CRAFT BREWERS CONFERENCE

& BrewExpo America

Praise and Paradox: What We Learned from the Brewers Association's Safety Survey

Beth Embry and Matt Stinchfield





Beth Embry
PhD Candidate

University of Colorado Boulder



Matt Stinchfield

Safety Ambassador

Brewers Association



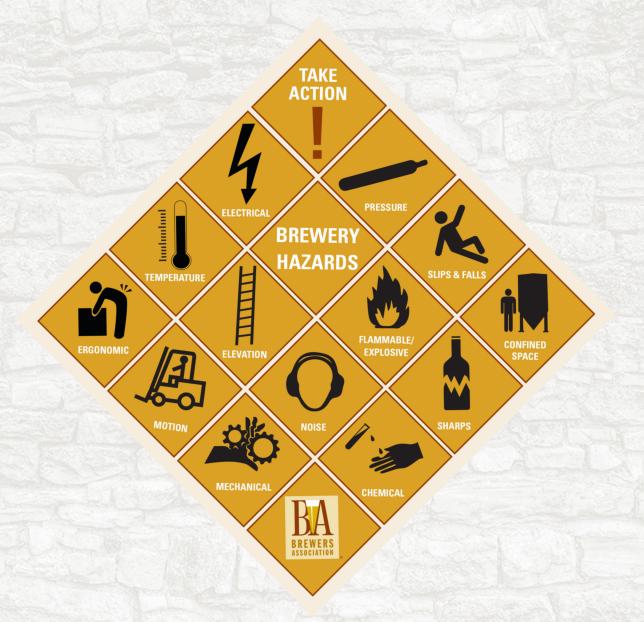


Goals for this session

- Brewers Association motivation for survey
- Robustness of the survey
- Strengths and weaknesses of the findings
- Conclusions
 - commonplace injuries, safety program management, communication, discipline and reward, and the current state of safety in America's craft breweries
- Take home ideas for your brewery





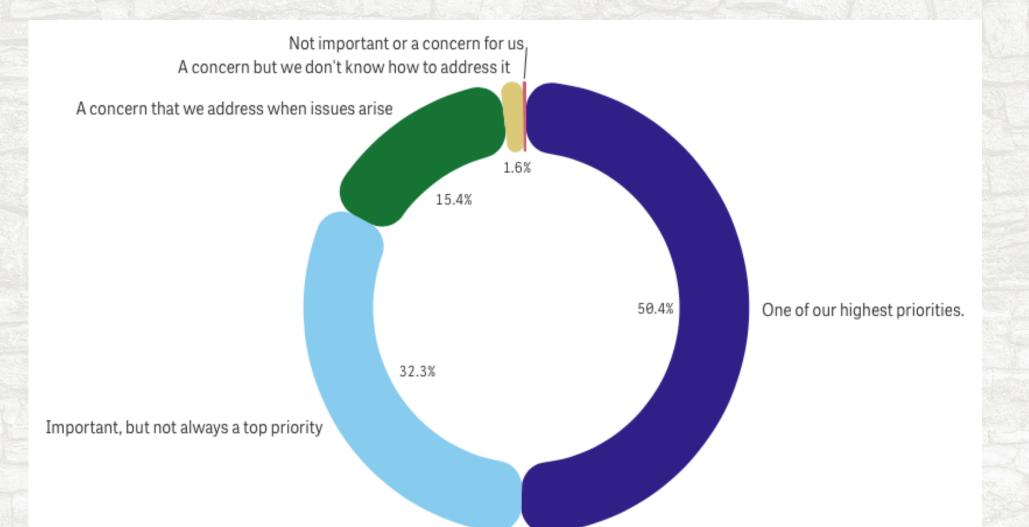


Why a safety study was needed





Currently, at our brewery, safety is:

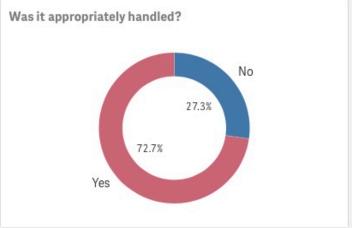


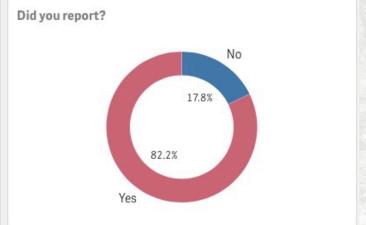


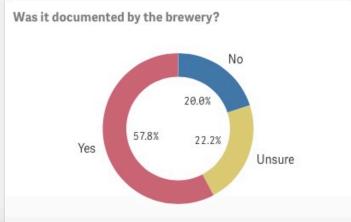


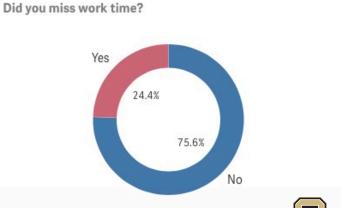
Accident and Injury Experience – Employee Perspective







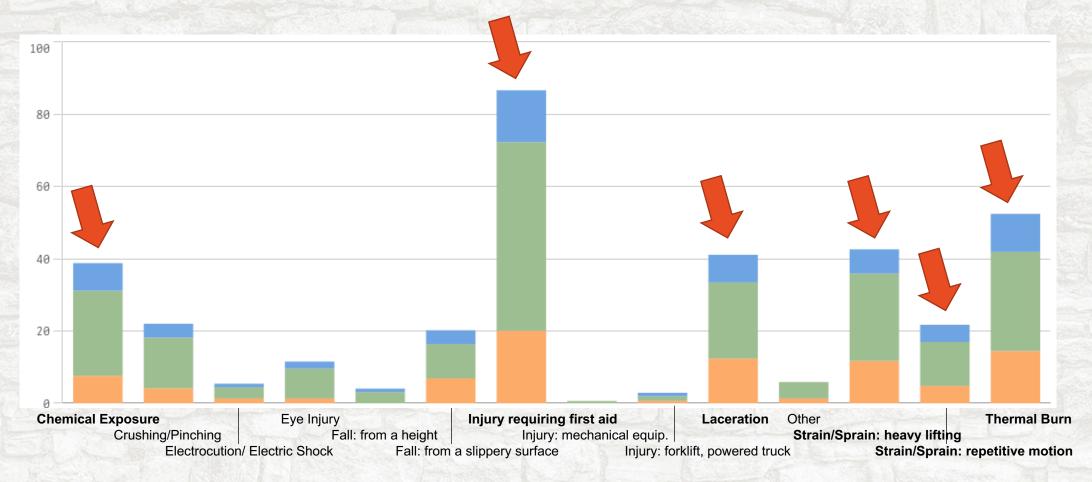


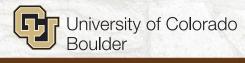






Accident and Injury Experience







If you remember nothing else...

RESPONSIBILITY

- Employers think they're doing well
- Employees think the employers are not supportive enough
- Clear and consistent communication

SOPHISTICATION

- Brewpubs and micros lack sufficient written programs
- Lack of understanding, e.g. PRCS, LOTO, PIT

DOCUMENTATION

- Deficiencies in training & documentation
- Lack of hazard assessments and written procedures: SOPs





Survey Structure



1

Management Survey

Demographics

Physical Plant

Safety Program

Safety Policies

Safety Culture

Free Response

2

Opt-in Employee Survey

Demographics

Safety Culture

Accident and Injury Experience

Free Response







456 breweries

127 brewpubs305 microbreweries24 regional breweries

Who completed the survey: Management

Age

44.2 years

Level of Education

48.5% Bachelor's Degree

Time at Brewery

4.7 years

Role

42.1% Owner 27.9% Brewer

Time Open

5.7 years

Size of Production

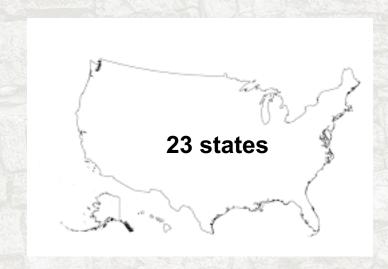
50% <2,000 sq ft

Employees

22 employees







41 breweries

8 brewpubs29 microbreweries3 regional breweries

Who completed the survey: Employee

Age

35.2 years

Level of Education

54.5% Bachelor's Degree

Time at Brewery

3.0 years

Role

42.1% Brewer 11.9% Packaging

Time Open

7.5 years

Size of Production

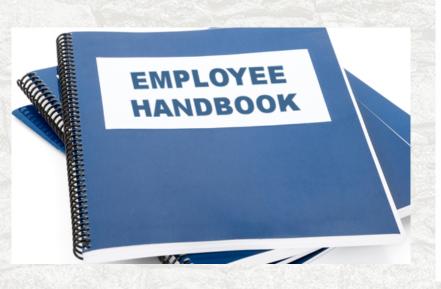
40% <2,000 sq ft

Employees

24 employees













Highlights of what we found





Safety Programs



 Who is responsible for safety, accountability and reporting?

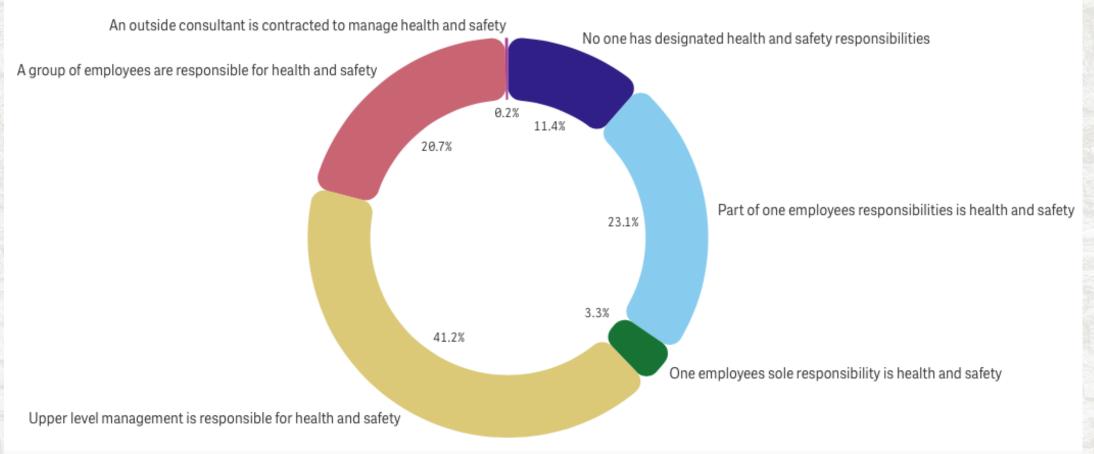
 Is the appropriate equipment available to ensure safe work?

 Is the physical plant laid out for safe work and protection of patrons?





Who is responsible for safety policies, reporting, and enforcement?







Safety Equipment in Brewery:	Brewpub	Micro	Regional	Total
First Aid Kit	97.0%	99.2%	100.0%	98.7%
Personal Protective Equipment	98.0%	98.5%	100.0%	98.4%
AED	17.7%	11.4%	45.5%	15.1%
Fire Extinguisher	99.0%	99.6%	100.0%	99.5%
Eye Washing Station	66.3%	65.8%	100.0%	68.0%
Emergency Shower	21.9%	24.8%	91.3%	28.1%
Emergency Chemical Spill Kit	16.5%	23.3%	86.4%	25.3%
Are hazardous chemicals appropriately labeled?	97.0%	98.1%	100.0%	97.9%
Are chemicals stored in secondary containment (spill pallets)?	34.0%	51.5%	100.0%	49.7%
Are confined spaces appropriately marked?	36.0%	39.7%	82.6%	41.3%
Are your employees required to complete training for using powered industrial trucks?	28.0%	45.8%	100.0%	44.4%





Physical Plant

Do customers/visitors have access to the product and packaging areas?

	Can pass somewhat freely	Only with a tour guide	Never allowed
Brewpub	2.6%	81.9%	15.5%
Micro	7.6%	79.0%	13.4%
Regional		91.3%	8.7%
Total	5.8%	80.5%	13.7%

P. C. J. School 1897.	The production/packaging and the taproom/resturaunt are:								
		All in the same open space	Separated by walls or floors	Separate buildings on the same campus					
	Brewpub	12.6%	78.4%	9.0%					
	Micro	20.0%	74.5%	5.5%					
100	Regional	5.6%	66.7%	27.8%					
50760	Total	17.2%	75.3%	7.6%					





Safety Programs

Summary



Praise

- Emergency Preparedness Equipment first aid kits and fire extinguishers
- Paradox Small vs. Regionals
 - Less investment in equipment
 - Less appropriate signage
 - Dreadful compliance with forklift safety
- Responsibility for Safety
 - Only 3% of breweries surveyed have a fulltime safety professional
 - 41% rely on a safety committee or team
 - 11% have no one identified as a safety lead





Safety Policies



- Are policies and procedures written?
- How detailed are the policies and SOPs?
- Are there specific policies for alcohol and substance use?

Are hazards/accidents/near misses

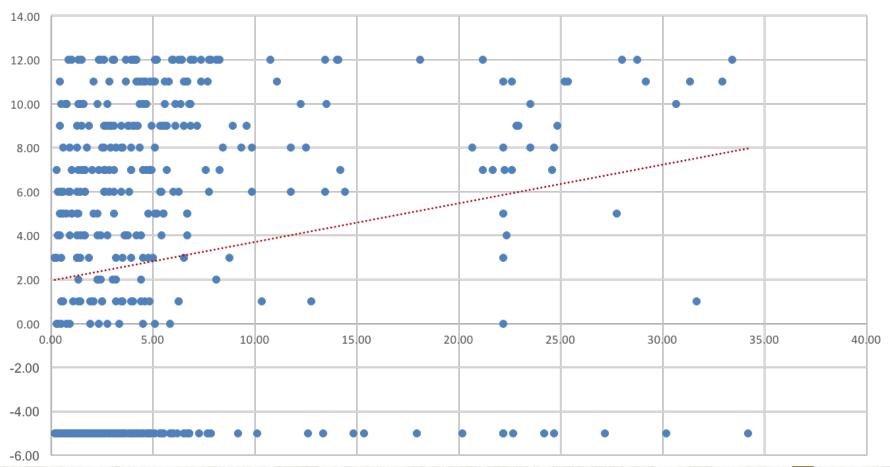
being documented Do you have written policies and

procedures?							
No Yes							
Brewpub	28.9%	71.1%					
Micro	30.0%	70.0%					
Regional	4.3%	95.7%					
Total	28.3%	71.7%					

Boulder

Policies and Years in Business

How detailed are your written policies?



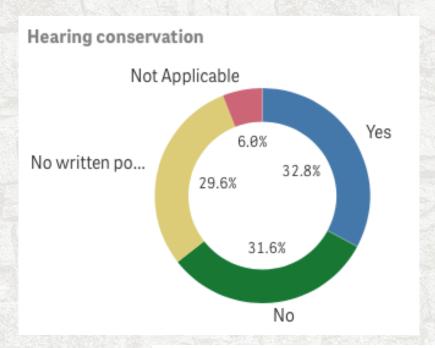


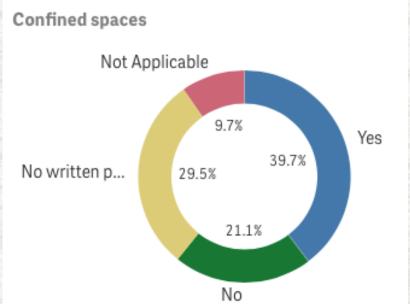


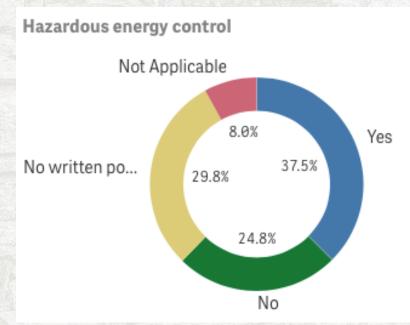
Written safety policies include:	Brewpub	Micro	Regional	Total
A general safety statement	79.5%	80.8%	88.9%	81.0%
Employee protection: personal protective equipment use	77.9%	87.8%	100.0%	86.1%
Walking and working surface safety	64.5%	65.4%	76.2%	66.0%
Fall protection for working at heights (<4ft)	32.5%	39.2%	76.2%	40.1%
Fall protection for working at heights (>4ft)	23.4%	30.5%	81.0%	32.3%
Confined spaces	49.4%	55.3%	90.9%	56.4%
Hearing conservation	41.6%	45.5%	77.3%	46.9%
Powered industrial truck use	29.9%	56.4%	100.0%	52.6%
Hazard communication	78.9%	85.0%	100.0%	84.6%
Hazardous energy control	46.1%	52.2%	90.9%	53.5%
Emergency action and evacuation	61.0%	58.0%	85.7%	60.8%
Tour Groups	18.4%	17.7%	54.5%	20.8%
Beer Festival Staff	21.1%	18.3%	31.8%	20.1%
Volunteers	18.4%	17.7%	9.5%	17.3%
Sales Representatives	10.5%	31.2%	50.0%	27.1%
Distributors	4.0%	8.1%	18.2%	7.8%

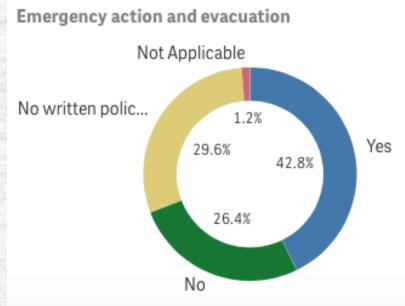
University of Colorado Boulder

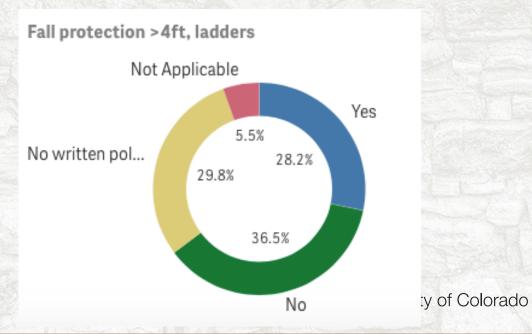






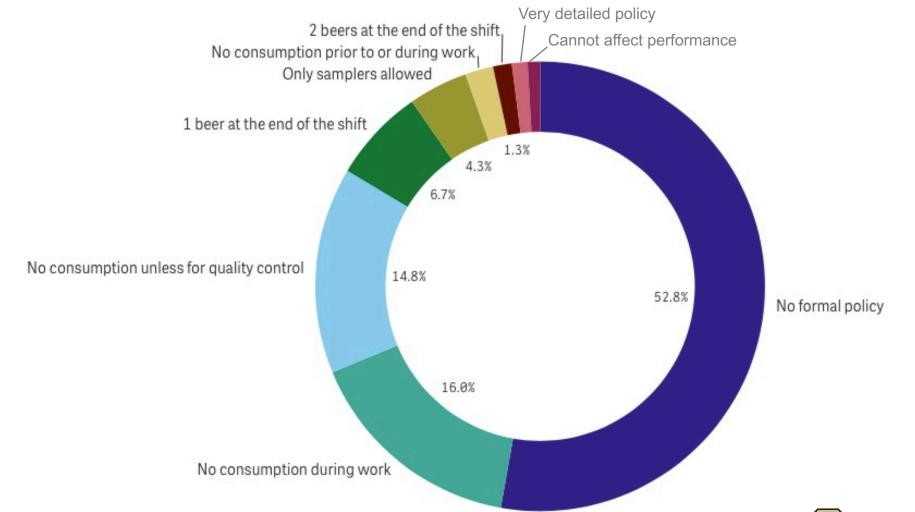








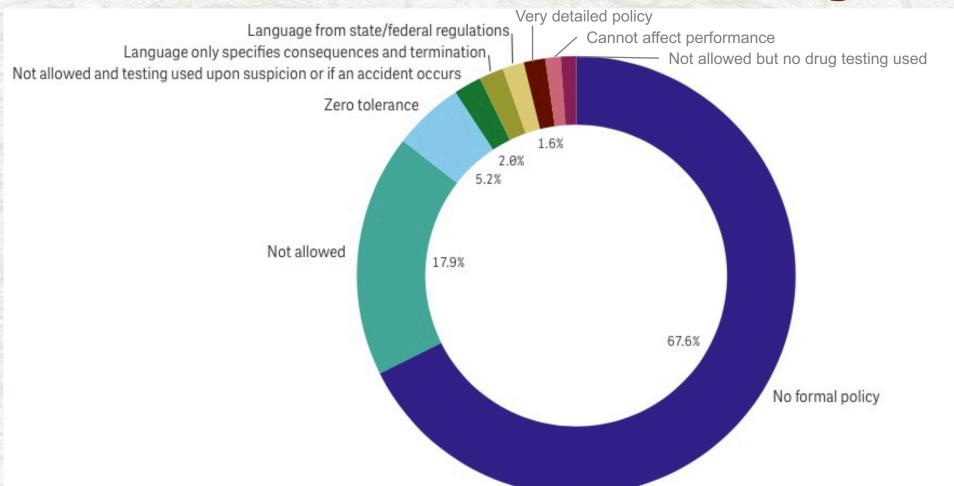
Alcohol Consumption Policy







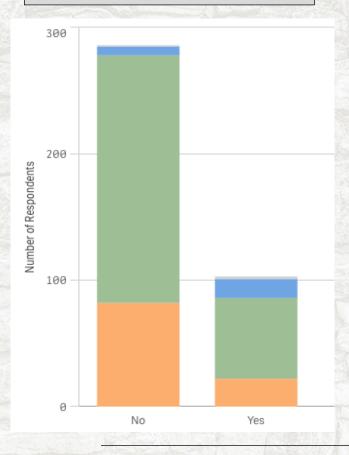
Substance Use Policy







Conducted a Hazard Assessment?



Only 1 in 4 breweries have conducted a hazard assessment

BEST MANAGEMENT PRACTICE (BMP) FOR THE DEVELOPMENT OF SAFETY PROGRAMS IN BREWERIES

VOLUME I

HAZARD ASSESSMENT PRINCIPLES

PREPARED BY THE BREWERS ASSOCIATION SAFETY SUBCOMMITTEE



https://www.brewersassociation.org/educational-publications/hazard-assessment-principles/





Safety Policies

Summary



Praise

- Over 80% of breweries with written policies include: safety policy statement, HazCom program, PPE
- Years in business, number of employees, size of production space = more comprehensive policies

Paradox

- Brewpubs and micros have very poor compliance in PITs, fall protection, LOTO and confined spaces – all are high hazard/high fatal risk concerns
- Few have policies for tours, visitors, festival staff
- Few have conducted <u>hazard assessment</u>
- More resources <u>BA Resource Hub</u> and <u>MBAA Safety</u>

Substance Policies

- >52%: no alcohol consumption policy
- >67%: no substance use/abuse policy





Training and Communication



- How is training taking place?
- How are safety messages being communicated? With what regularity?
- Is safety being praised or are there only negative consequences?
- Do employee experiences align with management expectations?





How are employees made aware of safety policies and procedures?	Brewpub	Micro	Regional	Total
Formal new employee training	59.8%	47.0%	91.3%	52.9%
Informal new employee training	37.5%	48.8%	39.1%	45.2%
Formal training when duties change	28.6%	26.9%	52.2%	28.7%
Informal training when duties change	33.9%	34.3%	26.1%	33.7%
Employee handbook	60.7%	48.1%	82.6%	53.3%
Team meetings	58.0%	62.9%	82.6%	62.7%
Meeting with direct supervisor	42.0%	42.4%	43.5%	42.3%
Refresher trainings (twice a year)	6.3%	6.7%	39.1%	8.4%
Refresher trainings (annual)	7.1%	12.0%	43.5%	12.4%
Refresher trainings (no schedule)	39.3%	31.4%	60.9%	35.2%





Difference in Perspective

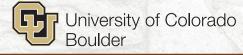
How are employees made aware of safety policies and procedures?	Brewpub	Brewpub M	Brewpub E	Micro	Micro M	Brewpub E	Regional	Regional M	Regional E	Total	Total M	Total E
Formal new employee training	59.8%	62.5%	38.5%	47.0%	58.6%	57.3%	91.3%	100.0%	63.0%	52.9%	62.5%	56.7%
Informal new employee training	37.5%	50.0%	46.2%	48.8%	44.8%	50.9%	39.1%		40.7%	45.2%	42.5%	48.7%
Formal training when duties change	28.6%	37.5%	15.4%	26.9%	27.6%	40.0%	52.2%	33.3%	51.9%	28.7%	30.0%	40.0%
Informal training when duties change	33.9%	62.5%	38.5%	34.3%	44.8%	32.7%	26.1%		14.8%	33.7%	45.0%	30.0%
Employee handbook	60.7%	87.5%	69.2%	48.1%	75.9%	43.6%	82.6%	100.0%	55.6%	53.3%	80.0%	48.0%
Team meetings	58.0%	75.0%	38.5%	62.9%	72.4%	79.1%	82.6%	66.7%	81.5%	62.7%	72.5%	76.0%
Meeting with direct supervisor	42.0%	25.0%	46.2%	42.4%	37.9%	36.4%	43.5%	33.3%	37.0%	42.3%	35.0%	37.3%
Refresher trainings	39.3%	25.0%	23.1%	31.4%	62.1%	37.3%	60.9%	66.7%	77.8%	35.2%	55.0%	43.3%





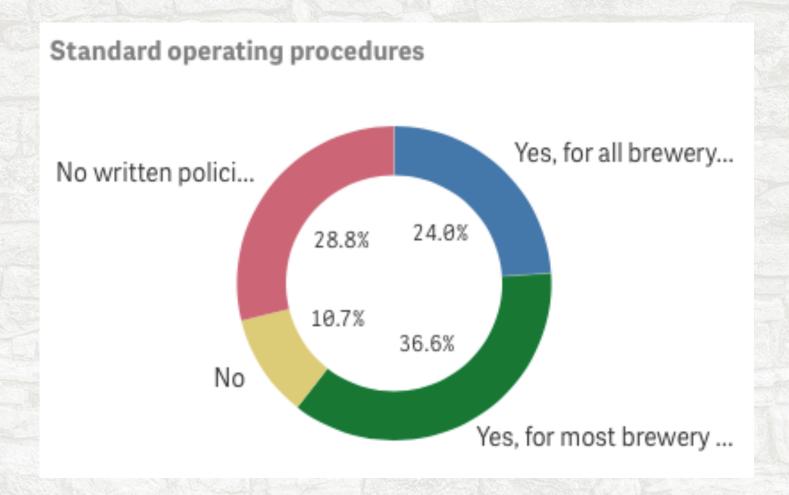
Difference in Perspective

How are employees made aware of safety policies and procedures?	Brewpub	Brewpub M	Brewpub E
Formal new employee training	59.8%	62.5%	38.5%
Informal new employee training	37.5%	50.0%	46.2%
Formal training when duties change	28.6%	37.5%	15.4%
Informal training when duties change	33.9%	62.5%	38.5%
Employee handbook	60.7%	87.5%	69.2%
Team meetings	58.0%	75.0%	38.5%
Meeting with direct supervisor	42.0%	25.0%	46.2%
Refresher trainings	39.3%	25.0%	23.1%



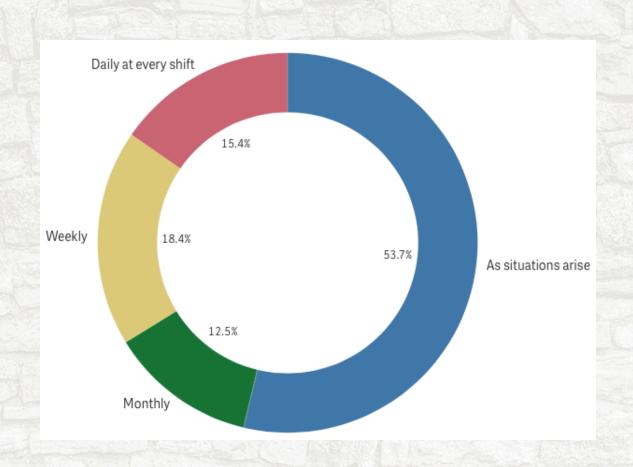


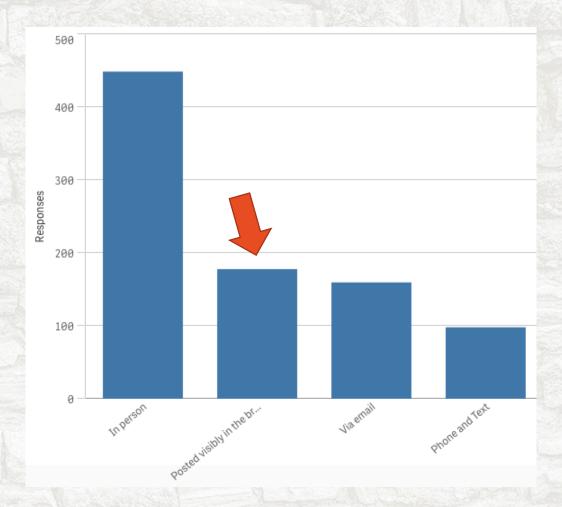
Standard Operating Procedures

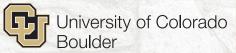




Communication about Safety





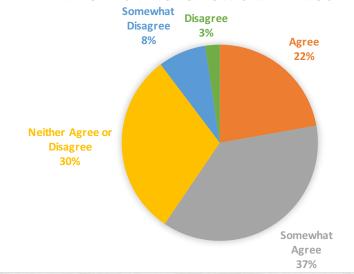




Management's Praise for Safety

Safety is acknowledged and rewarde by:	Brewpub	Micro	Regional	Total
Verbal acknowledgements individually	70.0%	52.3%	57.1%	57.3%
Verbal acknowledgements at company- wide meetings	26.0%	21.9%	47.6%	24.4%
Occasional tangible rewards	6.0%	5.5%	28.6%	6.9%
Regular tangible rewards	4.0%	1.2%	14.3%	2.7%
We do not have a culture of acknowledgements or rewards	30.0%	46.1%	33.3%	41.1%

MANAGEMENT WILL PRAISE OR REWARD EMPLOYEES WHO FOLLOW SAFETY PROCEDURES





Training and Communication

Summary



Praise

 Employees try to be resourceful about training by watching others, self-education, informal methods

Paradox

- 54% only address safety after a situation arises
- 40% of breweries have no SOPs
- Formal training is widely lacking, and also documentation of training
- 41% of breweries do not have a culture of acknowledging safe practices

Employee vs Manager Perspective

Wide difference in perception of communication and training





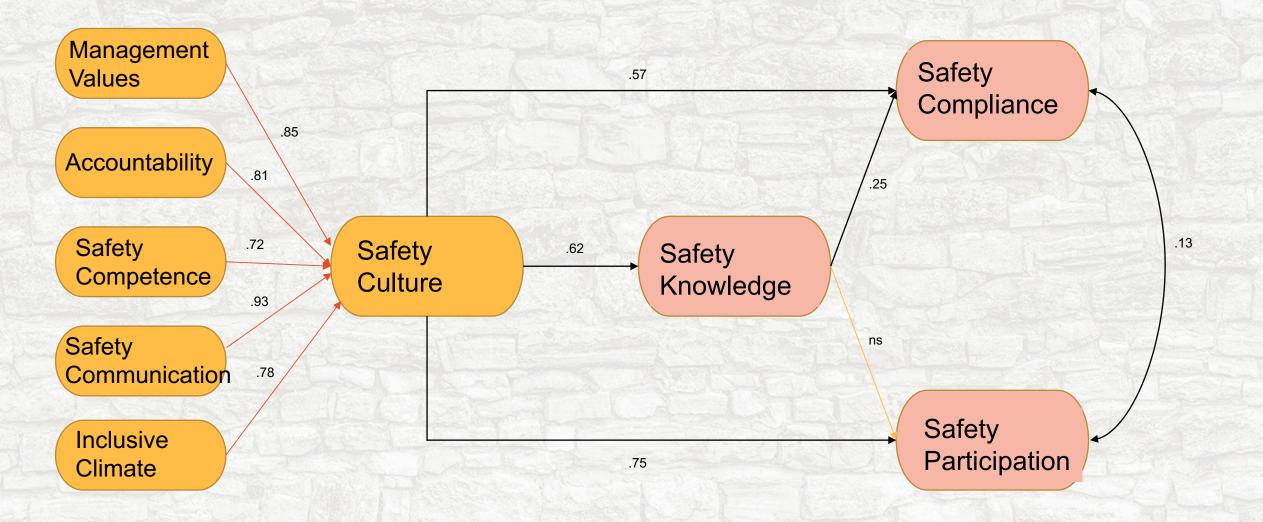
Safety Culture



- Does the brewery have a culture that promotes and encourages safe practices?
- Does the brewery have an environment that is inclusive and supportive for all employees?
- Do management and employee perceptions align?











Safety Culture

Summary



Praise

- Employee to Employee relationships are stronghelping/ praising/ respecting differences
- Sense that communication channels exist

Paradox

- Management to Employee relationships are weakseen as punitive and corrective
- Communication channels are not being used
- Creation of a climate that supports all physically and mentally needs attention

Employee vs Employer Perceptions

- The largest discrepancy between employees and managers is with the Regional Breweries
- Employees do not feel that management always prioritizes their safety in equipment, resources, support
 University of Colorado

If you remember nothing else...

RESPONSIBILITY

- Employers think they're doing well
- Employees think the employers are not supportive enough
- Clear and consistent communication

SOPHISTICATION

- Brewpubs and micros lack sufficient written programs
- Lack of understanding, e.g. PRCS, LOTO, PIT

DOCUMENTATION

- Deficiencies in training & documentation
- Lack of hazard assessments and written procedures: SOPs





What to do next...

RESPONSIBILITY

- Safety is responsibility of BOTH employer and employee
- Improve communication methods and frequency
- Safety culture breeds safe behavior better than compliance or safety knowledge

SOPHISTICATION

- Learn requirements:
 e.g. forklifts, confined
 spaces, lockout,
 elevated work places
- Seek out compliance help from BA, MBAA, state OSHA, insurance company, or consultant

DOCUMENTATION

- Conduct hazard assessments, write SOPs
- Develop required written programs
- Document training





Cheers and Thank you!

Special **thanks** to all of YOU who participated in the surveys, and provided us with an honest look at what is happening at your brewery!

Beth Embry -

elizabeth.a.embry@colorado.edu

Matt Stinchfield -

safetyambassador@brewersassociation.org



