

INFECTION CONTROL: IMMUNOCOMPROMISED PATIENTS AND COVID-19

Alon Vaisman MD MAS FRCPC

Hospital Epidemiologist, Infection Prevention and Control
Infectious Disease Specialist
University Health Network

Assistant Professor
Department of Medicine, Division of Infectious Diseases
University of Toronto

DISCLOSURES

- No conflicts of interest or financial interests to disclose

OBJECTIVES

1 Discuss pre-pandemic infection control measures on transplant and oncology wards

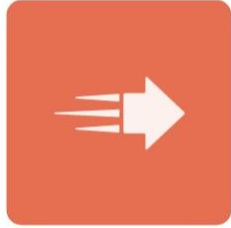
2 Discuss Pandemic related changes

PRE-PANDEMIC MEASURES

ROUTINE PRACTICES



Hand Hygiene



Prompt
Isolation



Surface
cleaning



Universal
masking

UNIVERSAL MASKING



Staff/Patients



Allo/Auto Units

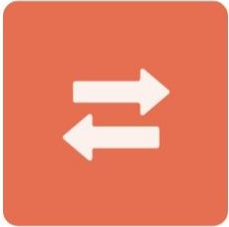


Reduce
Transmission

- RVI
- Outbreaks



REDUCING AIRBORNE EXPOSURE: VENTILATION



Air Exchanges

>12 air exchanges



Filtration



Air Cleaners



Positive
Pressure


POST-PANDEMIC MEASURES

A NOTE ON THE TRANSMISSION SPECTRUM....

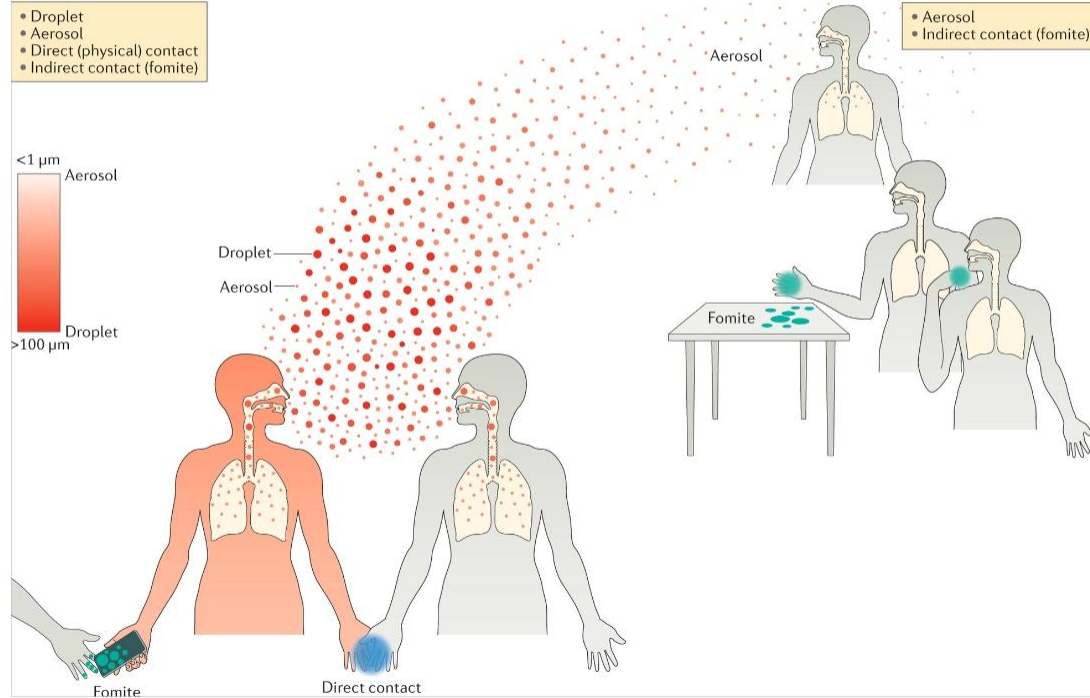
Short-range transmission

- Droplet
- Aerosol
- Direct (physical) contact
- Indirect contact (fomite)

<1 μm Aerosol



>100 μm Droplet



Long-range transmission

- Aerosol
- Indirect contact (fomite)



PANDEMIC CHALLENGES: NON-CLINICAL AREAS



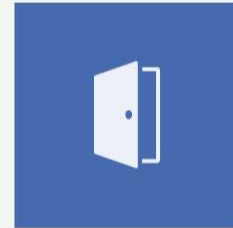
Meeting Areas



Common Spaces



Ventilation



Portals of Entry



UNIQUE ASPECTS ASPECTS FOR IMMUNOCOMPROMISED PATIENTS



Vaccine efficacy



Unique Wards



Infection relapse

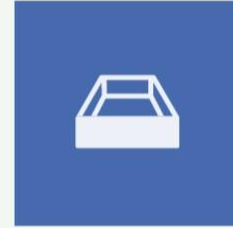


Portals of Entry

PANDEMIC CHALLENGES: CLINICAL SPACES



Multi-bed Rooms



Negative Pressure
Isolation Rooms

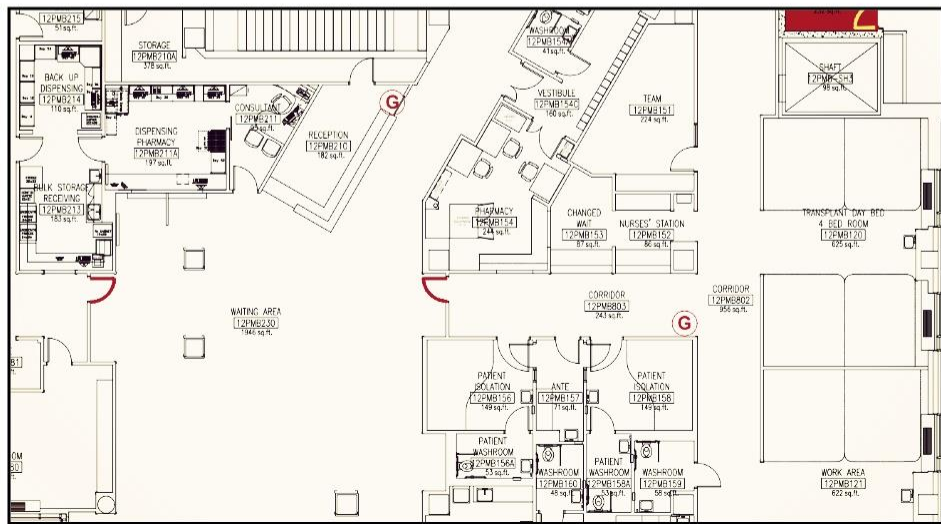
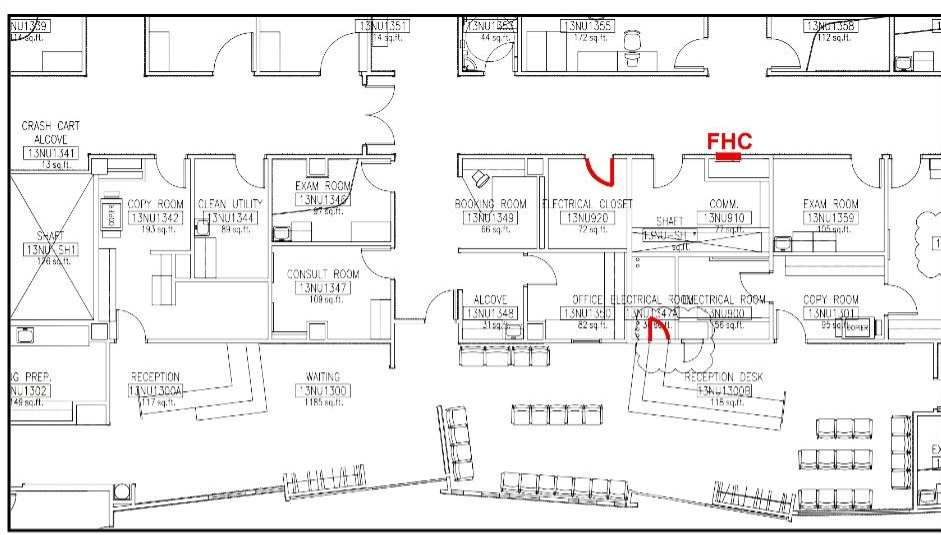
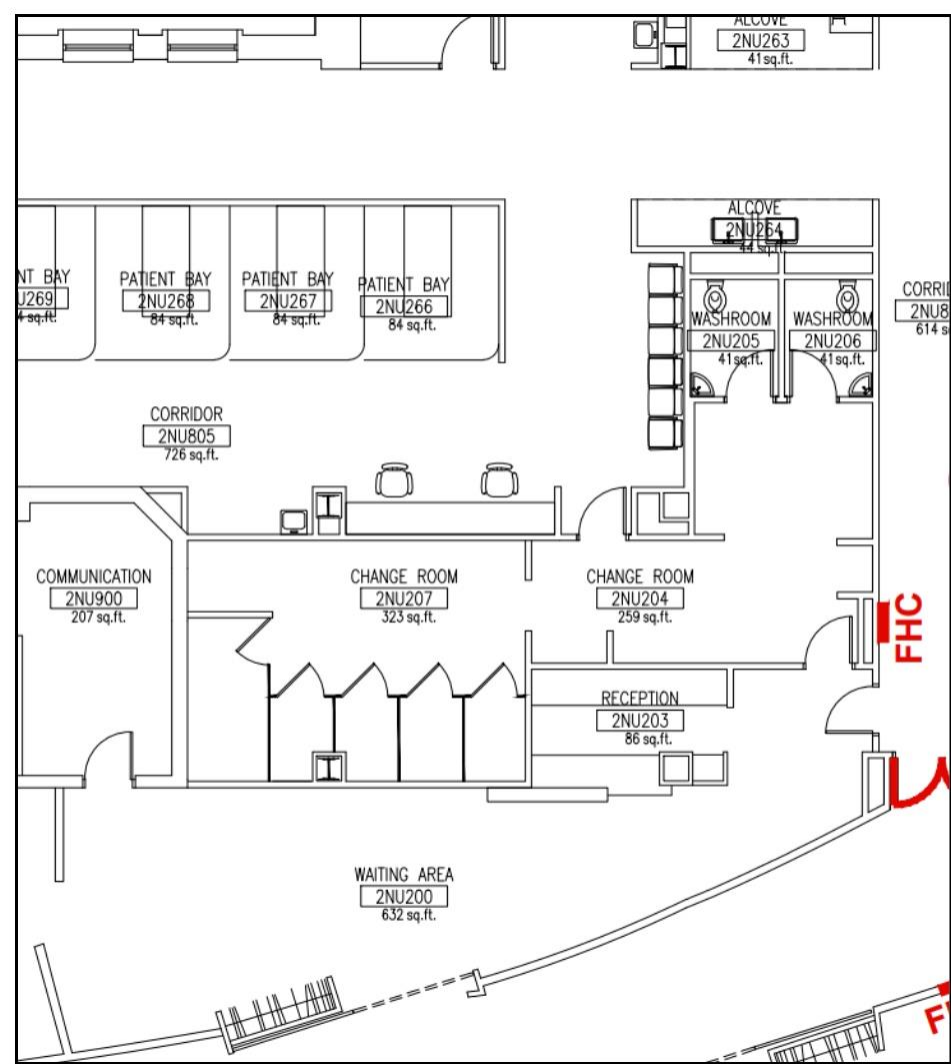


HCW protection

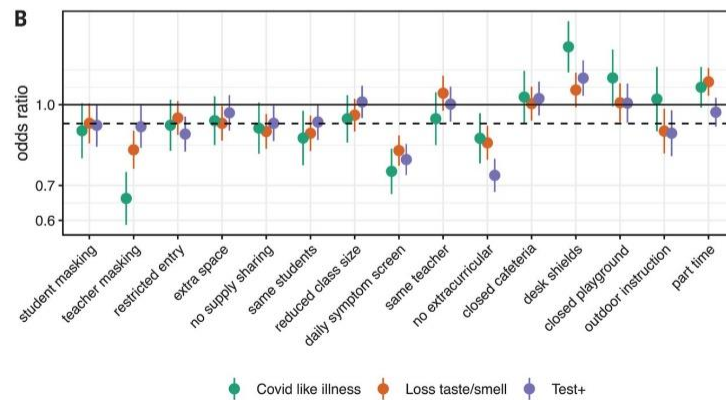


Triage Areas





USE OF SHIELDS/BARRIERS





BENEFITS OF SINGLE-BED ROOMS

Infection control

COVID-19, MRSA, C. difficile

Privacy

Patient/visitors/family

Reduction in Disturbance

Noise/medical care

PANDEMIC CHANGES



Universal masking



Increased virtual care



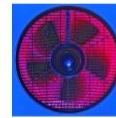
Twice daily
syndromic screening



Reduce volumes



Universal Testing



Review airflow



UNIVERSAL TESTING

Symptomatic

Low threshold

On Admission

All patients

Pre-procedure

BMT

Surgery

Endoscopy

Weekly Prevalence

Long-stay units

REDUCE EXPOSURES

Reduce Procedure

BMTs

Transplant surgeries

Limit Visitors

All patients

Switch to virtual care

Outpatient clinics

Close common spaces

Social/therapy





VENTILATION

Use Fresh Air

- Where possible, also open doors/windows
- Open outdoor dampers

Recurrent Maintenance

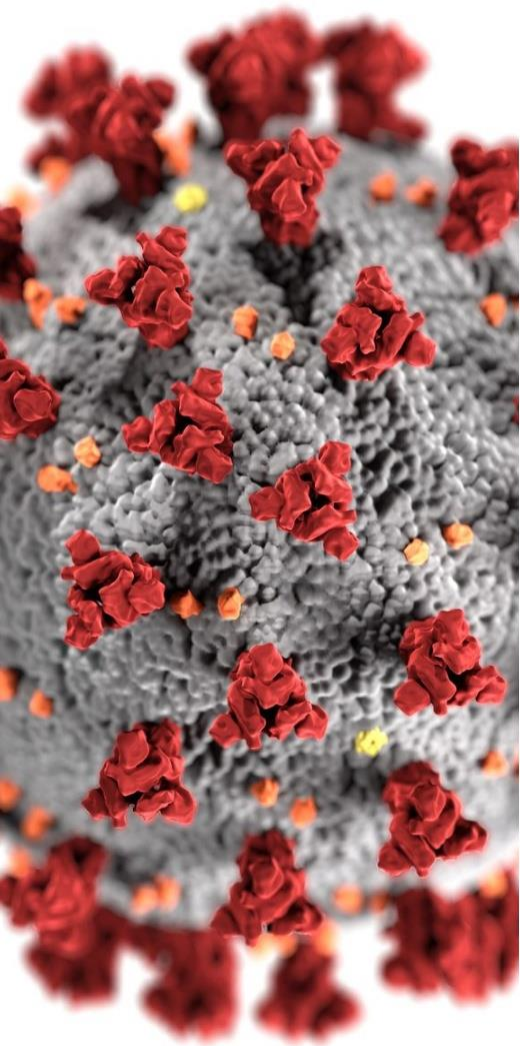
Communication with facilities, operators, engineers

Portable Cleaners

HEPA filters in high risk settings (AGMP)

More Isolation Beds

Infrastructure development



COVID-19+ PATIENTS

Where to place them?

- Move away from positive pressure units
- Dedicated unit
- Transfer to outside facility

A scanning electron micrograph (SEM) showing a cell with several bright blue, circular structures, likely nuclei, against a dark red background. The cell's surface is highly textured and irregular.

COVID-19 OUTBREAKS

- Prompt identification
- Testing all staff, patients
- Visitor restrictions
- Increased Cleaning
- Close the unit

CHALLENGES TO OUTBREAK MANAGEMENT



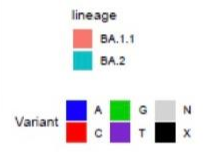
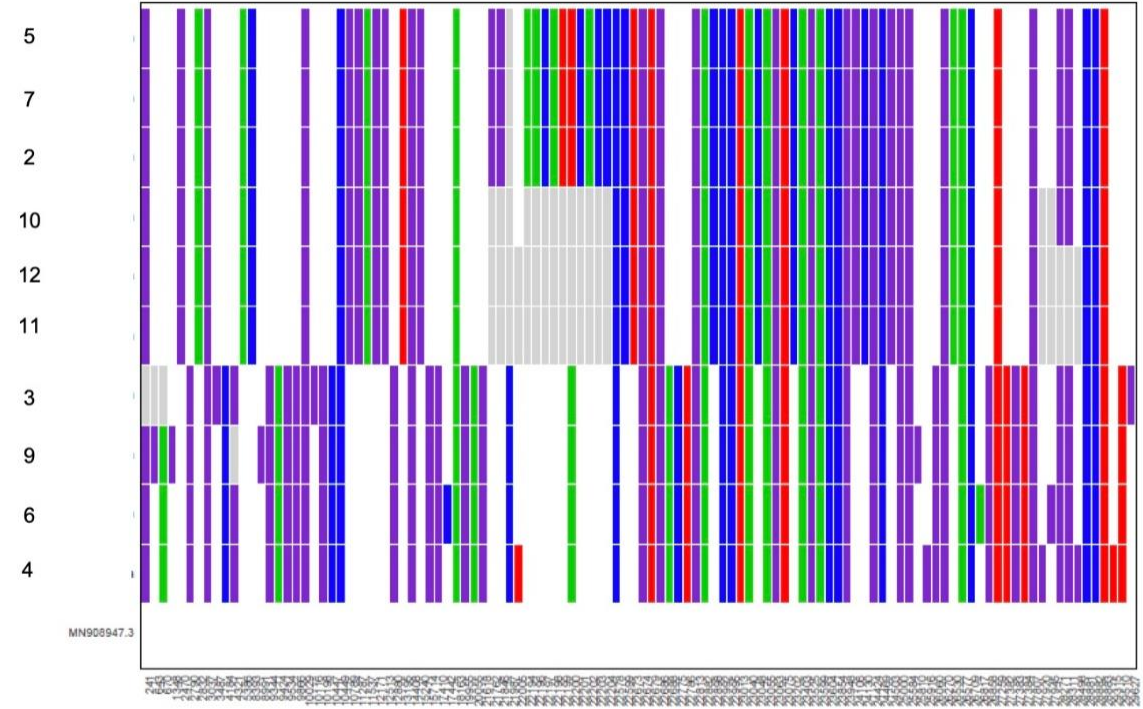
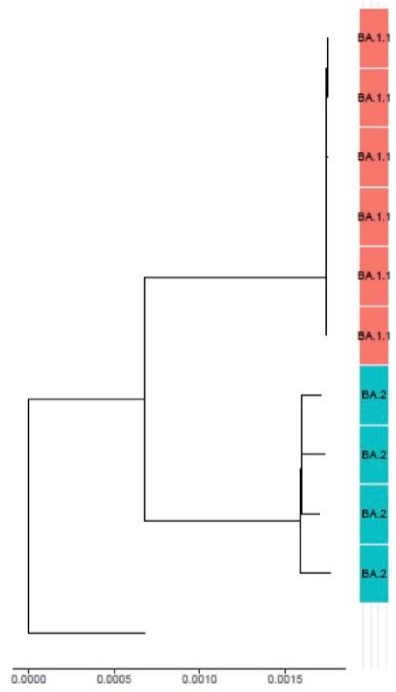
Multi-bed Rooms

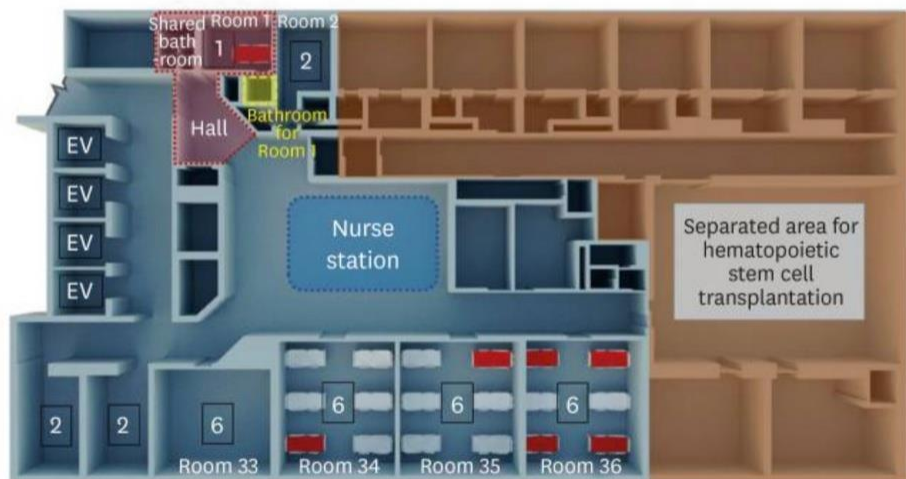


Shared Spaces
(lounge, locker room)



Common Areas
(nursing stations,
clinical areas)



A**B**

A vertical strip on the left side of the slide features a red-tinted microscopic image of a biological structure, possibly a cell or tissue. Two prominent blue circular highlights are visible, suggesting specific points of interest or infection sites.

POST PANDEMIC CHANGES

- Maintain masking?
- Maintain broad testing?
- Reinforce pre-pandemic measures
- Surveillance for the next pandemic

CONCLUSIONS

- 1 Many pre-pandemic measures in place
- 2 Many pandemic changes unlikely to change
- 3 Ongoing surveillance will be needed



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UNIQUE ORGANISMS OUTBREAK RISK

- **Aspergillosis**
eg. During construction

- **Respiratory
Viruses**
Prolonged secretions

- **Adenovirus**



UNIQUE ORGANISMS

OUTBREAK RISK

- **Vancomycin Resistant Enterococcus**

Increasing prevalence across Canada

- **Pseudomonas**
 - Surface/water transmission