# The effect of food safety culture in reducing food borne illnesses rates

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Mr. Hisham Hassan. He is a consultant in food safety and international food law, and he's currently working for the Quality Assurance regulatory affairs manager for an NGO in Canada. His presentation is going to be about the effect of food safety culture in reducing foodborne illness rates.

Right. Good afternoon, everyone. My name is Hisham, and as you see I'm presenting about the effects of food safety culture on reducing foodborne illness rates. First of all, I would like to thank Dr. Alam and the board here for inviting me for this conference. And this is a very important topic, I believe.

Before we talk about the food safety culture and the foodborne illnesses, let's go back to the human history. Throughout the human history, there have always been obstacles that are facing humanity and humans. We're gonna focus on wars—we're gonna focus on wars, starvations, and outbreaks. And, if you see, all those factors are connected. Wars will cause starvation. Starvation will make people desperate to eat anything and everything, and this might cause outbreaks.

The major cause of death and … hospitalization, and even in developed countries if you look at all those factors, would be the outbreaks. Outbreaks caused significant cost to countries, even developed countries. If you see here, these numbers are from the United States. This is annual cost. Estimated cost for a cost of food illness is caused by 15 major … foodborne pathogens in 2013. And if you see here, Salmonella, only Salmonella, 3.7 billion dollars spent because of salmonella in the United States. That was in 2013. You see noroviruses, you see all these all these pathogens here. You can look at details. This is significant cost to countries.

One out of ten people, almost one out of ten people, fall ill—this is globally. 33 million people die every year because of food borne illnesses. Four hundred twenty thousand children die every year because of foodborne illnesses, and one-third of children die because of foodborne illness. This is very, very serious.

If you also look at costs, 15.6 billion dollars—this is most recent statistic—15.6 billion dollars spent every year. 2,700 deaths. 8.9 million people get sick every year. 53,000 people hospitalized every year. This is the cost of food safety to the US. 77.7 billion dollar cost to the economy—to the US economy. This is the largest economy in the world, and look how much how much are they spending on food safety. Look at all these numbers. We're not gonna go in details, but it is kind of serious and scary.

Now where does foodborne illness and food poisoning occur? As you see, 52 percent happened in restaurants. People dine out, and of course when you're in a place other than your house you don't know what's going on. Your main concern or your main thing is just to have a nice meal and go home. Twenty-two percent home. Eighteen percent other sources. Four percent unknown. And four percent at schools.

So, there is a very recent approach to face this disastrous problem: foodborne illness. This approach would be the food safety culture. And if we want a definition of food safety culture, it’s basically the approach of food facilities towards food safety. How people are understanding and interacting with food safety. The sum of principles and ethic followed in an establishment with respect to food safety. So basically, how people are approaching food safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies and patterns of behaviour that determine the commitment to and the style and proficiency of an organization’s health and safety management. So, basically this has to deal with our behaviour. And this can be applied not only for food establishments, but you can apply to your own household.

And this picture—this guy is Frankie Yiannas. He used to help the—he was the vice president for food safety at Walmart, and he happened to be my mentor and good friend. He's now holding, like few months ago, … he was assigned as Deputy Commissioner for Food Policy and Response at the FDA. He is very big on food safety culture. His two famous books, *Food Safety Culture* and *Food Safety Equals Behavior,* those two books are very, very valuable in food safety culture, and I believe they're the only two textbooks about this topic.

So in his books he said we can divide science into two: hard science and soft science. I wanted to test audience about this—what is hard science and what is soft science?—but Dr. Alam said you have to condense your slides into 15 slides so I couldn't do it, but hard science is microbiology; HACCP, which is hazard analysis and critical control points for people who are in the field; time; temperature. And the soft science is basically the human behaviour. What Frank Yiannas said, he said food safety equals behaviour. And this is a very unique approach: food safety equals behaviour.

So, if we want to focus on the human behaviour, human activities play a very crucial role in defining nature and the magnitude of outbreaks. Why? Why do you think so? Does anyone have any answer why do we focus on human behaviour when we're dealing with food safety? Because, basically, human activities make food. So, if we follow food from farm to fork, as they say: processing, transportation storage, and selling of food is done—all these activities are done—by humans. So, if we want to control what's gonna—what's coming to us from food as far as pathogens and outbreaks, we have to focus on human behavior throughout all these stages.

Now, why should we adapt and develop food safety culture? Because we want to save lives, and we want to reduce the cost of medical services. So that's why we have to focus on food safety culture.

Reducing the harm of spreading foodborne illnesses is done mainly by two things: regular inspection and training. And we don't just stop at that. We have to do this again and again. Regular inspection, training. And make it as a norm in any food facility.

Those are the elements of food safety culture. We're going to cover all of them quickly. Risk perception, perception of food safety procedure, competence, leadership, employee involvement, ownership of safety, communication, and business priorities.

Perception of food safety procedures is basically the organization's perception of the effectiveness and validity of food safety regulation. This is on a higher- level.

Ownership of food safety: the level of responsibility that organizations accept in relation to food safety. Basically, if I’m a regular employee in a food facility, I have to take ownership; this is my responsibility to produce safe food that won't kill anyone, pretty much.

Business priorities: the extent to which an organization prioritizes food safety and their overall attitude regarding food safety. So is food safety—is safety my priority or making money is my priority; I have to define that first.

Risk perceptions: the organisation's perception and understanding of the risk associated with food safety. So, I have to take that in mind; I have to put that in mind.

Competence is the level of understanding an organization has regarding risk management procedure. So, if I ask someone to do a certain task, they have to know why the reason why are they doing this. If I ask you to put this phone, to move it from point A to point B, I want you to know why. If anything happens in a process, so you know what to do.

Leadership: the level of commitment that management has regarding food safety. So, a leader should be a good example to other workers.

Employee involvement is the level of commitment the wider organization has towards food safety. So, each and every one is responsible.

Employee communication is basically the level of communication across the organization, and the freedom for employees to challenge procedures—again, understanding why am I doing this. If I want to accomplish a competency in food safety, I have to communicate with each other as a team. This is very crucial.

Now, the awareness about food safety and food safety culture is growing. Now, twice as many people are concerned with food product safety and equality versus five years ago, which is very promising. So, more people are concerned right now. Even in my house, I have my own food safety officer. I wanted to put her picture here, but I got busy. My daughter, my 8-year-old daughter, is my food inspector in the house. As soon as I step in, she would ask me, Dad did you wash your hands? This is very important. You have to take it from that level.

And, like I said, the awareness is growing day by day year by year, which is very promising. So, if we achieve the highest level of awareness, we will reduce foodborne illnesses. We will reduce the cost and we can utilize that money towards something else: human development, nutrition, and other things.

So, those are the fears. People are—you know—have so many fears about food, and the understanding right now is growing, like I said. If you look at those details here. So, it is a question—there is a very burning question right now we have, that you should have. Are you proactive or reactive? Do we want the problem of growing foodborne illnesses and pathogens that are resistant to antibiotics to grow, or we want to prevent that from happening? So, each and every one—even you're if not working in a food facility, you should ask yourself: what is my role what am I supposed to do? Consider yourself as a team—a team player in a big team. Even if you're not communicating with this team right now, just do your part and you will see good results. Thank you.

[Applause]

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Please remember if we all help and do a little bit, it will make a big difference.