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IPAC BEST PRACTICES GUIDELINE
Regionally Consistent Specifications for Construction
of COVID-19 Units

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PURPOSE

To provide a regionally consistent approach for setting up dedicated COVID-19 units, to ensure safe care regardless of where patients access services. The goal is selecting the best physical environments that can protect the safety of patients and staff, and can be deployed within short turnaround times.

BACKGROUND

This guideline supports the setup of dedicated COVID-19 units at all VCH hospitals. The minimum requirements, considerations and recommendations for identifying, selecting and repurposing existing inpatient unit spaces are informed by subject matter experts in physical spaces and construction, as well as CSA standards for infection prevention and control in built environments and construction projects. Infection control practitioners throughout VCH have also been engaged as stakeholders.

GUIDELINE

Minimum requirements for suitability of existing inpatient unit spaces:

Physical space:

- Determine if the COVID-19 unit rooms can be switched to a general negative flow- not true airborne isolation
- HVAC capacity to maintain optimal air exchanges and humidity in the unit at all times (per CSA standards)
- Access to at least one shower per COVID-19 unit. The shower can be in an adjacent space but must be easy access, with minimal risk of contamination of other spaces. Consider showers that can be accessed elsewhere in the facility or options for staff start/finish times to minimize congestion
- At least one ante room before entering the COVID-19 unit for donning PPE
- One way into the unit and a separate way out of the unit, so as to provide a safe, systematic way of removing PPE on exit without cross-contamination

Unit organization and logistics:

- All staff wearing scrubs and using droplet precaution PPE for the entire shift
- A way to operationalize the flow into and out of the unit for: supplies, garbage, linen, so as to prevent cross-contamination

Critical issues that must be addressed before selecting unit space:

- Who has authority to approve changes to HVAC standards
- Evaluation of HVAC on each unit by a qualified mechanical engineer to ensure utmost accuracy of positive and negative airflow, air exchanges, humidity
- Evaluation of effect of nearby elevator shafts, which act as a wind tunnel, in theory introducing contamination risk (only theoretical risk)

Infection Prevention and Control

- Evaluation of flow into and out of the unit for people, equipment and supplies
- Availability of suitable shower facilities in close proximity to the unit

Requirements for construction:

If renovations are needed to address any of the above minimum requirements, permits may have to be secured first, to ensure that the work can be completed within the needed timelines. CSA standards for Class IV Infection Control Precautions (hoarding and exhaust of construction contaminants) must be maintained at all times, to protect patients and staff safety during construction. Refer to [VCHA IPAC Construction Checklist Level III IV](#). This includes:

- Securing the area for patients for the duration of the construction, or selectively hoarding off areas during construction
- Maintaining negative air pressure, isolation of HVAC system and critical barriers during any physical construction (e.g. building new showers)
- Containment of all construction waste

Additional considerations that may need to be addressed locally, with guidance from Regional Infection Prevention and Control:

- Use of UV mounted lights in bathrooms or other areas needs to be evaluated for quality, electrical requirements for installation, and maintenance (brand currently available: Aseptix)
- Determine use of other ancillary devices (RD, Aseptix wall-mounted UVC, UVC CleanSlates)
- Determine how to address the needs of Mental Health inpatient units and possible COVID cohorts.

REFERENCES

Canadian Standards Association. (2018). CSA Z8000-18: Canadian health care facilities.

Canadian Standards Association. (2017). CSA Z317.13-17: Infection control during construction, renovation, and maintenance of health care facilities.