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RESEARCH ARTICLE

FOOD SAFETY MANAGEMENT IN LIGHT OF PANDEMIC COVID-19FOR MEDIUM CARE POSITIVE CASES UNIT(MCU)AT 57357CCHE

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Abstract

COVID-19 is a new strain of coronavirus to which humans have not got immunity. It originated in China and has quickly spread around the world.It is a disease caused by an infection by SARS-CoV-2 virus, first identified in the city of Wuhan, in China's Hubei province in December 2019. COVID-19 was previously known as 2019 Novel Coronavirus (2019-nCoV) respiratory disease before the World Health Organization (WHO) declared the official name as COVID-19 in February 2020. Like the other coronaviruses, the SARS-CoV-2 virus primarily causes respiratory tract infections, and the severity of the COVID-19 disease can range from mild to fatal.

Introduction:-

The SARS-CoV-2 virus belongs to the family of viruses called coronaviruses, which also includes that cause the common cold and cause more serious infections such as severe acute respiratory syndrome (SARS), which was caused by SARS-CoV in 2002, and Middle East respiratory syndrome (MERS), which was caused by MERS-CoV in 2012. Coronaviruses are a family of viruses made from RNA (Ribo Nucleic Acid), a single strand of four different amino acids carrying the genetic information of the viruses. There are many species which cause respiratory and gastrointestinal illness in humans and animals.

The pandemic coronavirus, COVID-19, spreads readily between people in droplets from coughing, sneezing or talking, the main risk of transmission is from close contact with infected people. The droplets may remain airborne for three - four hours and lose their infectivity rapidly. Within about an hour, half of their potency has gone. Based on various reports(Hao, et al., 2020), they may remain viable on surfaces like plastic and stainless steel for two to four days , on cardboard for about 24 hours and on cupper for 4 hour. After six to seven hours on steel or plastic (under laboratory conditions), about half of the particles have lost viability i.e. no longer likely to cause infection. As a result, it is strongly advised that one use caution with objects or surfaces that are possibly contaminated. Thus should avoid touching door knobs or elevator buttons with your hands and so on. The viral particles picked up from cloth are only 1% of the number of particles picked up from hard surfaces. Natural fibres break up the droplets in which the virus is suspended, allowing the virus to dry out quickly and die(MMWR, 2020).

An infection can start with just a small number of articles (the dose). The actual minimum number varies between different viruses and don't yet know what that 'minimum infectious dose' is for COVID-19, but might presume it's around a hundred virus particles bodily fluids from those infected. When that dose reaches respiratory tract, one or two cells will be infected and will be re-programmed to produce many new viruses within 12-24 hours (for COVID-19, we don't yet know how many or over how long). The new viruses will infect many more nearby cells (which can include cells of immune defense system too, possibly compromising it).

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In the COVID-19 clinic, the purpose of PPE is to prevent such large exposures leading to high dose infection. Situations should be concerned about are potential high dose exposure of clinical staff conducting procedures on patients who are not known to be infected (CDC, 2019).

Genetic material from the virus:
Although COVID-19 needs a human host to reproduce and spread, research (Chunyan et al. ,2020) has found that genetic material from the virus is detectable on various objects and surfaces outside of those hosts. One investigation found genetic material from the virus on floors and other surfaces in hospitals andhalf of the shoes that tested came up positive , 75% of the computer mice from the ICU they tested had genetic material from the virus, as did 60% of trash cans and 40% of handrails. The air itself in the ICU yielded positive tests 35% of the time.

Foodsafety management:
According to multiple health and safety organizations worldwide, including the CDC, the USDA, and the European Food safety Authority, there is currently no evidence that COVID-19 has spread through food or food packaging. Previous coronavirus epidemics likewise showed no evidence of having been spread through food or packaging, food is not a vector (WHO , FAO , 2020).

Food safety in hospitals is of paramount importance, since their patient populations are at higher risk of developing a foodborne illness, especially:
1. The elderly
2. Infants and young children
3. Pregnant women
4. Chemotherapy patients
5. Unlike foodborne gastrointestinal (GI) viruses like norovirus and hepatits A that often make people ill through contaminated food, the COVID-19 is a virus that causes respiratory illness. It may be possible that a person can get COVID-19 by touching a surface or object that hasrisk infection by the virus on it and then touching their mouth, nose, or possibly eyes (EU, 2020).Hospitals typically do a good job of preventing foodborne illness due to four essential protocols and it is mandatory for all the food process to implement General Hygiene Practices (GHPs) (fssai,2020).
6. Implementing HACCP (the importance of washing hands and surfaces often, when preparing foods as well as separating raw foods from other foods, cooking foods to the right temperature, and refrigerating foods promptly (IFC, 2020).
7. scheduling regular inspections, internal audit
8. Monitoring and recording food temperatures and
9. Continuous education for employees

Methodology:-
We will take appropriate actions to protect the safety of our kitchen's food supply.

Prevention:
The best way to prevent infection is to avoid exposure to the virus:
1. Wash hands regularly and thoroughly with soap and water (lather for 20 seconds) , use an alcohol based (at least 60%) hand sanitizer.
2. avoid contact with others who are sick (Dwight, 2020)
3. avoid touching your mouth, nose, eyes or face
4. cover coughs and sneezes into a tissue
5. clean and disinfect surfaces (alcohol or bleach based cleaning solutions work best for coronaviruses)
6. Face masks can help in reminding to avoid touching the face, and will help prevent the spread of the disease to others.
7. social distancing
8. Do not share dishes, drinking glasses, cups, eating utensils, towels, with other people.
9. Clean and disinfect areas.
10. The following are recommended cleaning agents, which may be used on hard surfaces that have demonstrated efficacy within 30 seconds of contact:
11. -70% alcohol

0.5% hydrogen peroxide
0.1% bleach,

1. the importance of applied the good manufacturing practices (GMPs) , thorough cleaning and sanitation of food processing equipment and facilities (WHO, 2020 **)**
2. Initiate full clean &sanitisation programs between shifts (NRAEF, 2020).
3. Maintain thorough cleaning and sanitising of facilities, equipment, transport vehicles , food contact surfaces , also door handles, light switches, floors, walls, Shopping carts, shopping baskets, counters, cafe areas (tables, chairs….).
4. As init is always a good practice to do not use compressed air or water sprays to clean potentially contaminated surfaces, as these techniques may aerosolize infectious material.
5. Maintain strict requirements around worker health and personal hygiene.
6. Following the main four simple steps – Clean, Separate, Cook, and Chill.
7. Experts assume that the virus will respond like other pathogens to temperature of 65°C for at least 3 minutes, is sufficient to kill it.
8. Any worker with a suspected communicable disease (such as coughing, sneezing, flu-like symptoms, and gastrointestinal illness) MUST be excluded from the workplace (Lisa, 2020).
9. For sanitising, current advice is that coronavirus is destroyed by hot water (e.g. by dishwashers operating above 60 C), or by commercial sanitisers normally used.
10. Personal protective equipment (PPE), such as masks and gloves, can be effective in reducing the spread of viruses within the food industry, but only if used properly and effective handwashing and sanitation at each stage of food processing, handled anddistributed.
11. Food workers must awareness of COVID-19 symptoms
12. as far as possible, a distance of 2 metres should be maintained between users staff (practice social distancing),
13. Food Safety Program will help to determine, implement and manage the administrative policies and procedures required to govern food safety operations and to ensure that only safe, healthy food is served to patients. To verify the efficacy of Food Safety Program, must schedule routine inspections.
14. Temperature monitoring is a standard — and extremely important — practice in kitchen, includes monitoring of(NRAEF, 2017):

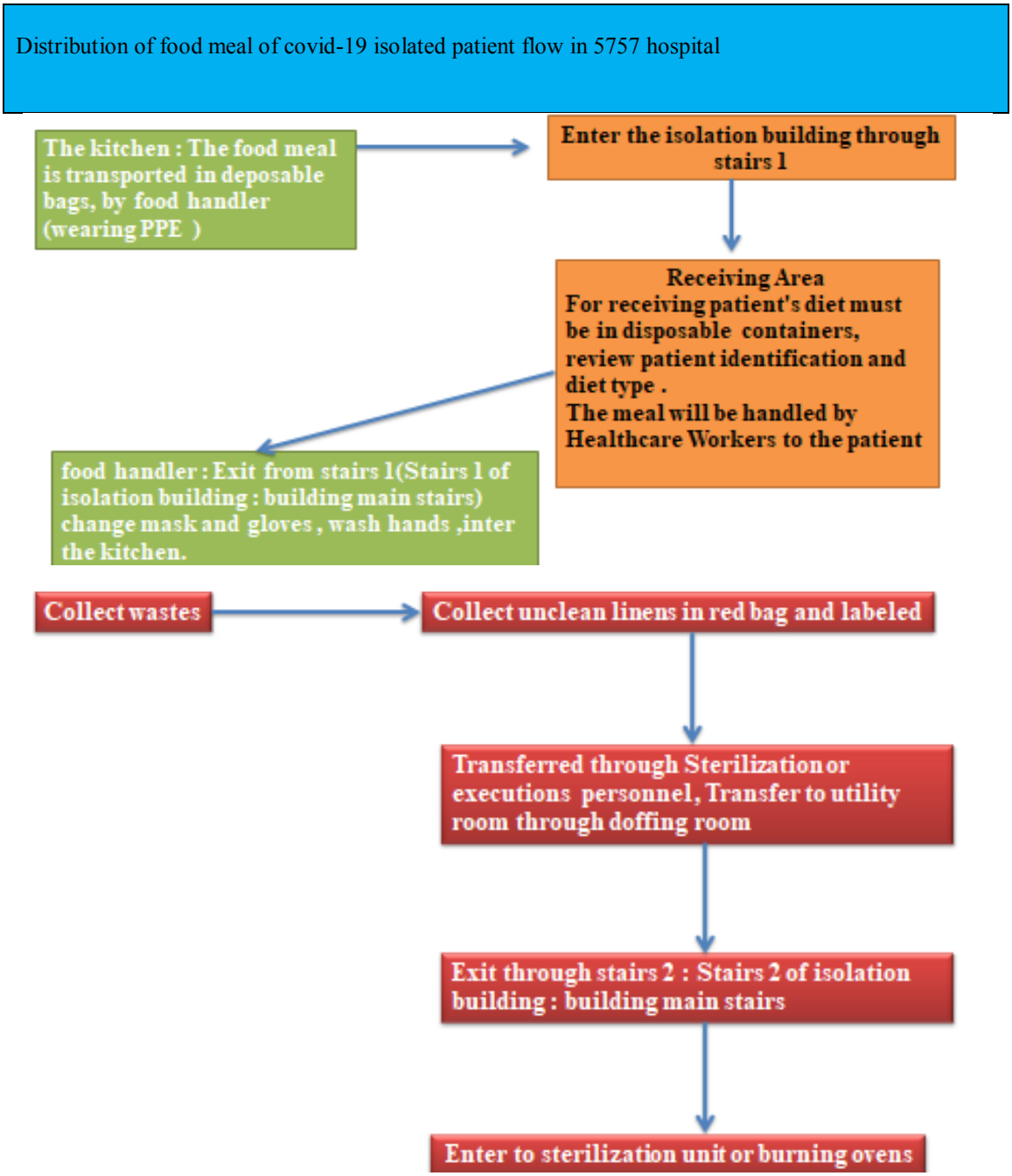
- refrigerators temperatures
- final cooking temperatures
- temperatures of food before and after service
- temperatures in dishwashing machines

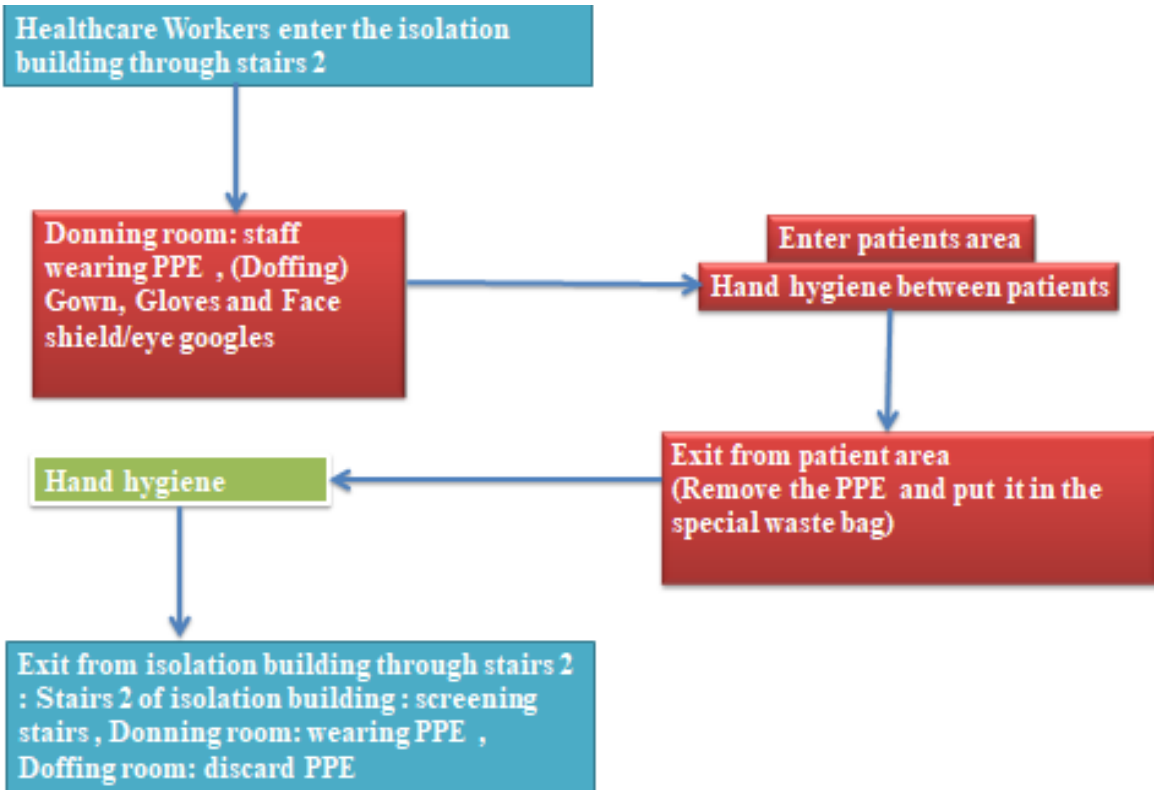
Requirementsforcrisismanagement
Providing food to patients with confirmed or suspected COVID-19

The best approach is to maintain:

1-- Minimize the numbers of food handlers' staff providing food to patients with confirmed or suspected COVID-19.
2- When providing food to a patient with Covid- 19 completely prevents contact with the food handler, but by who is qualified for this, as the auxiliary nurse, while maintaining the social distance and taking all the necessary precautions.
3- Install barriers to limit contact with patients, use of tape and signs on the ground to designate waiting areas outside and inside buildings which are at least 2m apart,
4- Must be using disposable eating utensils, dishes, drinking cups and executed after use by burning it in special ovens or by an autoclave before throwing it.
5- Requiring use of face masks or other respiratory protection, Wash hands regularly with soap and water and avoid touching face to reduce risk (WHO,2020).
6- Good hygiene at all times inside the kitchen.
7- The importance of applied the good manufacturing practices (GMPs) andHACCP programseliminate reasonable probability of any virus , during food handling and preparation, cooking thoroughly , cooking meats especially mince and chicken, egg thoroughly and avoiding cross-contamination.
8- The biggest risk of transmission of COVID-19 is being around individuals who are symptomatic, should be following kitchen employee health policies and local health department recommendations and be asking sick employees to leave immediately. Also any worker with a suspected communicable disease (such as coughing, sneezing, flu-like symptoms, and gastrointestinal illness), MUST be excluded from the workplace.

9- As far as possible, a distance of 2 meters should be maintained between users staff (practice social distancing),
10- Maintain thorough cleaning and sanitising of facilities, equipment, transport vehicles, food contact surfaces, also door handles, light switches, floors, walls, cafe areas (tables, chairs….), (Garret , 2020).
11 -Personal protective equipment (PPE), such as masks and gloves, can be effective in reducing the spread of viruses within the food synthesis, but only if used properly and effective hand washing and sanitation at each stage of food processing, and handling.
12- Collect the wastes(as utensils used by the patients and the rest of food)in red bag and labeled, transferred through Sterilization or executions personnel, transfer to utility room through doffing room, enter to sterilization unit or burning ovens.




Healthcare Workers enter the isolation building through stairs 2
Donning room: staff wearing PPE , (Doffing) Gown, Gloves and Face shield/eye googles
Enter patients area
Hand hygiene between patients
Exit from patient area (Remove the PPE and put it in the special waste bag)
Hand hygiene
Exit from isolation building through stairs 2 : Stairs 2 of isolation building : screening stairs , Donning room: wearing PPE , Doffing room: discard PPE




abeid
catering

Dairy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