COVID-19 raises the stakes for foodservice operators to ensure employees properly wash hands

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Introduction

It was March 12, 2020 in the United States. The National Basketball Association announced a suspension of the season as the first player tested positive for COVID-19. At this moment our lives would change forever as we responded to the global pandemic that had now come to the United States. In immediate response to COVID-19, many states passed shelter-at-home orders to protect citizens from being exposed to or transmitting the virus. Businesses deemed non-essential were shut down to combat the virus. All bets were now off in the traditional ways we have grown accustom to working together, socializing, exercising, visiting with our extended families, following sports teams, enjoying a summer festival or concert, and dining out.

According to data published by the NPD Group, transactions at quick-service restaurants were down nearly 40% in April 2020 whereas in this same month transactions at full-service restaurants decreased nearly 80%[1]! For those fortunate foodservice operators that remained open, a more intense focus emerged on how best to keep employees and customers safe. COVID-19 put foodservice operations in a high-risk category. The penalty for a COVID-19 outbreak among the workforce could be very costly. The foodservice operator may be faced with staffing disruptions due to loss of an employee for an extended period, including other employees that were potentially exposed. Perhaps even more damaging as news gets out (now ever so quickly and far-reaching through social media platforms), the foodservice operator's brand reputation and future sales and profits could be at-risk.

The historic awareness of food safety in foodservice operations positioned the industry well ahead of other industries in terms of understanding the need to immediately outfit workers with face masks and enforce proper employee hygiene. A key component of the industry's employee hygiene guidance includes frequent and proper handwashing. According to ServSafe's Handwashing 101 employees should be washing their hands before and after such activities as handling raw meat, poultry, or seafood; after using the restroom; after touching your hair, face, body, clothes or apron; after sneezing, coughing or using a tissue; after smoking, eating, drinking or chewing gum; after using chemicals; after emptying or taking out the garbage; after clearing tables or washing dirty dishes; and after handling money[2].

However, even with this well structured foodservice industry guidance, practical gaps still exist in foodservice. The Center of Disease Control and Prevention's (CDC) research revealed workers engaged in about nine activities an hour which should involve handwashing yet only washed their hands in only 27% of the circumstances in which they should have[3].

Can you remember the last time you got food poisoning from eating out? It is a very unenjoyable experience that can have a lasting impact on where you choose to dine. According to the CDC, approximately 48 million Americans get sick annually from foodborne diseases, which results in 128,000 hospitalizations, and unfortunately 3,000 deaths[4]. Proper handwashing is a critical component of a foodservice operator's food safety and risk management plan and the single-most important means of preventing the spread of infection.

The Food and Drug Administration (FDA) recommends the following steps when washing hands

1. Rinse hands under clean, warm running water
2. Apply soap and rub all surfaces of the hands and finger together vigorously with friction for at least 10 to 15 seconds, giving particular attention to the area under the fingernails, between the fingers/fingertips, and surfaces of the hands, arms, and surrogate prosthetic devices
3. Rinse again thoroughly with clean, warm running water
4. Thoroughly dry the hands and exposed portions of arms with single-use paper toweling, a heated-air hand-drying device, or a clean, unused towel from a continuous towel system that supplies the user with a clean towel

100°F (38°C) water is very important to the handwashing process, however difficult to achieve instantly and consistently

In layperson terms, 100°F is required and your health inspector will check for it as part of a routine inspection. 100°F is comfortable, increasing the likelihood employees adhere to the FDA handwashing steps. 100°F optimizes lathering of soap, and if you are in a kitchen with greasy foods, 100°F helps gets fat, oil and grease off your hands.

So, while 100°F is the optimal temperature for handwashing, do most employees have access to a thermometer to know when the water reaches 100°F prior to beginning their handwash? If employees go off the feel of the temperature, how do they know when the water has reached 100°F prior to washing? How far away is the water heater installed and how long will it take for the warm water to reach the hand sink? How much employee productivity is lost while waiting for water to warm up? How much water is wasted while waiting for the water to reach the minimum temperature? What other risks are foodservice operators exposed to if employees are cutting corners on handwashing?

The costs associated with waiting for water to heat up are staggering. Using the CDC's research that workers engaged in about nine activities an hour which should involve handwashing yet only washed their hands in only 27% of the circumstances in which they should have[3], food-handling staff would be washing their hands 8-24 times per 8-hour shift (2-3 times per hour), depending on the menu, the people serviced, supervisory leadership, and the owner's tolerance of risk. If you assume a restaurant chain with 100 stores open 12 hours a day, 365 days per year with 6 employees washing their hands 2 times per hour, this equates to 5,256,000 annual hand washes. Now assume each employee turns on the water and waits 10 seconds (many claim it takes much longer for water to warm up to 100°F) for the water to warm up and then keeps the water running while scrubbing their hands with soap for the COVID-19-era recommended 20 seconds. At a 0.5 gallon per minute flow rate (many faucets are at 1.0-2.2gallons per minute), this example chain would be wasting 1,314,000 gallons of water annually. Now assume the wasted water costs $1.50 per 1,000 gallons and energy to heat the running water is $1.50 per BTU, in addition to applying an average hourly employee wage of $14/hour to the wasted employee productivity time waiting for the water to reach proper temperature, this chain would be wasting $616,156 annually standing around waiting for water to heat up and letting it run while scrubbing for 20 seconds.

The FDA's Employee Health and Personal Hygiene Handbook[5] states:

- Warm water is generally more comfortable than cold water and encourages handwashing for the recommended duration.
- The water temperature used in handwashing can also affect the solubility or emulsification of some soils. Warm water is more effective than cold water in removing fatty soils.
- An adequate flow of warm water will cause soap to lather and aid in flushing soil quickly from the hands.
- The 2017 FDA Food Code specifies a minimum handwashing water temperature of 38°C (100°F).

Foodservice operators can minimize risk, save money and conserve water by adopting more sustainable solutions that make handwashing easier and support proper handwashing behaviors

Foodservice operators must act quickly to invest in cost-effective technologies that protect their employees, brand and profits. A global sandwich chain shared their problem of getting 100°F water to the hand sink for proper handwashing. And having some awareness of the InSinkErator™ line of near-boiling instant hot water dispensers asked if we could build a system that dispenses water at 100°F for handwashing? A new idea was born.

While known for being the world's largest manufacturer of food waste disposers with over 80 years of experience, Emerson's InSinkErator business has designed industry leading, near-boiling, instant hot water dispensers for over 45 years with global distribution in the United States, Canada, Mexico, Australia, New Zealand, and across Europe, Middle East and Asia. The water products portfolio includes hot water tanks, faucets and filtration and are engineered to meet specifications set by electrical, health and plumbing regulatory agencies, both domestically and internationally. The water products are designed to be safe to use, include functionality to maintain proper temperature, and are built to be both reliable and durable.

Leveraging the water products technology and history of innovation, the InSinkErator engineers determined providing 100°F water instantly and consistently in a commercial kitchen for handwashing applications was feasible to develop. While the engineers went to work on the design, the marketers became very interested in understanding the issues and pain-points of getting 100°F water to hand sinks for handwashing in food safety applications. The team preformed extensive market research, held focus groups with foodservice management and employees, visited local restaurants and other foodservice operations, talked to large national chains, and consulted with foodservice equipment dealers, manufacturer's sales representatives, and foodservice design consultants. It was clear there was a common problem of lack of warm water at hand sinks and not a single technology existed to provide instant and consistent 100°F warm water for handwashing.

InSinkErator to launch a patent pending new product providing instant and consistent 100° F water for handwashing

Available in June 2021, the InSinkErator Instant Warm Handwash System will provide foodservice operators with a sanitary, touchless handwashing solution that promotes hygiene by providing instant and consistent 100°F warm water in locations where employees are required to wash their hands consistently and effectively. The system combines a 2/3rd gallon, stainless steel hot water tank and touchless, 2-in-1 faucet that can be splash or deck mounted to 1, 2, or 3-hole sink with 4" centers, and the hot water tank can be easily mounted on the wall below the hand sink. The system works by cold water entering the tank enclosure through the supply hose. The cold water then travels through the mixing valve into the tank where it is heated to approximately 145°F. Once motion is detected by a user at the faucet sensor, the solenoid valve will open, mixing the water from the tank with additional cold water to deliver 100° F water to the faucet. The system is designed to provide at least 40 twenty-second instantly warm 100°F handwashes per hour at a 0.5 gallon per minute flow rate. The system is easy to install, care for and use. Only a hand sink, 115V outlet and cold-water line is required, which removes stress on the facility's hot water heater. The system is hard wired with a standard plug so there is no battery to fail on the sensor. More information on the system can be found at www.insinkerator.com/wash-2.

The penalty for a COVID-19 or other food safety breakout at a foodservice operation could be very costly. Health inspectors will continue to test for 100°F water at hand sinks. The cost of wasted water and employee productivity while employees wait for water to heat up can now be avoided. Foodservice operations must act quickly to invest in cost-effective technologies that help protect their employees, brand and profits.

1 https://www.cnbc.com/2020/06/02/3-charts-that-show-the-us-restaurant-industrys-coronavirus-recovery.html

2 https://www.servsafe.com/ServSafe/media/ServSafe/Documents/Handwashing.pdf

3 https://www.gchd.org/home/showpublisheddocument?id=5665

4 https://www.cdc.gov/foodborneburden/index.html

5 https://www.fda.gov/media/77065/download

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