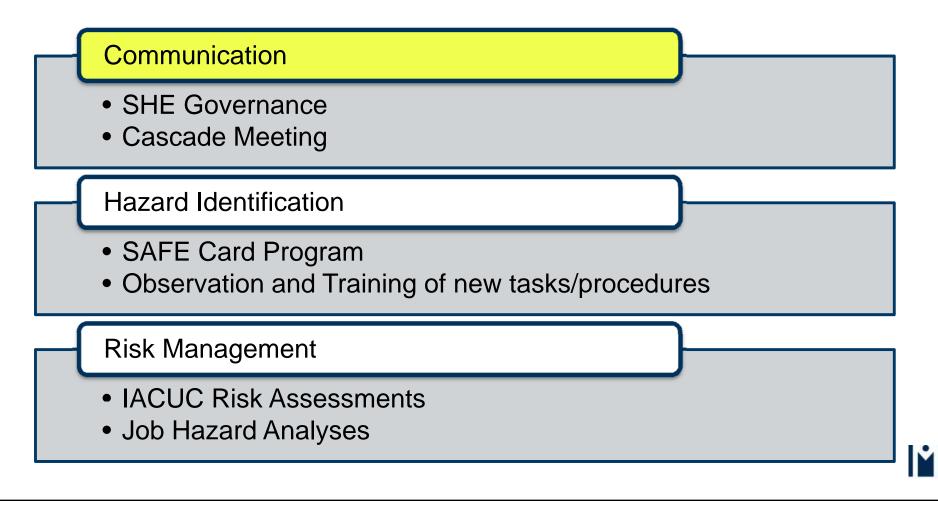




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### **Prior to BeSHE Implementation**

## **Building a Foundation**

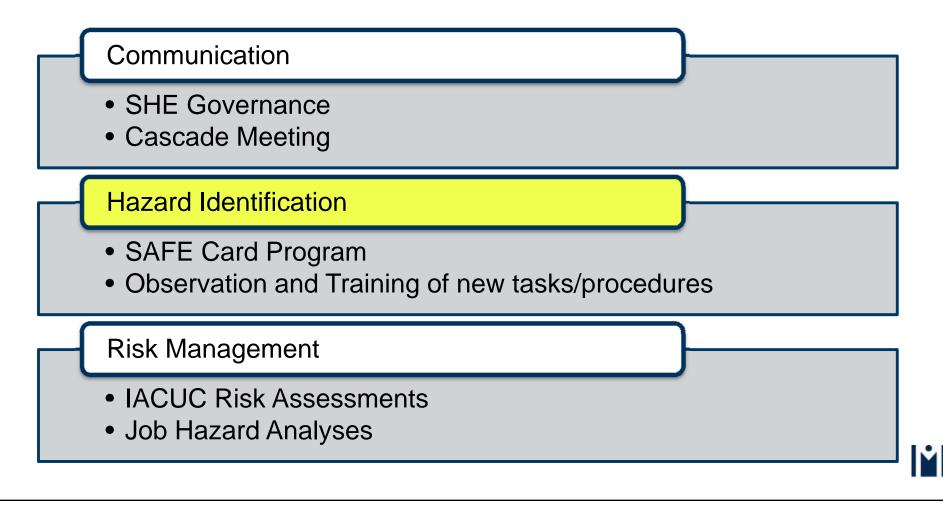


## **Updated Hazard Communication**

#### **Incident reporting Cage Labeling Requirements** EMPLOYEEE INJURY FLOW CHAR Injury Occurs Mark any hazards Exp.No 1 train Ø ADC ( teceived: **Room Signs ROOM DESCRIPTION** Room: xxxx Animal Biosafety Level 2 DEPARTMENT Potential Agents in Use Tier 2 PPE Requirements **Emergency Contact Information** Contact 1 Position Office: x8-xxxx Contact 2 Position Office: x8-xxx Position Office: x8-xxxx Contact 3 Facilities: 301-398-xxxx 301-398-xxxx Safety, Health, and Environment (SHE):



## **Building a Foundation**



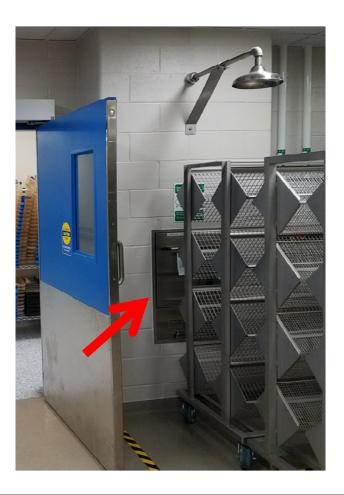
## **SAFE Cards**

#### Safe Accountability For Everyone

GOAL: To identify the <u>at-risk</u> <u>behavior/condition or near miss</u>, *not the individual* 

	EE SO	SAFE ccountab	and TAKE	ACTION		I		
	~	-RISK OD	SERVA	non				
Your Name:								
Your Dept.:								
Observation Lo	ocation	fenter descript	ion if needer	d, or if exte	rior location):			
Bidg.	+	Area	Floo		Room			
Location Descr Date:		s		ccoun	FE CARD tability For NG and TAKE			
Type of Observ								_
At-Risk Con	dite	SAFE OBSERVATION						
At Risk Condition E Unlabeled chemicals/8 Inadequate guards or 1 Defective tools/equipt At Risk Behavior Ex		Your Name:						7
		Your Dep	ot.:					
		Observat	tion Location	ocation (enter description if needed,			rior location):	
<ul> <li>Failure to use pro</li> </ul>		Bidg.		Area	Floor		Room	
of task • Failure to Disabling safety dev								
Describe your	_	Location Description:						
		Date: Time:						
		Describe your Observation:						
		Describe your observation.						
if known, depart	men							7
								-
What action did	d <u>yo</u>	If known, identify the individual(s) who demonstrated the safe behavior:						
		Categorize your Safe Behavior Observation						
Submitted W	Vork	Proper personal protective equipment (PPE) selection						
		Proper personal protective equipment (PPE) use						7
	YES	Using to						
	ve this card to the a Proper disposal (PPE, waste, etc.)							
Mana	ger: CORF	Using the right tool for the task						
Manager Name		Organizing workspace (6S) (good housekeeping)						
		Using handrail when ascending or descending stairs						
Return to SAI	FE Ca	Safe driving practices						
		Safe lifting techniques (back safety awareness)						
		Keeping clear of pinch points						
		Safe body position for task (ergonomics) Following procedures (SHE)						
		Proper material storage (chemical, biological)     Eyes on path (stopping to use mobile phone when walking)						
		Other						
		Return t	o SAFE Car	d Box, Inn	er Office Mail, o	r Any Me	mber of SHE	
							March 20	117

### At Risk Condition – Emergency Equipment Blocked



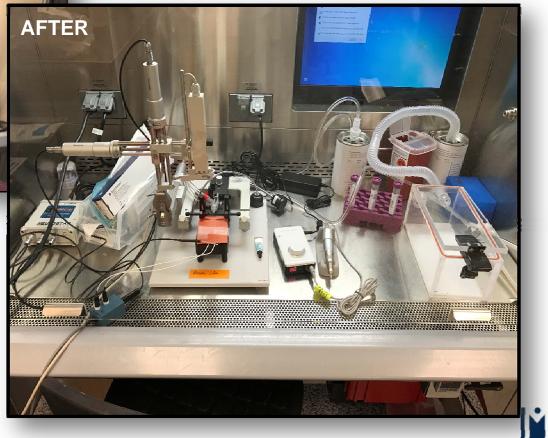




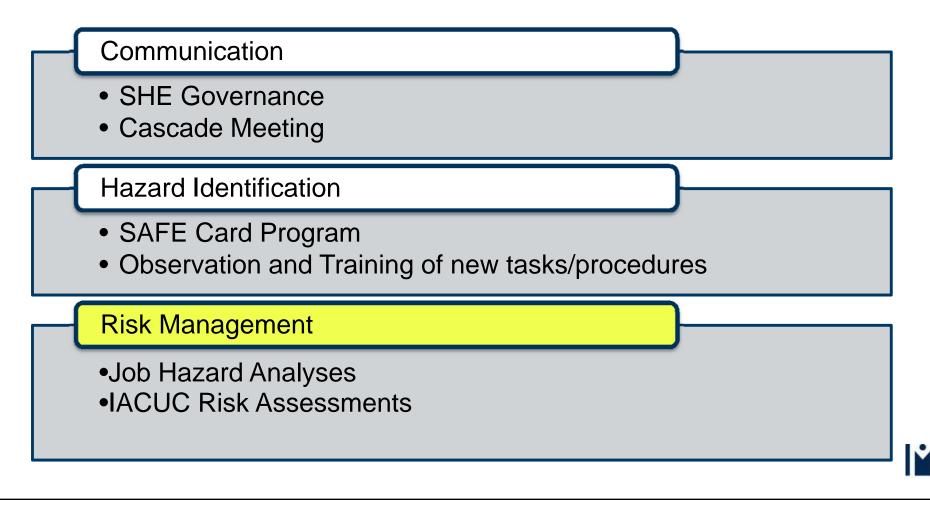
### **Brain Tumor Xenograft**



- Reported to Governance by ABF technician due to anesthesia concerns
- PI concerns about "interference" and tight timelines
- Provided technician, better safety, better science



### **Building a Foundation**



### **Ergonomic Observations**

#### **FINDINGS**

- Husbandry and technician staff have various repetitive motion tasks that present ergonomic challenges.
- Husbandry tasks are very different than technician tasks, requiring different stretches to counteract musculoskeletal challenges faced by each group.

#### **OUTCOME**

- Ergonomic assessments of husbandry and technician tasks with on-site ergonomist.
- Movement Maintenance and preventative stretching exercises incorporated into daily activities



### **Needlestick Prevention**



- Assessing procedures lead to concerns with needle disposal
- Disposal outside the biosafety cabinet presents multiple hazards to the researcher and study
- Containers that can be reached into are not considered a true sharps container

#### OUTCOME

- Smaller sharps containers, varying styles, have been placed at point of generation and stocked in stockroom
- Large biowaste containers relocated away from BSC
- Shelving for supplies



## **Near Miss - Animal Bite**

Animal bite on index finger that did not break skin or cause injury during retroorbital bleeds.



#### **FINDINGS**

- C57 Mice are particularly known to be more aggressive.
- Finger cots were being worn during the procedure (index and thumb).

#### OUTCOME

 Finger cots (safety device) that were originally tested to prevent needle sticks might be more applicable for protecting researchers from animal bites.



### **Incident – Cart Laceration**

Laceration from cart while transporting animal cages to procedure room



#### **FINDINGS**

- Carts were not inspected routinely.
- Carts are cleaned by stacking them 2-high and placing them in the rack washer.

#### OUTCOME

- Carts will be inspected prior to being inserted into the rack washer.
- Carts with damage will be repaired or discarded.
- Carts will no longer be stacked into the rack washer



## Incidents – Formalin Spill

A cart clipped the spigot to a 20L box of formalin on the counter in the necropsy room, causing it to fall and spill on the floor.





#### **FINDINGS**

- Formalin was not stored in secondary containment
- Located along egress area, making it more susceptible to getting hit

#### OUTCOME

 A smaller carboy is now used and secured into the shelving with a bracket so that the container cannot fall



## Incident – Bone Splinters

While performing a bone marrow extraction, an investigator received a splinter from the bone when it became lodged into the investigator's hand. A few months later, a similar incident occurred with a different investigator.



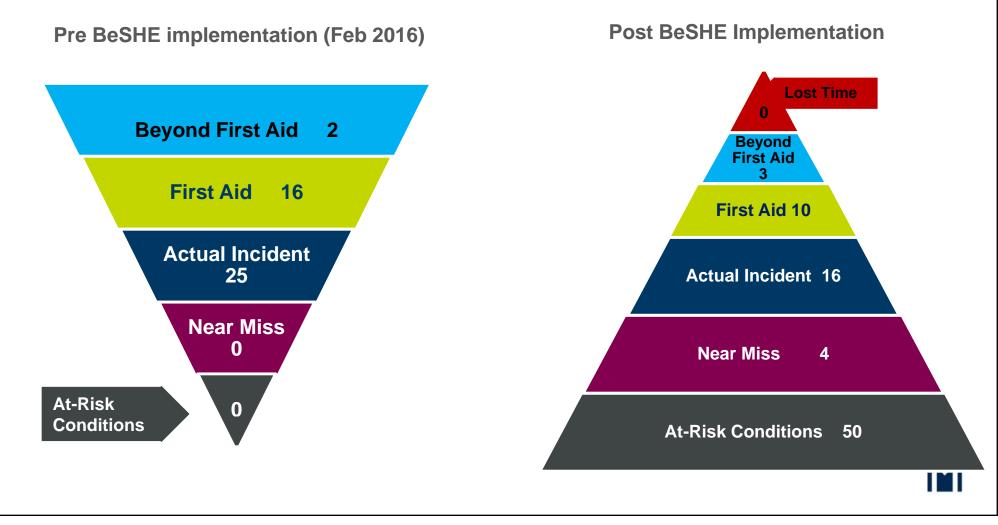
#### **FINDINGS**

- Not a routine procedure for either investigator
- Investigators used a different technique that were learned at other institutes
- Bone required cutting, resulting in uneven sharp edges.

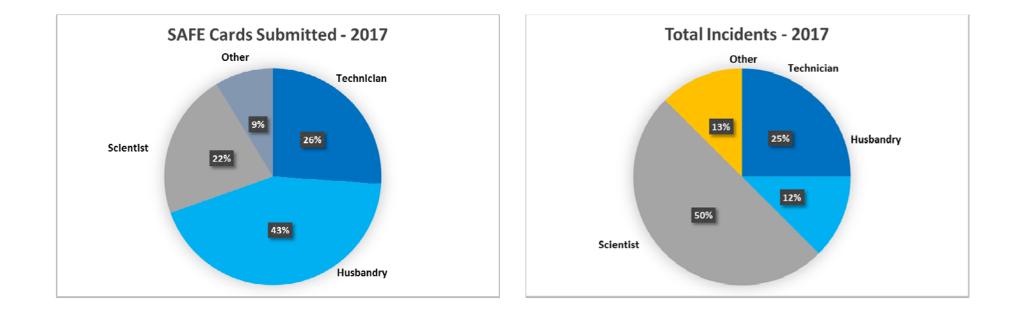
#### OUTCOME

- Retraining LAR technicians have a different technique that is more efficient and minimizes cutting.
- Both methods demonstrated and provided to the two investigators.
- Procedure also video taped for future training.

### **BeSHE Post-Implementation**



### **2017 Prevention Reporting and Incident Trending**



#### Next Step: Implement BeSHE within Therapeutic Areas

#### Better together...

Coming together is a beginning. Keeping together is progress. Working together is success. -Henry Ford



### Acknowledgements

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