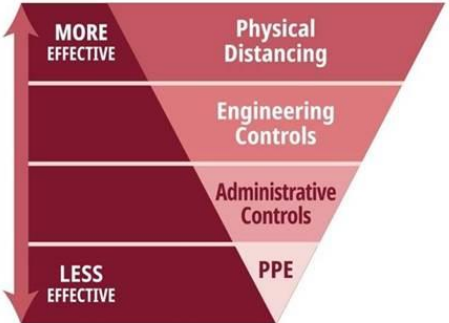


Workplace COVID-19 Risk Management (Control Banding) Matrix

	Low Risk (Caution)* Examples: Workers are not in frequent or close contact with other workers or the general public ¹ . Occasions/circumstances where routine physical distancing (< 2 metres) is generally possible, screening & other procedures are in place, ventilation and cleaning is sufficient, and masks are available for occasional variations.	Medium Risk* Examples: Frequent contact with the possibly asymptomatic persons, eg. schools, high volume retail such as grocery stores or with other workers ¹ . Risk assessment should consider areas of ongoing community transmission (travellers, residences and other high population density and possibly high volume retail).	High Risk* Examples: Health care delivery and support staff who may be exposed to known or suspected COVID 19 patients. Medical transport workers (moving known or suspected COVID-19 patients in enclosed vehicles). Mortuary workers ¹ . Personal care and other close range work.	Very High Risk Examples: Health care workers (HCW) performing aerosol generating procedures; HCW or laboratory workers collecting or handling specimens from known or suspected COVID-19 patients; Morgue workers performing autopsies ¹ . Dentists and dental technicians.
Elimination/Physical Distancing (MOST EFFECTIVE)	Maximize distance apart; Maintain physical distance > 2 metres at minimum. Where possible work from home. Keep direct social contact to a minimum, especially indoors.	Support & enable telework and/or curbside service delivery. Restructure layout, flow & points of interaction to Maintain physical distance > 2 metres as much as possible.	Use Telemedicine. External tent for triage. Physical barriers in triage. Physical distance not possible so much stronger lower order controls starting off with engineering control.	May not be possible. Physical distance not possible so much stronger lower order controls starting off with engineering control – general and localized ventilation.
Engineering Controls	Ventilation Maximize air changes, including opening windows & doors as/where feasible; Ashrae Technical resources Good practices around ventilation Optimize Workplace for cleaning and personal hygiene .	Ventilation Maximize air changes, including opening windows & doors as/where feasible; Ashrae Technical Resources Good practices around ventilation. Prevention by design eg. Physical barriers (Plexiglas), uni-directional flow; alternate direction of service provision Optimize Workplace for cleaning & personal hygiene . Stand alone air purifying devices, fans behind static staff.	Ventilation: Increased ventilation air changes per hour. (Minimum ASHRAE) Barriers, doors, cleanable curtains Temporary Negative Pressure Isolation Ashrae Technical Resources Workplace cleaning .	Ventilation: Temporary Negative Pressure Isolation Ashrae Technical Resources ; Increased area plus localised ventilation, e.g. headboard ventilator for patient bed, Chair-Side Air Extraction For Dental Offices. Workplace cleaning.. Exhalation particle capture device . Patient encapsulation w. frame & plastic sheeting, & possibly exhaust ventilation.
Administrative Controls	Hazard awareness training Work schedule, location & flow to minimize convergence. Basic education to raise awareness. Personal hygiene. Best Practice - Hand Hygiene (frequent hand washing etc.). Cleaning/Sanitation/Disinfection. Safe work practices, including limited use of common facilities. Screening worker risk & health. Facilitate & support hazard & risk communication.	Risk assessment & Risk Management plan Hazard awareness training. Work schedule with less worker convergence. Document occupants to ease contact tracing. Comprehensive education to raise awareness & understanding of risks & controls. Facilitate regular time & access for Personal hygiene (frequent hand washing etc.) Organize & document Cleaning/Sanitation/Disinfection. Safe work practices. Screening worker risk & health. Facilitate & support hazard & risk communication	Risk assessment & risk management plan Competency based training. Training of correct use of personal protective equipment (PPE) see: Proper Use of Respirators Infographic . PPE program including CSA Z94; Clean/Dirty areas; batch tasks to minimize in and out; limit staff cross-over. Screening worker risk & health, modify location & tasks to minimize risk. Create mechanisms to facilitate & support hazard & risk communication Acknowledge and plan for Psychosocial health / fatigue management.	Competency based training. PPE program including CSA Z94 Training & monitoring of correct use of personal protective equipment (PPE) see: Proper Use of Respirators Infographic . (Buddy check system) Screening workers daily. Other full body and eye PPE. Enforce practices to facilitate & support hazard & risk communication. Recognize, Assess, Control, Evaluate (RACE) re: Psychosocial health / fatigue management.
Personal protective equipment (PPE) (LEAST EFFECTIVE) <i>(preserve critical PPE supplies for HCW).</i> Refer to CDC strategies for optimizing supplies of PPE	Where physical distancing is not possible. Consider face masks (source control) for all present to minimize transmission, especially indoors.	Face masks for all present (as source control) to minimize transmission. Gloves (w. appropriate training & disposal) for frequent common touching; If/when congestion is unavoidable, and/or poor ventilation and/or increased community transmission conduct a risk assessment to inform additional controls whether an N95 is required (eg. bus driver) for worker protection.	RPE CSA Standard Z94.4 should be followed (as a minimum) and preferably Tool for choosing respiratory protection against bioaerosols is recommended and review case studies . Respirator program required: Fit tested N95 as a minimum. P100 or elastomeric are other options. Proper donning, doffing, storage, disposal and hygiene. Other full body and eye PPE. Including goggles, face shield, gloves,. Fluid resistant isolation gown or coveralls, booties. Safe handling/disposal of contaminated waste required.	RPE CSA Standard Z94.4 should be followed (as a minimum) and preferably Tools for choosing respiratory protection against bioaerosols is recommended and case studies . Powered air purifying respirators (PAPR) preferred. Other full body and eye PPE.including goggles, face shield, gloves, Fluid resistant isolation gown, booties Safe handling/disposal of contaminated waste required.

Where PPE does not meet minimum requirements (eg. No fit or short-supply) then it is very important that more effective stringent exposure control and other prevention strategies are put in place, such as providing increased room, local exhaust ventilation or portable air cleaning based on individual, operational & environmental risk.

Healthcare Workplace COVID-19 Risk Management (Control Banding) Matrix

	Medium Risk Health care workers or hospital ancillary staff. See: Point of Care Risk Assessment** Areas of building without public or patients If there is a likelihood of treating patients with COVID 19 then the risk becomes high.	High Risk Areas of Healthcare facilities where public or patients are present. If there is treatment required that requires AGPs then the risk becomes very high.	Very High Risk Health care workers (HCW) performing aerosol generating procedures; HCW or laboratory workers collecting or handling specimens from know or suspected COVID-19 patients; Morgue workers performing autopsies ¹ . Dentists and dental technicians.
Elimination/Physical Distancing (MOST EFFECTIVE)	Support & enable telework and/or curbside service where able; Maintain physical distance > 2 metres as much as possible . Clear room/area occupancy signage (eg. red/green) ID & manage protocol for points of contact & constriction	Maximize use of Telemedicine. External tent for triage. Physical barriers and load management procedures in triage. Physical distance not possible so much stronger lower order controls starting off with engineering control.	May not be possible. Physical distance not possible so much stronger lower order controls starting off with engineering control – general and localized ventilation.
Engineering Controls	Ventilation Maximize air changes, including opening windows & doors as/where feasible; Ashrae Technical Resources Good practices around ventilation. Physical barriers (Plexiglas) Workplace surfaces to optimize cleaning. Stand alone air purifying devices. Reduce furniture, mark floors, organize flow,	Ventilation: Temporary Negative Pressure Isolation Ashrae Technical Resources Increased ventilation air changes per hour. Optimize surfaces for cleaning . Patient isolation capacity w. enhanced, filtered exhaust ventilation. Consider portable air cleaners and/or High level UV decontamination	Ventilation: Temporary Negative Pressure Isolation Technical Resources Increased ventilation and localised ventilation. Such as headboard ventilator for patient bed, Chair-Side Air Extraction For Dental Offices. Workplace cleaning . Exhalation particle capture device . Patient encapsulation w. frame & plastic sheeting, & possibly exhaust ventilation.
Administrative Controls	Hazard awareness training. Work schedule location & flow to minimize convergence.. Comprehensive education to raise awareness & understanding. Personal hygiene (frequent hand washing etc.) Cleaning/Sanitation/Disinfection. Safe work practices. Facilitate & support hazard & risk communication Screening workers.	Regular & refreshed Competency based training. PPE program including CSA Z94 including fit testing Training of correct use of personal protective equipment (PPE) see: Proper Use of Respirators Infographic . Clean/Dirty areas; batch tasks to minimize in and out; limit staff cross-over Agp execution & communication protocol Frequent, thorough environmental cleaning Planned breaks to reduce fatigue and maximize don/doff safety Facilitate & support hazard & risk communication Screening workers.	Competency based training. PPE program including CSA Z94 including fit testing Training & monitoring of correct use of personal protective equipment (PPE) see: Proper Use of Respirators Infographic . Buddy check system Screening workers daily. Time to don/doff all warranted respiratory, full body and eye PPE. Enforce practices to facilitate & support hazard & risk communication. Recognize Assess Control Evaluate (RACE) re: Psychosocial health / fatigue management.
Personal protective equipment (PPE) (LEAST EFFECTIVE)	Where physical distancing is not possible. Face masks for all present (as source control) to minimize transmission. In situations where congestion is unavoidable, and/or poor ventilation and/or increased community transmission, conduct a risk assessment to consider whether an N95 is required.	RPE CSA Standard Z94.4 should be followed (as a minimum) and preferably Tool for choosing respiratory protection against bioaerosols is recommended and case studies . Fit tested N95 as a minimum. P100 or elastomeric are other options. Other full body and eye PPE, Including goggles, face shield. Gloves, Fluid resistant isolation gown or coveralls. Safe handling/disposal of contaminated waste required.	RPE CSA Standard Z94.4 should be followed (as a minimum) and preferably Tools for choosing respiratory protection against bioaerosols is recommended and case studies . Powered air purifying respirators (PAPR) preferred. Other full body and eye PPE.including goggles, face shield.gloves, Fluid resistant isolation gown, coveralls, booties Safe handling/disposal of contaminated waste required.

Specific for Health Care Workers

References: OSHA 2020¹ Guidance on preparing workplaces for COVID – 19*, CSA Standard Z94.4-11, The [International Society for Respiratory Protection \(ISRP\)](#), [Neesham-Grenon, E 2013, Journal of the International Society for Respiratory Protection, Vol. 30, No. 1, 2013, IRSST \(2015\) support tool for choosing respiratory protection for bioaerosols \(Health Care Sector\)](#); See also [IRSST case studies that provide worked examples for health care and other sectors](#). Resource Environmental Associates (2008), Protecting Personnel from Pandemic Influenza, [ASHRAE \(2020\) Position Document on Infectious Aerosols](#). [CDC 2012, In-depth report: expedient methods for surge airborne isolation within healthcare settings during response to a natural or manmade epidemic](#). [ASHRAE 2020, Guidance for Building Operations During the COVID-19 Pande](#)

Where PPE does not meet minimum requirements (e.g. No fit or short-supply) then it is very important that more effective stringent exposure control and other prevention strategies are put in place, such as providing increased room or local exhaust ventilation or portable air cleaning, based on individual, operational & environmental risk.