

1.3 Site infrastructure & environmental considerations

The quarantine facility's infrastructure and general environment directly impact the functionality of the teams and the experience of the residents. During the COVID-19 pandemic, the lack of facilities appropriate for quarantine and isolation purposes was apparent and through a trial of using established structures, it became evident certain infrastructure characteristics were

more conducive to infection prevention and control (IPC) measures and the health and well-being of staff teams and residents. This highlighted building status in relation to ventilation, space capacity, and structures that promoted mental and physical health and wellbeing. For the Centre for National Resilience (CNR) an additional focus point was environmental factors associated with weather and climate with staff working outdoors in a hot tropical area.

This section focussed on the quarantine services site infrastructure is based on the infrastructure characteristics of the CNR which contributed to the success of the site as a quarantine facility. This includes environmental concerns and recommendations on quarantine service design from the wider pandemic.

The structural design of a quarantine service needs to incorporate a functional infrastructure that will minimize risk of disease transmission whilst still providing an environment that promotes the health and wellbeing staff and residents. The predominant risks within a quarantine facility are associated with quarantine workers contracting disease in the workplace and subsequent incapacitation of teams and spread to the community. The first step in mitigating such risk is by a multifaceted approach to infection prevention and management controls (IPMC).

As presented in detail in *Section 2: Infection, prevention and control,* prevention is supported across the quarantine and isolation facility by:

- Site induction processes for new workers,
- mandatory initial PPE training and refresher training and;
- controls in the workplace to ensure PPE and infection control procedures are adhered to by all workers entering and exiting orange and red zones;
- viral screening of all staff on site every 7 days and;
- ensuring the quarantine workforce and residents are separated.



There are many different factors that will contribute to the success of the quarantine service in relation to its design and infrastructure. Some are within the control of the site such as ventilation and the built environment and others such as weather elements and climate are not. Features that contribute to quarantine services structural and environmental risk factors can be identified as:

- Weather and climate (extreme heat and sweating, storms, extreme cold, lightning and rain),
- Site hazards,
- Ventilation (air circulation and air filtering systems),
- Infrastructures (built environment) and rooms (open versus closed-in spaces, indoors or outdoors).



Weather and climate

Section 1: Figure 3: Structural and environmental features which contribute to quarantine service risk factors.

Environmental factors related to infrastructure and infection control in quarantine are represented as climate, humidity, air circulation and filtering, with each presenting different impacts on disease transmission risks. During the COVID-19 pandemic, these factors were primarily linked back to the transmission through fomites and contact transmission with the coronavirus being cited as remaining viable (transmissible) on stainless steel surfaces for up to 72 hours early in the pandemic. There was also the recognition of the importance of air circulation with airborne and droplet transmission a much higher risk in closed in poorly ventilated areas also dependent on the number of people within a closed in the area and the time they were together.⁷



1.3.1 Site mapping and pathways

The site is required to have a coherent approach to designating resident and staff zones ensuring these are well mapped. Each zone requires a logistic entry/exit point where staff can don and doff safely and a security station can be established. Zones need to be signposted and fenced with maps of zones sent frequently to teams across the site to ensure awareness of any changes to red and orange zone allocation, or changes to the perimeters of zones. The core staff administration and leadership team areas should be central to the site, easily accessed by all staff and visitors.

Across a large site the segregation of zones facilitates better site functionality by:

- Having a security station based at the site entrance where all staff and visitors can be screened on arrival and resident traffic facilitated to avoid delays.
- Allocating zones with Pods (office/team areas) across the site by dividing the site into areas which provide each space with access to parking, office space, toilets, resident arrival/exit areas, donning & doffing stations and laundries in each resident zone.
- Implementing a system to recognise teams and zones, for example, Purple Team is allocated to work in Zone 5. When the residents from Zone 5 have exited, Purple Team may then be allocated to Zone 3 to care for the next cohort of residents whilst Zone 5 undergoes maintenance.
- Changing zones into a red or orange zone as required. For example with times of high level of community transmission and positive cases more red zones may be required.
- Site policies include IPC guidelines to manage IPC for zone changes.
- Red zones are situated close to the health centre and main entrance, this facilitates easy and fast access to any positive resident who may become unwell and require transfer into acute care services.
- All main service provision areas are located in a central space (in perspective to the facility and each other). This includes (but is not limited to) leadership, administration, education and training, operations, catering, cleaning and other ancillary teams.
- A one-way flow of traffic around the facility reduces road traffic hazards.
- Site security stations are established at strategic points around the perimeter of the facility to monitor points of high traffic flow, high resident and staff numbers and/or areas where site fence lines may need to be observed for risk of residents absconding or people trying to enter the site.
- Muster points for emergency evacuations are located in logical and safe areas which are easy for staff to access.
- Site policy provide clear guidelines for pathways which are used by both pedestrians and buggies.



A comprehensive overview of zones in quarantine is presented in *Section 2: Infection prevention and control,* this section also presents how the donning and doffing stations are structured and stocked with diagrams and posters.

There also needs to be clear communication and identification of muster points for site evacuations in the case of a fire or other onsite emergency, these processes are detailed in the Processes topic in Section 1.



Section 1: Figure 4: The Center for National Resilience quarantine map depicting structural approaches to ensure site functionality.



1.3.2 Types and sizes of infrastructures (built environment)

It is now known the structural design of quarantine facilities contributes greatly to transmission risk. Open spaces with good ventilation (outdoors areas ideally) are deemed safer in respect to disease transmission. In enclosed spaces, poorly ventilated or crowded areas viral particles are more likely to be encountered with research demonstrating the coronavirus remaining viable (airborne transmissible) for up to 20 minutes with most viral particles losing viability for infection after 5 minutes.^{8,9} This finding highlights the risks in many clinical areas and hotels with these infrastructures often having smaller closed-in rooms, lack of windows or windows which are unable to be opened (due to increased risk of falls from windows and for internal building maintenance) and a central ventilation system which recycles air and does not routinely include filters. There is also the risk of communal spaces and other common enclosed areas such as lifts, corridors and bathrooms which often lack adequate ventilation and air circulation.

Quarantine services such as CNR noted much of their success in recording no transmission of COVID-19 between staff and residents to high-risk processes such as health checks and viral screening being conducted in an open-air and tropical environment. In accompaniment with staff IPC practices and use of effective PPE this significantly lowered the risk of encountering viral particles. A combination of control measures needs to be implemented to ensure the spaces being used for quarantine are safe for staff and residents, this includes: implementing standard precautions of staying home when unwell, physical distancing and hand hygiene, encouraging vaccination (if available), allowing staff to work from home (if achievable), rotating staff working from home, reviewing the airflow and ventilation systems, increasing cleaning with a focus on high use areas (such as door handles), rotating staff through areas of high use such as cafeterias.

Infrastructure and environmental considerations needs to ensure:

- Operability- systems and resources are safe and easy to operate
- Safety- systems, buildings and resources are safe to use, occupy, and maintain.

Safe Work Australia provided a number of guidelines to calculate the number of people that can safely be enclosed in one space.¹⁰ This involved measuring the dimensions of all enclosed rooms and diving this by 4.



Section 1: Figure 5: Implementation of physical distancing measurements for an office space with a length of 8 meters and width of 5 meters.



Once the room measurements have been identified, additional consideration will need to be given to the type of tasks to take place in the room, reducing the amount of time people spend in the room together, and signage of room capacity requirements and physical distancing reminders. This may include putting signs on tables or desks which clearly indicate where people will sit so, they are physically distanced and how many can sit at the table/desk. Limiting the amount of time people spend together is also recommended in smaller spaces and the facility can implement strategies such as the use of PPE (masks) when crossover of shifts occur to further reduce transmission risk.



Section 1: Figure 6: recommendations of seating arrangements to maintain physical distancing.

1.3.3 Infrastructure and residents

A large-scale quarantine facility needs to provide accommodation for a variety of residents and ensure they meet the needs of those living with a disability, family groups, couples and people quarantining alone. The space should be conducive to mental and physical health and wellbeing recognising that people in quarantine can still exercise and complete activities (refer to *Section 4: Resident Care* for guides on staying active in quarantine). The resident space needs to be divided into areas to cohort residents.

Characteristics and work practices of CNR that were conducive to better health and well-being and infection control risks for residents and staff can be identified as:

- Conducting all risky activities such as viral screening and daily health checks outdoors.
- Requiring residents to wear a mask whilst outside their room.
- Instruct staff not to enter residents' rooms (noting residents do not wear masks in their room) unless it is
 an emergency situation. If staff need to enter resident rooms they are to keep the door open to promote
 ventilation and remain in view of their buddy so any breaches in IPC practice is detected (in cases where the
 staff member may not be aware they have breached IPC).
- Instructing staff to stand to the side of resident's room doors when they are opened so they are not facing the air gust that will occur.
- Instruct staff to stand to the side of residents when conducting any viral screening or health checks (so they are not face to face) and to maintaining a physical distance of 1.5 meters or greater whenever possible.
- Individual air conditioning systems for each resident room.
- Pod teams cohorted into one office/team space reducing interaction with other staff.



Resident zones are structured to ensure the residents feel safe and Pod Teams caring for them can easily access all residents in their zone. Each Pod Team will be in an office/team space located close to the entry/exit point of the zone with security staff based at this point at all times. One Pod Team is allocated to care for a single cohort of residents for their entire quarantine stay. Pod Staff will not move between teams as an IPC practice to reduce risk of transmission, noting that residents from different world locations may be exposed to different disease variants. The one Pod Team to one resident cohort minimizes risks of introducing variants to other teams and pods in the case a staff member became infected from a resident.

Considerations of residents' zones to ensure site functionality include:

- Having only one entry/exit point for each zone (noting there are additional emergency exits identified in the need to evacuate residents).
- Practices to enhance personal safety and feelings of security by segregating families, couples, single women and single men. For example, single women are located closer to families and couples and single men are clustered together.
- Segregating families to reduce the risk of children from different families playing together.
- Reducing opportunities for residents to come in contact with each other by setting site policies of all residents remaining on their balcony (with balcony perimeters marked) and setting laundry schedules with dates and times resident can access this.
- Positioning vulnerable residents in rooms at the zones entry/exit point so they are quickly accessible by staff and can access the security staff if required.
- Segregation of smokers from other residents.
- Using a coherent and intuitive resident management information technology system (RMITS) to manage all resident room allocations.



Section 1: Figure 7: The Center for National Resilience quarantine map depicting residents zone structural approaches to ensure site functionality.





1.3.4 Cohorting residents

The quarantine site needs to be divided into areas to accommodate the cohorting of residents entering the facility.

To facilitate a safe environment the public health approach of organising residents into cohorts is recommended by:

- Keeping people travelling together cohorted together (for example everyone on one international flight would be considered a cohort) or by cohorting everyone arriving on the same date (used for domestic residents), this reduced the risk of exposure to other disease variants and to infecting people who are at the end of their quarantine period.
- Separating groups within the cohort into vulnerable people, families, smokers, couples and women travelling alone and men travelling alone.
- Placing families, couples and women travelling alone or any identified vulnerable residents closer to the security and staff entry point.

1.3.5 Room descriptions and types

Example of rooms with description

Normal Room

- 1 person per room
- 4 people per building
- Entry from the veranda, single bed, small bathroom

Family Room

- 4 people max
- 4 people per building (entire building is a family room)
- Entry from the veranda, connecting rooms, single bed in each room, small bathroom in each room

Disability Room

- 1 person
- 2 people per building
- Entry from the veranda, larger/spacious bedroom with single bed, larger/disabled bathroom, wheelchair access



Room allocation process

1. VULNERABLE (VUL)

VUL is 70+ years of age or has medical issues. Start with the allocation of vulnerable residents to rooms. Once allocated, highlight the letter of the room number in <u>YELLOW</u> for reference.

2. DISABLED

Refers to people living with a disability and rooms have ramp access with modifications to enlarge the interior space for easy wheelchair access. Once allocated, highlight the letter of the room number in **DARK PURPLE** for reference.

3. SINGLE MALES (SM)

Must be allocated together. Try to keep similar aged men together for company. SM are required to be separated from SF to minimise contact, such as different Laundry Blocks (if feasible). Once allocated, highlight the Resident Number in BLUE for reference.

4. SINGLE FEMALES (SF)

Must be allocated together. Try to keep similar aged women together for company. SF are required to be separated from **SM** to minimise contact, such as different Laundry Blocks (if feasible). SF can be placed next to families and couples if they have another SF next to them for company. Once allocated, highlight the Resident Number in **PINK** for reference.

5. SMOKERS

Must be kept away from other residents and grouped together while still implementing the above placement rules. If allocation is tight, they can be put in the same block as non-smokers if there is at least one room free between them. Once allocated, highlight the letter of the room number in **BLUE** for reference. Preferably, smokers need to be in a block together and as far away as possible from other residents.

6. FAMILY (FAM)

Must be grouped in the same blocks, while trying to keep families with similar-aged children away from each other where possible to avoid children wanting to play (increases risk of disease transmission). The oldest female in the family group is classed as the primary traveller and is allocated the first room in the building. Once allocated, highlight the Resident Number in GREY for reference.

Families will only go into a Family Room on a case-by-case basis, e.g. single parent with 3 children, special needs children, a family of 4 with children under 10.

7. COUPLES (CPL)

Should be grouped by similar age. The female is always classed as the primary traveller and is allocated the first room. Once allocated, highlight the TWB Resident Number in **PURPLE** for reference.

8. UNALLOCATED ROOMS

All unallocated rooms are highlighted in **GREEN** for On-Site reference.





Images represent rooms allocated to families and people living with a disability.



1.3.6 Air circulation (heating, ventilation and air conditioning systems (HVAC))

Air circulation and ventilation recommendations changed as the COVID-19 pandemic progressed as a better understanding of disease transmission emerged. This at times occurred through super spreading events which revealed the resilience of the virus and weaknesses in systems and infrastructures. Myths regarding transmission had to be dealt with as the COVID-19 infodemic led to the belief the virus was similar to bacteria and multiplying in air conditioning systems. The problem was identified as recycling of air with many systems not drawing in clean air but recycling air within a room, (which would include coughs, sneezes, and laughs which carry higher levels of droplets and airborne virus particles) meaning there can be a build of viral particles.¹¹ In addition, it was highlighted the position of most air conditioning units was high and this pushed expelled air down towards people.

Air conditioner systems considered high risk for disease transmission were identified as those that:

- used recycled air,
- did not implement high-efficiency particulate air (HEPA) filtration, and
- directed air directly down at people presenting a higher risk of exposing people to viral particles.

Recommendations to reduce transmission risk favour systems that draw in clean air and have individual systems for each room. There also needs to be a clear (and evidenced-based) recommendation for the number of people who can safely occupy an area so airborne transmission risk is very low. This calculation needs to consider the stability of airborne viral particles (relative to time) and surface transmission risks, current community transmission rates, the number of people, the size of the space, additional IPC measures in place such as wearing mask, time spent in a room and room ventilation.



On a broader scale, other factors such as air pollution, and chemical exposures can also be included within this field noting the risk from airborne transmission are exacerbated by the four factors of health, pre-existing conditions such as immune suppressed people, viral characteristics and transmission and behaviors.¹²

To further protect residents from viral transmission the use of certain filtering systems was a recommendation by the Centers For Disease Control (although research around their effectiveness is varied). The Minimum Efficiency Reporting Value (MERV) filter refers to the scale which represents the efficiency of the filter in removing varying sized particles (in this case viral particles). The MERV scale is rated between 1-20 with a rating of 13 or above considered most effective for COVID-19 and the high-efficiency particulate air (HEPA) is the specific type of filter required to remove viral particles.^{13,14}

Upper room ultraviolet irradiation system (UVGI) involves the use of UV energy to render viral particles inactive/unviable so they are no longer infectious.⁸ These were recommended for high



risk areas where there is more likelihood of infectious people, crowded spaces and spaces such as restaurants where people will remove PPE such as masks.

At CNR, HSQF the positive air pressure incidentally created in rooms (the air conditioner heating or cooling circulation builds pressure which is released when doors are opened, pushing air outside) was recognised as a risk even when dealing with residents in an outside environment. This risk was not associated with the circulation of the virus in ventilation systems but in the air movement created by them when doors were opened to a confined space (resident rooms). To address this, staff education included recommendations to stand away from the door when it was opened, so air exiting (from the pressure of the air conditioning build up inside) did not blow towards staff.

1.3.7 Site hazards

Referring to site hazards capture those factors which are:

- accidental (behaviourally or infrastructure related),
- factors that become evident after the initiation of a strategy/actions, or
- known hazards which need to be accommodated as part of the IPC process.

At CNR site hazards included factors such as fences and gateways which may catch and tear PPE, the use of buggies (and other vehicles) to mobilise staff and resources for activities such as large-scale resident viral screening and weather elements affecting the integrity of PPE.

Risk mitigation for these aspects included:

- An onsite work health and safety team to conduct regular inspections of site infrastructure in relation to the risk posed to staff.
- Education and training implemented for the use of buggies (and the requirement of a current drivers license) with site road rules specific to the buggies.
- Education and training for the use of PPE in wet weather and weather warning sent to staff when heat waves or storms were a concern.



1.3.8 Workplace inspections

The quarantine workplace must be inspected by competent personnel at least annually, with copies of each inspection forwarded to the Work Health and Safety (WHS) Team. These inspections will identify hazards in the facility and ensure systems are operating in the way intended.

This Workplace Inspection Checklist will be used by the WHS Team to:

- Review and analyse workplace hazards.
- Identify existing and potential hazards and determine their underlying cause.
- Review how effective hazard controls that were previously implemented were.
- Identify areas which need special attention due to the nature of work carried out.
- Identify areas which need attention where there is signs of stress, wear, impact, vibration, heat, corrosion, chemical reaction or misuse.

Refer to Appendices B for an example of the WHS checklist used for inspections of site infrastructure.

In addition, the standard auditing requirements for quarantine services require any capital works carried out on site to be undertaken in compliance with the Building code 2016.¹⁵ This includes:

- Ensuring any work is undertaken by a builder or builders accredited under the Australian Government Building and Construction Work Health and Safety Accreditation Scheme.
- The work undertaken under the Australian Government Building and Construction Work Health and Safety Accreditation Scheme must:
 - Be complete and free from defects or omissions
 - Not cause any legal or physical impediment to the use and occupation of the property and the works or designated use; and
 - Be fit for the designated use.

1.3.9 Environmental (weather) considerations

Understanding environmental factors that contribute to disease transmission and infection prevention and control (IPC) measures is vital to know where to invest in infrastructure (architectural and operational design, modification or development), resources, education and training and site process (Standard Operations of Practice). There need to be systems in place to protect healthcare workers and residents.

The influence of weather on a quarantine sites infrastructure and practices will likely depend on which world hemisphere it is placed relative to whether site practices will be occurring indoors/outdoors. In areas where weather will be an influential part on the timing of routine practices such as with CNR where due to the tropical heat and outdoors setting, resident health checks and viral screening rounds were conducted early in the morning or later in the afternoon to avoid periods of higher heat risk. There also needs to be a formal communication channel with the Bureau of Meteorology for updates of concerning weather patterns including cyclones, flood warning and heat waves.



Tropical Cyclone Probabilities

BOM ACCESS Model



Research demonstrated that climate is a determining factor in COVID-19 incidence with those geographical areas experiencing lower temperatures and humidity having higher incidence of COVID-19.¹⁶

Other predictions indicate the incidence of COVID-19 will increase over winter months and decrease during warmer months.17

Although it was understood that being in hot climates did not protect communities from COVID-19 (other factors such as overcrowding would confound this), the COVID-19 virus like many others was found to be not as viable in hot conditions. This being said, research indicated that direct sunlight and heat did contribute to inactivating the SARS-CoV-2 fomites on surfaces.¹⁸ This aligns with the use of ultraviolet rays being used to eradicate viral particles outlined in the UVGI systems.

Additional weather elements to consider are the effects of rain and sunlight on PPE integrity, this was a very real hazard for staff at HSQF where resident interaction occurred in an outside environment in the tropics. During October to May the build-up and tropical; rain season occurs which brings heat waves causing staff to sweat in PPE (personal health hazard related to heat stress).

PPE is not effective when it becomes wet.

Wetness can be due to rain, sweat or increased dampness in masks associated with exhalation.

Heat and wet weather strategies in place at CNR included:

The CNR accommodation village is spread over 60 hectares with individual rooms in banks of four spread over several large quarantine zones. The staff providing services to the residents are all working in the heat and humidity whilst delivering services including health, wellbeing, catering, facilities and maintenance services.



Managers and POD Leaders were aware of daily weather forecasts at start of shifts and informed staff of possible working hazards throughout the day. Responsibility was placed with individuals to monitor their own health in relation to heat stress and to monitor their buddy when working in the residents zones and wearing PPE.

- All staff were reminded to regularly check the Bureau of Meteorology weather advice during the wet season and build-up when heat waves and tropical storms are occurring.
- Work tasks were to be planned around expected weather events where possible and staff were to be mindful of lightning in the area at all times.
- Staff were to avoid becoming wet during work where possible.
- Staff who enter zones were encouraged to keep a spare pair of shoes and change of clothes at work during the wet season.
- Staff entering zones had access to umbrellas for light rain protection, noting umbrellas will require sanitising when departing a zone.
- Staff must take cover and all outside work must pause during heavy downpours of rain, noting it is preferred that staff shelter inside a fixed building where possible.
- Staff must take cover and all outside work must pause during lightning/electrical storms.
- If caught in a sudden downpour, walk safely to cover, staff were advised not to run in the rain due to trip hazards.
- If PPE becomes wet, staff were to return to a doffing station and remove PPE in accordance with doffing procedure. Staff must then don dry PPE before re-entering the zone when the weather event has ended.
- Staff needed to close the PPE container lids at Donning stations, when finished, to avoid them filling up with rain or being blown around the site in wind gusts, noting all PPE was kept in plastic tubs which could be sealed from environmental and fauna hazards (such as humidity and rain, and snakes and spiders).
- Staff were to ensure they close all bin lids at doffing stations, when finished doffing to avoid them filling with water.
- Arrivals during weather events were to remain in transport vehicle until safe for staff in PPE to complete arrival on boarding.
- Departures will cease during heavy downpours or lightning storms.

It is recommended the site identify a building can be utilised to keep residents safe until they are able to enter the zone. In such times all appropriate zone indications must be applied (PPE, physical distancing). This needs to include barrier tape and orange lights to notify other staff onsite where possible (and include this in a SMS communication to all site staff) and in all occasions staff supervision of area must be maintained. In these cases the area must be cleaned before re-use.





1.3.10 Heat health at CNR

Exposure to the tropical environment in outdoor workers across all sectors can result in heat related illness and the cumulative exposure to heat over several days can result in chronic heat hangover symptoms. Heat hangover symptoms include thirst, fatigue, headache and irritability and can occur with cumulative exposure and may result in increased workplace injuries and potentially in setting PPE breaches. Heat hangover also negatively impacts on individuals' sense of well-being, sleep patterns, appetite and family relationships – it is important to prevent this happening.

Staff at CNR worked with an ambient temperature of 24.7-32°C with high humidity levels reaching 80+% from November to April in the wet season and 21.6–31.8°C during the dry season. All staff working at CNR are therefore at risk and must take steps to mitigate the risk.

The effect of working in the tropical environment is compounded in the quarantine facility as staff must wear personal protective equipment in the orange zone to protect staff and the community from COVID-19 infection. Full contact PPE includes wearing a gown which creates a microenvironment around the skin due to a higher thermal resistance and lower water vapour permeability of the materials compared to usual clothing. Consequently, heat loss capacity via the skin surface is greatly reduced leading to shorter work tolerance times and a reduced physical and cognitive performance.

All staff briefing before daytime intake or bulk exits, or to any contractors when staff will be exposed to the heat for a longer period of time, must include a plan and reminder to staff about being mindful of their heat health. If a staff member has a heat related incident, this must be reported in the Risk Management System and reviewed by the Work Health and Safety and Director of Nursing to identify what were the causes and if improvements in work processes is required to prevent a repeated event.

The resident information booklet includes heat health information including causes, ways to prevent and what to do if affected by heat. During October to March, daily wellbeing checks are to include verbal reminders and/or explanations of heat health.





Preventing heat related illness

- 1. Complete heat health training (include this in site induction sessions/online presentation/WHS snapshot training).
- 2. Avoid direct sun as much as possible.
- 3. Plan staff workloads so they are in the orange zone for the minimum time possible.
- 4. Remind staff to self-monitor and remove themselves from the heat for a cool break if they are feeling too hot and/or thirsty encourage staff to communicate with their buddy and team leader to advise they need to have a cool break.
- 5. Staff are required to monitor their workmates and suggest a cool down break if they appear to be affected unduly by the heat.
- 6. If staff need to be in the orange zone for longer than an hour they must plan to have a cool break for at least 10 minutes for every one hour spent in the orange zone set an alarm to remind themselves to have a cool down rest at the end of each hour. They need to be disciplined with this rule pushing through another 10, 20 or 30 minutes will result in cumulative elevated core temperatures that will impact on their health and wellbeing. Leaving the orange zone and having a cool down break in the Teams pod or office space or in the staff dining area.
- 7. It is recommended that staff plan to ingest ice during cool down to lower core temperature more effectively -Slushy machines/Zooper Doopers (flavoured ice sticks) are available to staff for this purpose.
- 8. Ensure hydration staff should drink to their thirst level and based upon their experience.
- 9. At end of shift at home use air-conditioned environment, cool shower, pool and/or ice slushies to accelerate the drop in core temperature and heat recovery. If staff are still sweating following their shower, they require additional cooling. Recovery will be delayed while their core temperature remains elevated.
- 10. Eat healthy meals and avoid skipping meals.

