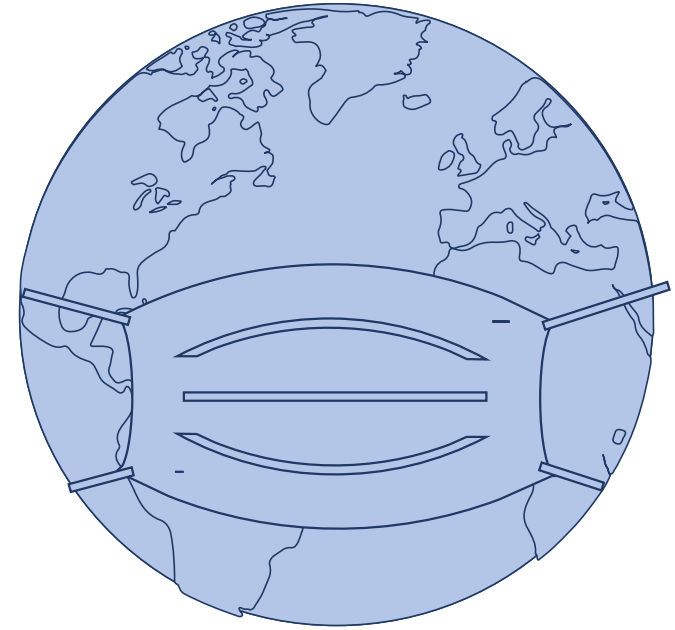


RECOMMENDED MANUFACTURING GUIDELINES

UNDER COVID-19 PANDEMIC 2020



Ministry of Trade & Industry
وزارة التجارة والصناعة



مركز تحديث الصناعة
INDUSTRIAL MODERNISATION CENTRE



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



Foreword and Acknowledgement

- ❑ This document is designed to help manufacturing entities in Egypt to adopt feasible manufacturing guidelines in the context of COVID-19.
- ❑ The following manufacturing guidelines were generated by integrating both secondary data reviewing guidelines from international organizations including the WHO, OSHA, UNIDO Field Office in Lebanon, the Scottish government Covid-19 manufacturing sector guidance, and the Indian Hygiene and Safety guidelines for Food Businesses, and primary data attained from representatives from the food, pharmaceutical, medical and PPE sectors, in addition to representatives from Egypt's MOH, private hospitals, local organizations, and business organizations.
- ❑ The study relied on conducting a comparative analysis between current adopted practices inside manufacturing facilities and the commonly shared guidelines in conjunction with expertise input.
- ❑ This guideline has been developed by UNIDO Regional Hub in Egypt, with the support of Industrial Modernization Center (IMC) of Ministry of Trade and Industry (MoTI).
- ❑ The document is inspired by the Lebanon industrial sector guidance document published by UNIDO titled "Recommendations and preventative measures in response to COVID-19: Guidance for the industrial sector", sponsored by Italy and Japan.
- ❑ The guideline was prepared by Mohamed Kamal, Managing Director of Enroot Development, under the general supervision of Bassel Elkhatib, Director and UNIDO Representative of Egypt Regional Hub, and Ahmed Rezk, National Programme Officer.

Introduction

COVID 19 pandemic is an unexpected novel pandemic that current manufacturing entities had never experienced.

Major fear and occasional panic has impacted the workflow and productivity of entities.

The lack of a central reference point despite a high media visibility for the pandemic's hazards has led to a high level of improvisation among the manufacturing entities.

The policies adopted to contain this pandemic among manufacturers were mostly derived from unclear "personal" fear of management, a motive to keep the workers (human capital) safe, and a goal to avoid contamination of the produced goods and maintain work flow.

Most active entities have generated internal policies based on the WHO and OSHA guidelines.

While these policies are of value, mostly are simply "over protective" and hence potentially leading to an "over spending" on the matter, placing financial burdens on organizations despite recession.

Some policies might also lead to negative impacts, for example, forming a "septic" focus in the plant that spreads other types of micro-organisms.

Hence; it is highly recommended to generate a credible point of reference for manufacturing entities to refer to with knowledge on viral and bacterial infectious mechanism.

On that basis, this manufacturing guideline focuses on providing "simple" effective guidelines and would also help manufacturers in trouble-shooting arising situations related to COVID 19.

The recommended manufacturing guideline provides comprehensive and feasible manufacturing guideline to be adopted in the Egyptian context considering best practices and contextual constrains, avoiding unnecessary spending and without compromising on employees' safety nor products safety and quality.

The guidelines are sought to be promoted by supporting agencies among manufacturers to guarantee operational sustainability.

MEASURE 1

DAILY ENTRY SCREENING PROTOCOL FOR STAFF AND VISITORS



RECOMMENDED MEASURES

- Temperature checks must be conducted upon entering the factory or enterprise and new face masks handed out.
- Post clear and visible signs at the entrance to warn individuals to :
 1. Not enter facility of experiencing COVID-19 symptoms
 2. Practice hand hygiene
 3. Follow proper respiratory etiquette
- Have employees and visitors fill out an employee/visitor screening questionnaire and/or a COVID-19 Symptoms Checklist.
- Train the individual who is conducting the screening on how to keep safe and provide protective measures such as the use of physical barrier such as a plexiglass barrier or appropriate personal protective equipment (facial mask, gloves).
- Regularly verify the reliability and accuracy of measuring devices.
- Disinfect thermometers or other devices between users.
- Ensure the privacy of screening participants.
- Symptomatic individuals should be instructed to immediately leave the facility and self-isolate.



MEASURE 2

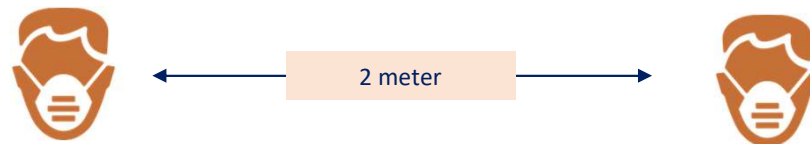
PHYSICAL DISTANCING IN THE WORKPLACE



RECOMMENDED MEASURES

- Make sure all employees are aware of why social and physical distance matter, and ensure procedures are visually represented across the workplace.
- Promote physical distancing between employees by 1-2 meters while wearing masks.
- Suspend all physical meetings or reduce number of employees allowed in meetings.
- Enforce work from home for those whose work nature allows or reduce no. of working days.
- Regularly disperse shifts and break times to avoid non-essential staff interaction.
- Reposition workstations on either side of processing lines to create more distance between workers so that they are not facing each other. If not possible, ensure that all workers are using PPE.

- When possible, organize staff into small working groups or teams where employees work on shifts together.
- Identify high risk areas like entrances and exits, and if possible, take measures such as staggering departure and arrival times, or introduce a one-way entry or exit point if the premise has more than one access point.
- Use markings and signs to remind workers to maintain their location at their station away from each other.
- Lifts should only be used by disabled people, for essential purposes, or one person per lift basis where possible.
- Ensure adequate physical distancing and limiting the number of employees in vehicles with vacant seats for distance.



MEASURE 3

HAND HYGIENE PROTOCOL



RECOMMENDED MEASURES

- Train employees on the importance of hand-washing and how to properly hand wash (soap and water for at least 20 seconds).
- Provide easy access to places where employees can wash their hands.
- If workers or customers do not have access to soap and water, ensure the presence of alcohol-based hand rubs containing at least 70% alcohol at entrances, exits, storage, delivery and transition areas.
- Ensure the supplies are regularly refilled.
- Implement contactless clocking in and out systems. Use of card attendance rather or eye detection is recommended rather than fingerprint access.



1. Rub palm to palm



2. Rub backs of both hands



3. Rub palm to palm with fingers interlaced



4. Rub backs of fingers (interlocked)



5. Rub both thumbs



6. Rub both palms with fingertips and rub each wrist



MEASURE 4

PERSONAL PROTECTIVE EQUIPMENT (PPE) I: FACE MASKS & PROTECTIVE CLOTHING



RECOMMENDED MEASURES

- Display posters promoting respiratory hygiene and proper usage of surgical face masks/coverings explaining the Do's and Don'ts for wearing a mask.
- Any new incomer must take his old face mask off and is provided with a new one in case he does not have one.
- Face covers should be changed every six hours or as soon as they get wet.
- **For employees in the food sector**, clean protective clothing such as full sleeves cloths/aprons, head gears, caps and gloves should be worn at all times while in the production area.
- Provision of reusable cloth face coverings should be considered if surgical or n95 masks are not available, putting into consideration that cloth masks are significantly low in protection in comparison to surgical masks.
- In case of use of cloth masks, it is integral to implement the following standard operating procedures for using them:
 1. Each employee is to be handed seven cloth masks. One is to be used every day after at least five days aeration (after washing).
 2. If used, a cloth mask can be washed for a maximum of 30 washes, and then must be thrown away.
 3. If cloth masks are used, all surrounding individuals must be wearing masks as well.

How to use a face mask properly



Make sure the mask covers your mouth and nose



Ensure it fits snugly on your face - no gaps



Wash your mask after each use



Wash your hands before and after touching your mask



DON'T have it sitting under your chin or pull it around while wearing



DON'T keep touching your mask once it's fitted

MEASURE 5

PPE II: PROPER USAGE OF DISPOSABLE GLOVES



RECOMMENDED MEASURES

INSTRUCT EMPLOYEES ON WHEN AND HOW TO USE GLOVES:

- The need to avoid touching their face when wearing gloves, including, eyes and mouth.
- The need to appropriately remove disposable gloves to avoid hand and any contamination.
- The need to wash hands before and after using gloves as gloves are not a substitution for handwashing.

- **For employees in the food sector**, gloves worn while handling food items should not touch any other surfaces, equipment or utensils. If any non-food related item is touched, the gloves shall be changed and properly disposed of.



1. Grasp the outside of one glove at the wrist. Do not touch your bare skin.
2. Peel the glove away from your body, pulling it inside out.
3. Hold the glove you just removed in your gloved hand.
4. Peel off the second glove by putting your fingers inside the glove at the top of your wrist.

5. Turn the second glove inside out while pulling it away from your body, leaving the first glove inside the second.
6. Dispose of the gloves safely. Do not reuse the gloves.
7. Clean your hands immediately after removing gloves by washing them.

MEASURE 5

AIR VENTILATION GUIDANCE



RECOMMENDED MEASURES

- Evaluate the workplace to assess the modifications needed in the existing air conditioning systems.
- Increase the frequency of change of filters for the existing air conditioners.
- Apply daily air ventilation for one hour before operations begin and two hours after operations stop.



MEASURE 6

CLEANING AND SANITATION OF SURFACES



RECOMMENDED MEASURES

- Conduct a traffic mapping of employees working inside the plant to identify all contact/touch surfaces and limit manual intervention to the maximum possible.
- Discourage workers from using other workers' phones, desks, offices, or other work tools and equipment, when possible.
- Provide hand sanitizers/disposable wipes across commonly used surfaces.
- Use Environmental Protection Agency-approved cleaning chemicals or which have label claims against the coronavirus.
- Equipment, staff rooms, work areas, canteens and all surfaces with possible human interaction should be sanitized after use through an organized and supervised cleaning schedule using approved antiseptics daily.
- Buses should be sanitized prior and after receiving passengers. Passengers should be checked for temperature prior riding the bus. All passengers should be wearing face masks.
- All personal belongings should be removed by each employee at the end of the shift from the work area.
- Keep doors open where possible to minimize the surfaces touched.



MEASURE 7

REPORTING OF COVID-19 ILLNESS



RECOMMENDED MEASURES

- If an employee is confirmed or suspected to have COVID-19 it will be necessary to track and notify all close contacts of the infected employee so they too can take measures to minimize further risk of spread.
- If an employee is confirmed to have COVID-19 it will be necessary to close the area/workspace used by the sick worker/employee for 24 hours for sanitation and disinfection.
- All the surfaces that the infected person has been in contact with must be disinfected.
- Instructing staff who have had close contact with the infected employee to stay at home for 14 days from the last time they had contact with the confirmed case and to practice physical distancing.
- Identify persons with higher risk factors, and support them, without inviting stigma and discrimination.

- If the worker displayed the symptoms while at work, then he/she can be placed in an isolation room (upon his/her approval) immediately until a transportation mean is availed for them, where air ventilation is necessary. He/she should not enter the factory's premises until he brings a doctor's certificate confirming his well-being.
- Re-organizing employees into small workgroups to minimize disruption of workforce in the event of an employee reporting sick with symptoms of COVID-19.
- Adopt measures to maintain confidentiality of infected employees.
- Staff who were not close contact with the infected employee, can resume work normally.



MEASURE 8

RECEIVING, TRANSPORT AND DELIVERY OF PRODUCTS



RECOMMENDED MEASURES

- Drivers and other staff delivering to premises should not leave their vehicles during delivery, when possible.
- Drivers should be supplied with an alcohol-based hand sanitizer, a disinfectant, and paper towels.
- Drivers also need to be aware of the need to ensure that all transport vehicles are kept clean and frequently disinfected.
- Drivers need to be aware of physical distancing when picking up deliveries and passing deliveries to customers and of the need to maintain a high degree of personal cleanliness and to wear clean protective clothing.
- Encourage the use of contactless or cashless payment where possible and simplify procedures to allow distancing such as digital signatures, text acknowledgment of delivery, etc.).
- Limit the sharing of pens or equipment between associates or sanitize between users.
- PPE must be used in all areas including loading and pick-up of merchandise.
- **For food transportation**, transport vehicles should be regularly cleaned and sanitized. The vehicle should be used solely for food delivery/distribution.



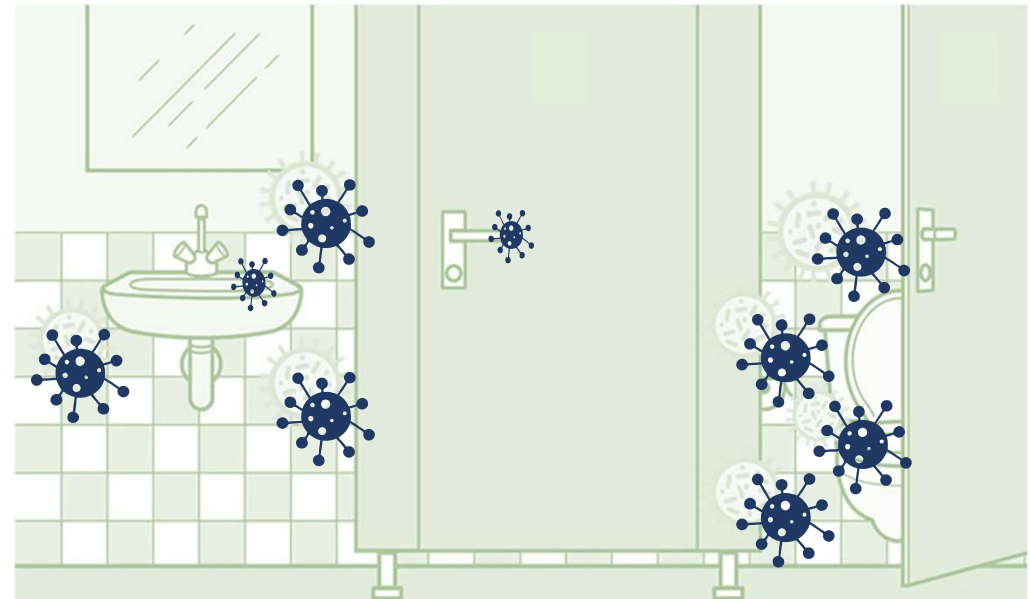
MEASURE 9

REST ROOMS



RECOMMENDED MEASURES

- Rest rooms need to be disinfected every 3 hours.
- New PPE material to be worn after using of the rest room.
- Closed containers to be available to place used PPE material in.
- Where possible, provide paper towels as an alternative to hand dryers.
- If possible, provide hand sanitizers outside restroom doors.



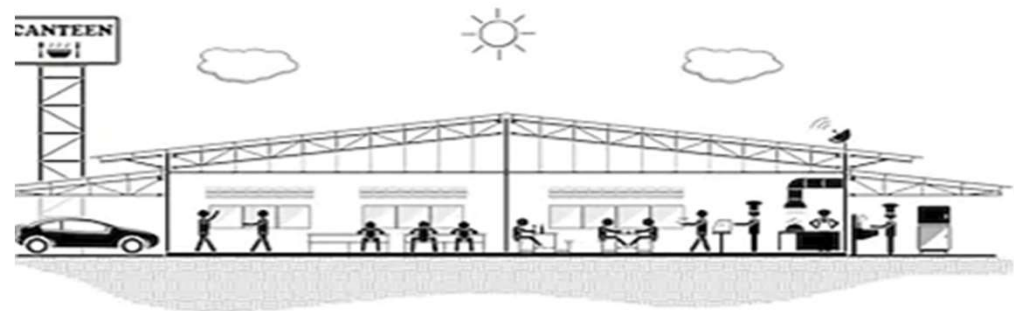
MEASURE 10

NON-PRODUCTION AREAS: STAFF CANTEENS AND BREAK/SMOKING AREAS



RECOMMENDED MEASURES

- Implement a full risk assessment across non-production area in the workforce in consultation with employees and their representatives.
- Take measures to reduce potential crowding in the identified areas for communal gatherings by dispersing break/lunchroom times to reduce staff numbers in a canteen at any one time.
- If possible, move cafeteria/eating space outdoors.
- Create markings on the floor in cafeteria and mosque to mark seating/standing area to ensure a distance of two meters between each individual.
- Use disposable rather than multiple use beverage cups/cutlery/plates.
- Provide ready-made meals and drinks in disposable packaging.
- Have hand sanitizer, sanitizing wipes and soap easily available in lunch and breakrooms and clean facilities at least daily or after each break.
- If required in canteens, staff should be encouraged to use contactless or cashless payment.
- Employees should change mask, gloves and overshoes after each break.



MEASURE 11

LAUNDRY CLEANING AND WASTE DISPOSAL



RECOMMENDED MEASURES

- It is recommended that cloths worn inside manufacturing plant be limited within the factory, thus, to be worn and left in the factory at the beginning and at the end of the day.
- When laundering items, use the highest appropriate temperature setting (60–90°C) with laundry detergent and dry items completely.
- Wear disposable gloves when handling dirty laundry.
- Keep soiled uniforms separate from clean uniforms.
- Wash hands immediately after removing gloves or after handling dirty items.
- When possible, disposable protective uniforms can also be used.



**WASH LAUNDRY
THOROUGHLY**

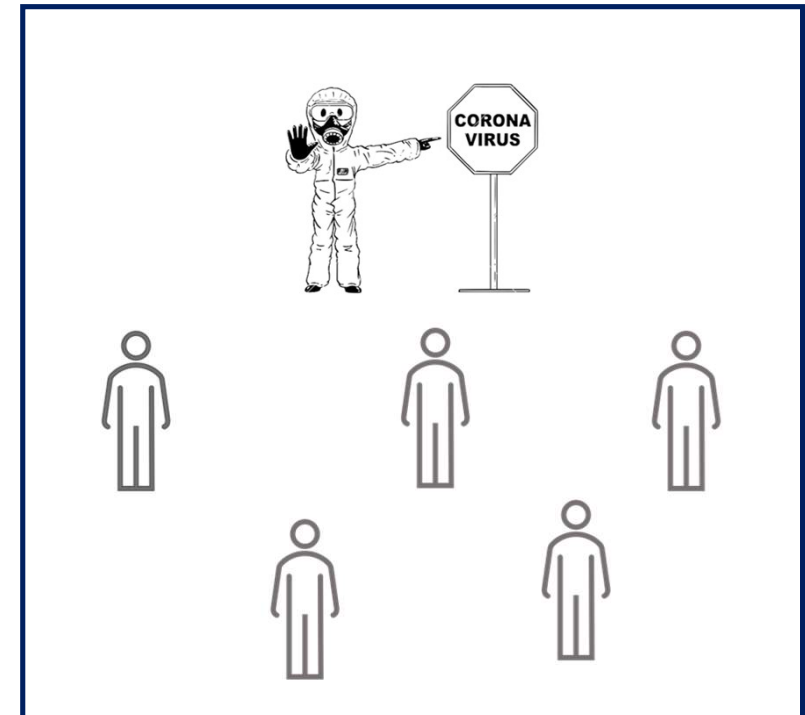
MEASURE 12

REGULAR COMMUNICATION WITH STAFF



RECOMMENDED MEASURES

- Print the necessary guidelines to be followed and hang them in every floor and department.
- Regularly communicate expectations, update and remind staff on COVID-19 control strategies.
- Have an open channel of communication with employees to keep tracks of any challenges facing them in adopting the guidelines.
- Conduct employee trainings in small groups and maintain physical distance between people.
- Evaluate personnel performance after initial training, and retrain them, if needed.
- Be mindful of employees who may be struggling in these stressful times.



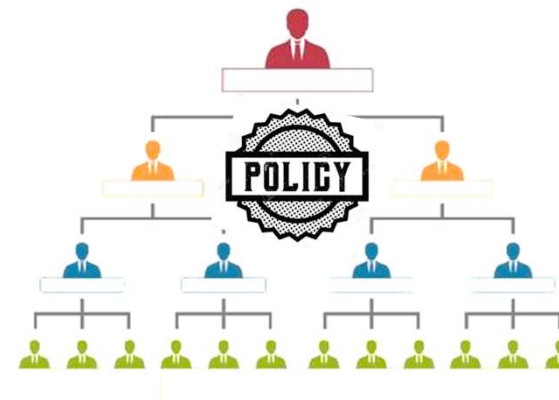
MEASURE 13

ORGANIZATIONAL MEASURES FOR INDUSTRIES



RECOMMENDED MEASURES

- Formulate a crisis management team to be responsible for handling all cases and issues related to Covid-19.
- Keep documentation and track suspected and confirmed cases.
- Hold staff meetings on COVID-19 control strategies to conduct worksite risk assessments that address potential COVID-19 exposure risks and prevention strategies, in consultation with their occupational health professionals. (online or obey physical distancing during these meetings).
- Revise and update health and sick leave policy to include offering paid sick leave for Covid-19 infection employees.
- Plan for backup workforce if existing employees get sick, exposed or another scenario occurs that could lead to a widespread labour shortage.
- Investigate/penalize any worker who refuses to comply with the communicated guidelines.
- Formulate a separate policy for disabled people which involves taking extra steps to ensure that they are informed about the new procedures and that they can access and use the facilities.
- Consider introducing a policy to promote positive mental health and well-being in the workforce.



MEASURE 14

WASTE MANAGEMENT MEASURES FOR COVID-19



RECOMMENDED MEASURES

- Waste contaminated with covid-19 should be treated like any other regulated medical waste.
- Contaminated PPE should be placed in red bags, and it must be ensured that the bag containing the waste is properly closed and tied with a knot in order to avoid any leakage.
- It is recommended to place the bags used inside dedicated bins or containers to collect PPE waste, preferably with lids/covers.
- Containers should be tightly sealed for pickup to prevent leaks or spills.
- All sharp objects should be placed in a bag and placed into single-use containers.
- It is advisable to cut masks and gloves prior to disposal to ensure that they are not re-used (personal bases action).
- Support needs to be given to waste workers to follow infection control measures and use PPE such as gloves, facemasks, and eye protection to prevent exposure to infectious material.
- Inform waste workers of personal infection control practices, and how to safely dispose of PPE.
- Hands must be cleaned with soap and water for 20 seconds or by an alcohol-based sanitizer immediately after any waste handling.
- In case of a high-risk condition in which multiple workers were tested positive in the workplace, it is recommended to have a medical removal service pick up and transport the used PPE for proper disposal.



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