

Three Important Areas of a Sound Food Safety Training Program

FMI Foundation Retail Food Safety Forum

Three Important Areas of a Sound Food Safety Training Program

- Proper Behavior
- Effective Training
- Management Commitment

















Traditional Food Safety Training

- Manager takes a day and a half class
 - General overview
 - Nothing task specific – explains much of the “What” but not the “How”
 - Receives Food Safety Professional certification but does the manager have a true understanding of the concepts?
- Manager is then responsible for sharing this training with hourly partners
 - One chapter at the end of the book on training
 - Does not specify what the Person in Charge (PIC) is responsible for knowing
- Conflicting opinions whether a CFSP manager improves health inspection scores

FOOD SAFETY

PROGRESS REPORT FOR 2012

Disease Agents	Percentage change in 2012 compared with 2006–2008	2012 rate per 100,000 Population	2020 target rate per 100,000 Population	CDC estimates that...
<i>Campylobacter</i>	 14% increase	14.30	 8.5	For every <i>Campylobacter</i> case reported, there are 30 cases not diagnosed
<i>Escherichia coli</i> O157	 No change	1.12	 0.6	For every <i>E. coli</i> O157 case reported, there are 26 cases not diagnosed
<i>Listeria</i>	 No change	0.25	 0.2	For every <i>Listeria</i> case reported, there are 2 cases not diagnosed
<i>Salmonella</i>	 No change	16.42	 11.4	For every <i>Salmonella</i> case reported, there are 29 cases not diagnosed
<i>Vibrio</i>	 43% increase	0.41	 0.2	For every <i>Vibrio parahaemolyticus</i> case reported, there are 142 cases not diagnosed
<i>Yersinia</i>	 No change	0.33	 0.3	For every <i>Yersinia</i> case reported, there are 123 cases not diagnosed



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

For more information, see <http://www.cdc.gov/foodnet/>

Preliminary FoodNet 2012 Data

April 2013

0201048

Not Working

We have not seen significant reductions in foodborne illnesses

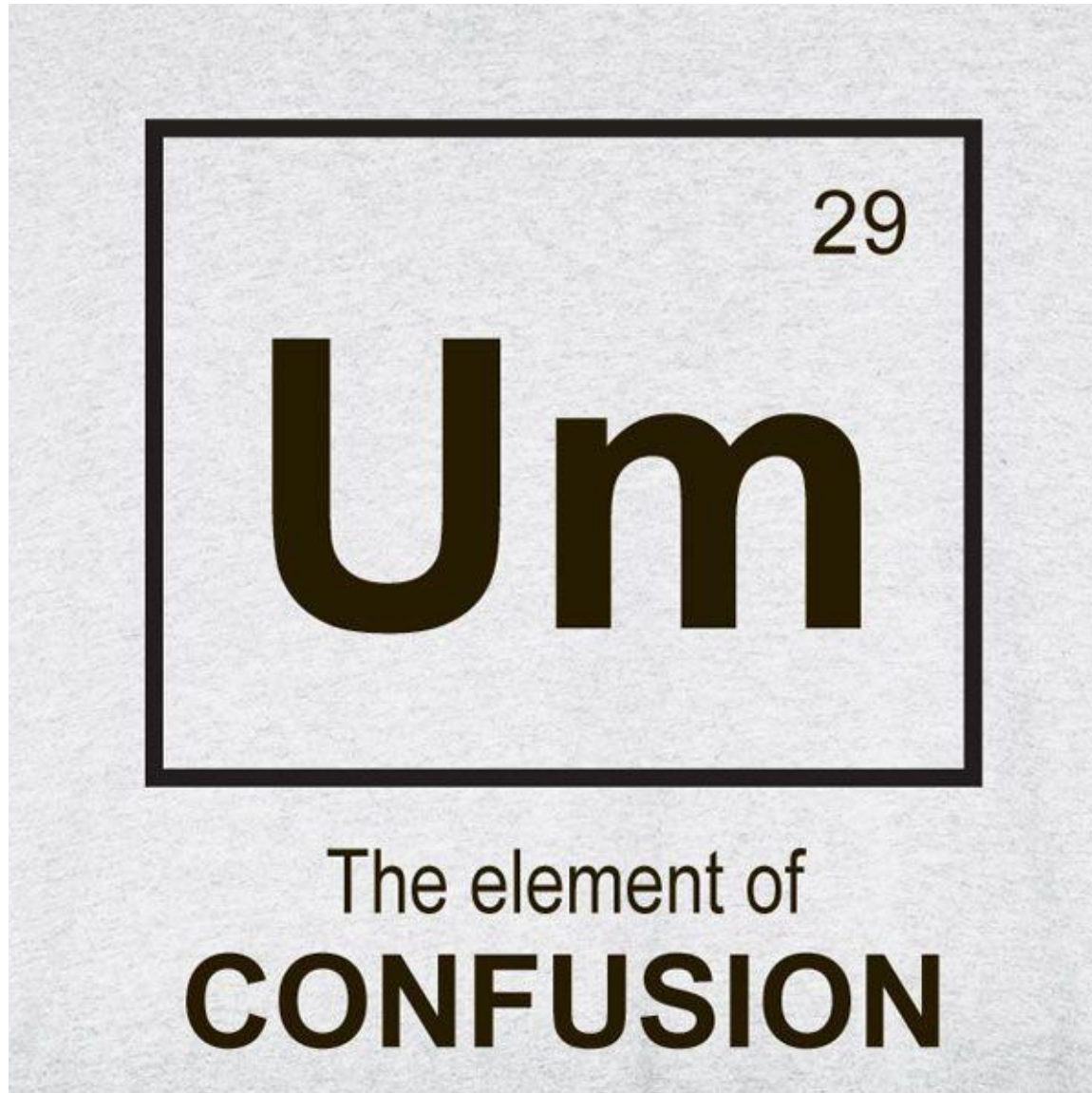
Inspection scores are inconsistent

What Do We Need From Our Food Safety Training?

Provide Healthy Food

- Active Managerial Control
- Food Safety Knowledge
- Demonstrate Proper Food Safety Behaviors
- Proper Cleaning and Sanitizing
- Proper Temperature Control
 - Cooking
 - Cooling
 - Storage





How do we get
our partners to
do those
things?

Theories of Adult Learning

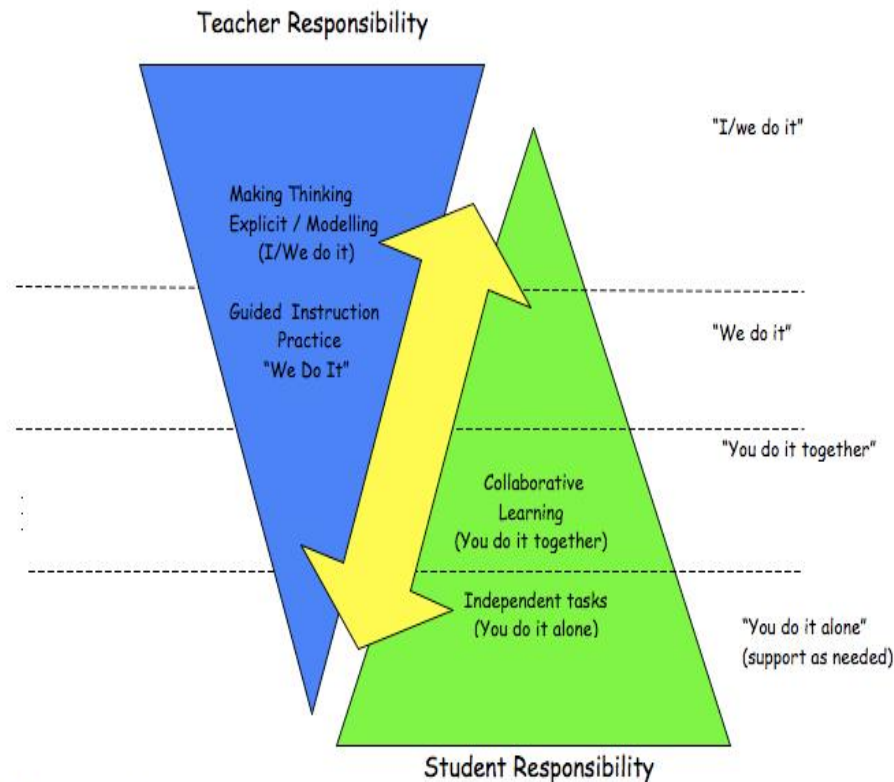
Problem-based and Collaborative

- Six principles
 - Internally motivated and self-directed
 - Bring life experience and knowledge
 - Goal Oriented
 - Relevancy Oriented
 - Practical
 - Like to be respected



Adults are Internally Motivated & Self-Directed

- Gradual Release of Responsibility Model

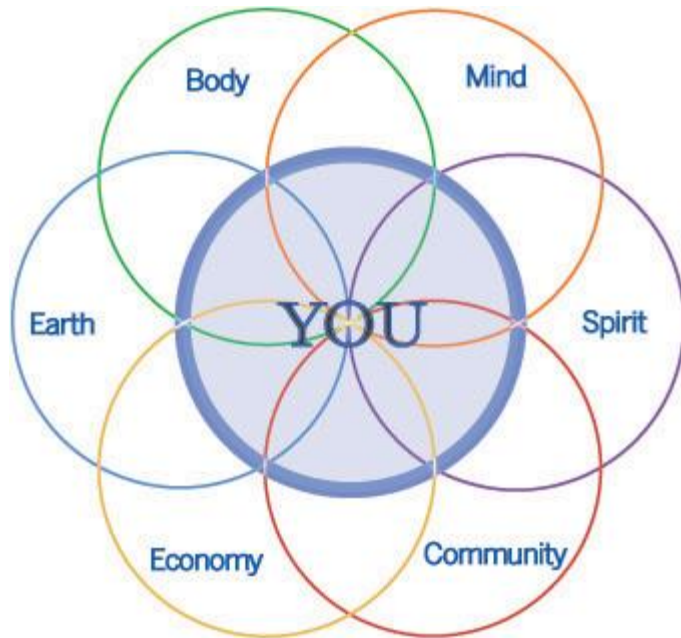


Adapted from: Frey, Fisher, Everlove (2009)

- Move from more to less structure
- Less to more responsibility
- More to less supervision
- Encourage asking questions
- Show interest in their opinions
- Lead partners to inquiry before supplying them with too many facts
- Provide constructive and specific feedback

Adults Bring Life Experiences & Knowledge to Learning Experiences

- Partners want to use their existing knowledge
- Find out about your partners past work experience
- Help them to draw on those experiences when problem-solving



Goal & Relevancy Oriented

- Adults become ready to learn when "they experience a need to learn it in order to cope more satisfyingly with real-life tasks or problems"
- Link the training to work objectives and goals
- Adult learners want to know the relevance of what they are learning to what they want to achieve
- This is invaluable as it ties theory to practice

Adults Are Practical & Like to be Respected

- Be explicit about how what the partner is learning is useful and applicable to the job they are doing
- Let the partners practice and get hands on experience and ample repetition rather than just listen to a food safety presentation or observe another employee
- Take interest in them
- Acknowledge the wealth of experience that the partner brings to your property
- Regard them as a team member who is equal in life experience
- Encourage expression of ideas, reasoning and feedback when appropriate



- We need to see what their current food safety knowledge is (pre-test)
 - Cannot assume they learned personal hygiene at home
 - Possible cultural differences
 - Also need to measure confidence
 - Knowledge does **not** always equal change
 - Intentions do not impact behaviors



Are Your Partners Demonstrating Their Food Safety Knowledge?

- How are they behaving?
- Observations
- Identify gaps between knowledge and behavior
- Develop Behavior Based, Task Specific Training
- Validate that the training is working
 - “Treasure what you measure”
 - ATP readings
 - Temperature readings
 - Employee demonstration of tasks
 - Improved inspection scores

Food Safety Training for Non-English Speakers

- NESI
- Non verbal experiment
- Accuracy
- Time
- Taste/Quality



Journal of Food Science Education 2011, Vol. 10 36-44

Fried Chicken with Cream Gravy

- **INGREDIENTS:**

- **AMOUNT:**

- **METHOD:**

- -Chicken, Breast, Bnls, Sknls, Raw
- -Salt and Pepper to taste
-
- I.1. Collect all ingredients and equipment.
- 2. Sprinkle chicken with salt and allow to rest for 2 minutes
- II.3. Set up breading station: seasoned flour, egg wash, and bread or panko crumbs
- 4. Pass the chicken through the standard breading procedure.
- 5. Heat the fat in the deep fryer to 325-350°F.
- 6. Shake off excess breading and place the pieces skin side down in the hot oil. Let the pieces fall away from you to avoid splashing hot oil on yourself.
- 7. Fry the chicken until golden brown on the bottom. Turn the pieces with tongs and brown the other side.
- 8. Check the chicken for doneness and color.
- 9. Remove the chicken from the pan and drain well. Keep chicken warm in the oven, uncovered.
- -Oil, peanut
- III. Note: Use enough oil to partially chicken
- - IV.10. Using ____oz. of peanut fry oil and whisk in flour to make a roux
- 11. Over medium low heat add stock and cream in stages, whisking as it comes to a boil (thickest point). Adjust consistency and flavor.

- **INGREDIENTS:**

- **AMOUNT:**

- **METHOD:**

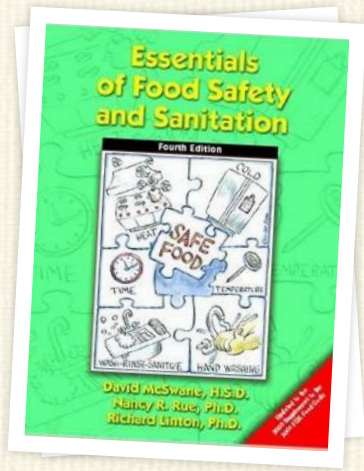
- -Χηιχκεν, Βρεαστ, Βνλσ, Σκνλσ, Ραω
- -Σαλτ ανδ Πεππερ το ταστε
-
- I.1. Χολλεχτ αλλ ινγρεδιεντσ ανδ εθυιπμεντ.
- 2. Σπρινκλε χηιχκεν ωιτη σαλτ ανδ αλλοω το ρεστ φορ 2 μινυτεσ
- II.3. Σετ υπ βρεαδινγ στατιον: σεασονεδ φλουρ, εγγ ωαση, ανδ βρεαδ ορ πανκο χρυμβσ
- 4. Πασσ τηε χηιχκεν τηρουγη τηε στανδαρδ βρεαδινγ προχεδυρε.
- 5. Ηεατ τηε φατ ιν τηε δεεπ φρυερ το 325-350°F.
- 6. Σηακε οφφ εξχεσσ βρεαδινγ ανδ πλαχε
- 7. Φρψ τηε χηιχκεν υντιλ γολδεν βρωων ον
- 8. Χηεχκ τηε χηιχκεν φορ δονενεσσ ανδ
- 9. Ρεμοπωε τηε χηιχκεν φρομ τηε παν ανδ
- -Οιλ, πεανυτ
- III. Note: Υσε ενουγη οιλ το παρτιαλλψ χηιχκεν
- - Ις.10. Υσιנג ____οζ. οφ πεανυτ φρψ οιλ ανδ ωηισκ ιν φλουρ το μακε α ρουξ
- 11. Οπερ μεδιυμ λοω ηεατ αδδ στοχκ ανδ χρεαμ ιν σταγεσ, ωηισκινγ ασ ιτ χομεσ το α βοιλ (τηιχκεστ ποιντ). Αδφυστ χονσιστενχψ ανδ φλαπορ.



Food Safety Training for Non-English Speakers

- Multi-cultural competencies
- Sign language
- Pictures
- One size does not fit all
- Don't need all of the information at one time





Essentials of Food Safety Knowledge

First

- Employees still need a baseline understanding
 - Textbook
 - Classroom setting
 - Online

Second

- What specifically do employees need to know for their specific responsibilities?

Identifying Baseline Food Safety Training Practices for Retail Delis Using the Delphi Expert Consensus Method

- Providing task specific information needed by deli employees without overburdening learners with irrelevant information
- None of the food safety training material investigated addressed deli specific content

Categories	Ranking	Mean
Food safety and foodborne illness	1	1.67
Safe food-handling practice	2	2.00
Cross-contamination and time/temperature control	3	3.00
Food safety regulation	4	4.47
Hazards to food safety	5	5.20
Contamination and food allergen	6	6.13
Cleaning and sanitizing	7	6.60
Sanitary facilities	8	7.27
The flow of food: Preparation	9	8.93
The flow of food: Storage	10	10.0

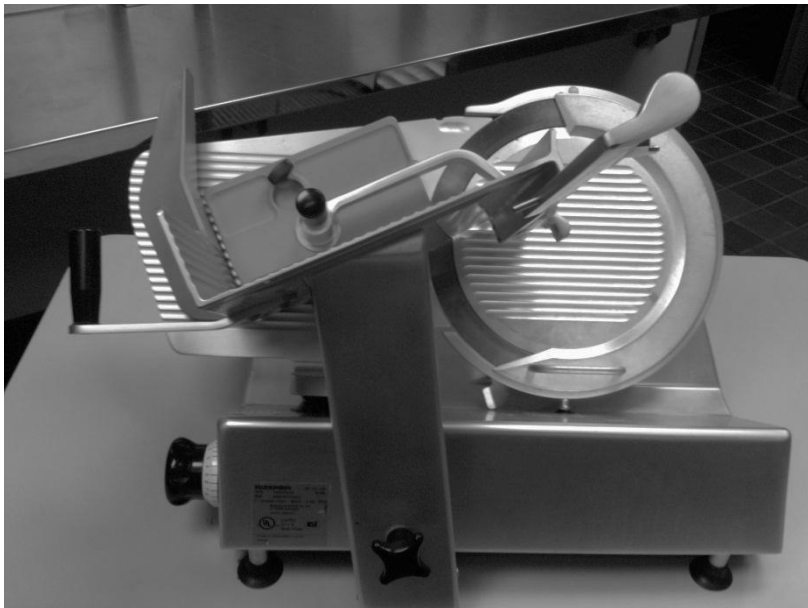
Comparative Analysis of Training Delivery Methods to Enhance the Safety and Sanitization of Retail Deli Slicers

- Characterize the performance of new employees receiving four types of training delivery methods
- Determine which training method was most effective in interpretation and execution as measured by:
 - Time
 - ATP bioluminescence
 - Participant survey
- No instruction
- Written instruction
- Demonstrations
- Written instruction with demonstrations



Comparative Analysis of Training Delivery Methods to Enhance the Safety and Sanitization of Retail Deli Slicers

- The amount of time taken to complete the task correlated directly to the amount of training
- Highest ATP scores (considered unclean) were from participants with the least training
- 113 volunteers - only one washed hands
- None checked the effectiveness of the sanitizer with the chemical strips prior to starting;
- 50% of the participants placed clean towels into either liquid without reading the contents of the containers
- Nowhere in the written or verbal instructions were directions given for using spray cleaning solution
 - 35% used it



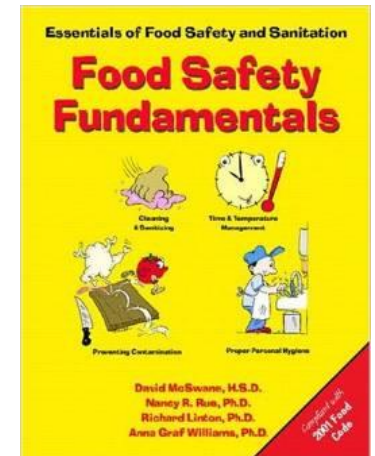
Observation and Relative Quantification of Cross-Contamination within a Mock Retail Delicatessen Environment

- <http://www.jove.com/video/51402/tracking-microbial-contamination-retail-environments-using>



How do we communicate this behavior based/task specific information to employees?

Let someone else do it!!!!



How do You Ensure that Online or Other Training Companies Meet Your Needs?

- How do managers decide what to use?
- Managers need a training system than not only educates but changes behavior
- We developed an online food safety training evaluation tool
- 5 areas of emphasis
 - Content and instruction
 - Learners
 - Job transfer
 - Design and packaging
 - Operation
- Examined 3 modules of a free online training program

[Journal of Food Science Education](#) Volume 10, Issue 1

Evaluation Tool for Online Food Safety Training Programs

Part two (unpublished)

- Four online training products were compared by 100 entry level employees
- Front-line employees prefer a blended delivery method
 - Fits the needs of the user
 - Trainee can learn at their desired speed
 - Material is reinforced by incorporating multiple learning styles
 - auditory, visual and tactile

Example:

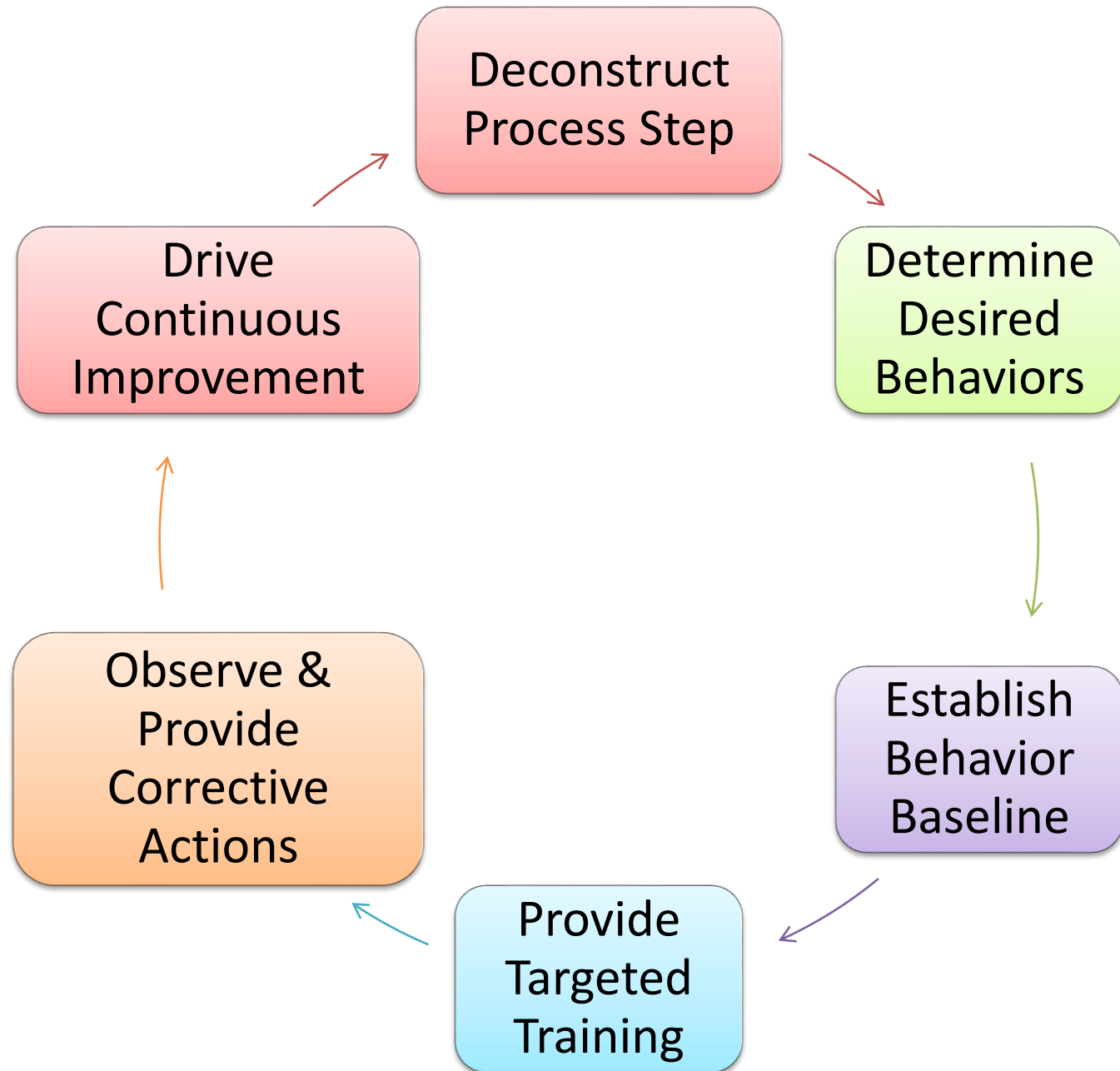
1. Employee watches a video clip on how to clean the deli slicer
2. Employee has to click through and clean the slicer virtually
3. Short quiz on material learned





Closed-Loop Approach

1. Breaking down a specific process into a sequence of smaller processes or steps.
2. Determining the desired employee action/behavior at each step and identifying potential deficiencies.
3. Observing, measuring and documenting baseline level of employee behavior compliance following training
4. Training front-line employees on what constitutes acceptable behaviors.
5. Empowering supervisors to make corrective observations of individual employees. Corrective actions should be non-judgmental and non-punitive in order to focus on continual improvements.
6. Repeating the process on a sustained basis to validate employee improvement.



How to Apply the Closed-Loop System to Hand Washing

- Define the specific personal hygiene behaviors needed to be included in the additional training?
 - Hand Washing
 - Entry/Exit
 - Cuts/Abrasions
 - General Personal Hygiene
 - Clothing/Jewelry
- Determine how to measure the behaviors?
 - A deficiency system

How to Apply the Closed-Loop System to Hand Washing

- What type of initial training needs to be provide?
 - Recommend Alchemy's SISTEM- Retail Library
- What process supports training?
 - Corrective Observation Process
- What is the sequence of the behavioral change process?
 - Set mile markers for evaluation and measurement of change
- Set baseline for each behavior

There is an APP for That

- Coach
 - Tablet based app
 - Facilitates safety and production observations
 - Mobile way to conduct reviews
 - Provides immediate remedial and positive feedback to front-line employees
 - When corrective observations are combined with effective training [compliance increased by 26%](#)



Is Your Food Safety Training Engaging, Interactive, Fun and Continual?

What else are you doing to encourage good food
safety behaviors?

What else can we do?

- Information Sheets
- Story Telling
- Community Perspective
- Creating a Food Safety Culture
- Pre-Shift Meetings



HIGH-END GROCERY STORE CLOSED OVER INSECT INFESTATION

Pest control in the food business is important; be extra vigilant with hygiene and storage practices



Pusateri's, an iconic high-end grocery store in Toronto was ordered to shut its doors following a routine inspection that revealed an insect infestation.

According to Rishma Govani, a spokeswoman for Toronto Public Health, "TPH responded to a complaint today and has subsequently issued a closure order for the store due to poor sanitation and pest infestation. It is up to the operator to improve their services and arrange a re-inspection"

John Mastroianni, general manager of Pusateri's responded in an interview, "We are all here and we will be here through the night. There are maintenance issues and pest control and so on that has to be rectified. All our staff and our maintenance people are working as diligently as possible."



The grocery store reopened three days later after passing a re inspection.



Pest control is often ignored until pests and their damage are discovered

- Don't just employ temporary measures to eliminate the pests; spend time to correct the reasons behind the infestation.
- Holidays are often time of year when large quantities of food will be bought in bulk resulting in additional places for pests to hide.
- Increased business puts extra pressure on storage space and facilities.

What you can do

- Inspect incoming food for evidence of insects or rodents before storing it.
- Rodent-proof rooms
- Store food off of the floor.
- Keep storage rooms clean, and inspect for insect and rodent activity on a regular basis.

Information Sheets

<http://foodsafetyinfosheets.org/>


Infosheets

- Passive- Postable Communication Tool
- Based on four emotion-generating factors:
 - **Storytelling**: used to focus on the cases/outcomes of individual incidents
 - **Dialogue**: designed to generate dialogue within the kitchen/retail food setting
 - **Information**: written with surprise, sometimes humorous graphic images and data
 - **Context**: puts food safety into context by providing prescriptive information

NC COOPERATIVE EXTENSION FOOD SAFETY INFOSHEET NOVEMBER 15, 2011 WWW.FOODSAFETYINFOSHEETS.COM KSTATE

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FOR MORE INFORMATION CONTACT BEN CHAPMAN, BENJAMIN_CHAPMAN@NCSU.EDU OR DOUG POWELL, DPOWELL@KSU.EDU

Storytelling

- 1 in 6 U.S. citizens get sick each year
- 128,000 persons are hospitalized
- 3,000 die from food borne illness

Enterohemorrhagic and shiga toxin-producing *Escherichia coli*

- Mason Jones, who in 2005 at the age of five died of *E coli* O157:H7 poisoning after eating a school lunch.
- Two year old Kyle Allgood died after eating spinach.



Food safety: No guarantees



Source: http://www.google.com/imgres?q=E+coli+O157:H7+deaths&um=1&hl=en&rls=com.microsoft:en-us&biw=1440&bih=719&tbn=isch&tbnid=QH-eRHADA5SsrM:&imgrefurl=http://www.marlerblog.com/lawyer-oped/mason-jones-e-coli-o157h7-death-still-causing-anguish-across-the-pond/&docid=1QiwD0Rm6XLJEM&imgurl=http://www.marlerblog.com/uploads/image/E-coli-death-001.jpg&w=220&h=317&ei=5_szULTQE0ji2AXftoGADw&zoom=1

Community Perspective

- What motivates your team?
- When Latino restaurant employees think that following proper food safety practices could increase customers' satisfaction, managers' satisfaction, and efficiency in the kitchen, they tend to demonstrate better food safety behavior (Cho et al., 2013).
- Why do employees come to work sick?
 - Don't want to let the team down or make their friends pick up the slack





How do we
create a food
safety culture?

Food Safety Culture

- Food safety culture needs to improve the actual food handling performances by employees by integrating the knowledge along with values, behaviors and beliefs
- Food safety culture needs to be a shared attitude by all employees, especially new employees who tend to follow the “dominant behaviors” found in the organization
- Our data suggests that the two most important factors for developing a food safety culture in food service operations are management commitment and worker food safety behavior

Food Safety Culture is Caught

Not Taught

THIS IS HOW WE ROLL!



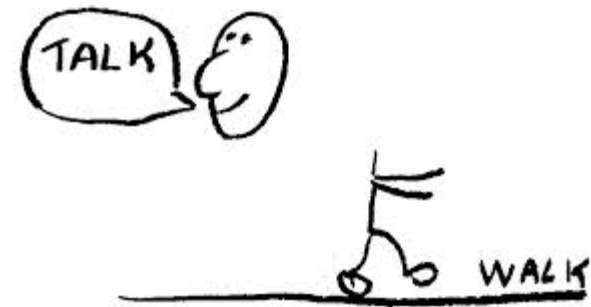
Management Commitment

- Food Safety Culture is Management driven
- Employees not only want consistency within the organization, but accountability by management
- Management needs to set the example and also champion the food safety cause

Management Commitment

Management demonstrates involvement by the following factors:

- 1) Stressing food safety even when busy
- 2) Keeping employees focused on food safety
- 3) Checking on employees to ensure proper food safety behavior is being practiced
- 4) Having adequate tools and utensils for employees
- 5) Making sure management follows all of the food safety rules
- 6) Making sure management visibly supports the food safety culture by “walking the talk”



It's So Much Information!

How do you eat an elephant?



One Bite at a Time!

The only way to accomplish a big goal is to break it down into smaller goals that can be measured by time and performance.

Pre-Shift Meetings

- Less than 15 minutes
- Purpose: *Inspect, Inform and Motivate*
- Inspect – ensure the partners are ready for the shift – uniform, hygiene and tools
 - Can also use this time to test employees on base knowledge “they should know”
 - Can also check to ensure all employees have the right attitude
- Inform – communicate current important information
 - Changes in policies or procedures
 - Reminders of policies not being followed
- Motivate – “pump up” the staff
 - Not a time to yell at employees

Pre-Shift Meetings

- The second, and possibly most important purpose of a Pre-Shift Meeting is to:

Lay the ground work for what management will manage during the shift

- Reinforcing proper food handling will reduce the chance of a food-borne illness out break



Food Safety Ambassadors Program

- Part of being part of a team is belonging
- Part of belonging is demonstrating acceptable behavior
- Employees that demonstrate proper behavior:
 - Get a certificate
 - Name tag colors – (belt colors in martial arts)
 - Raise \$\$\$\$\$
 - Trainer
 - Key Employee
 - Person in Charge

Error Management

- Most of our training focusses only on prevention
- How do we handle errors?
- Error Management Culture suggests that food safety compliance may help increase store sales which may lead to employee bonuses/raises
- Food Safety training and compliance may be a revenue generator

Summary

- Knowledge doesn't always change behavior
- Baseline understanding of food safety
- Behavior based/task specific training
- Not a one-time solution
- Additional support
- Management commitment



Thanks

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University of Houston