GL2018_002 - State Preparedness and Response Branch

Summary This document provides guidance regarding public health matters that may be considered in the establishment and monitoring of a major evacuation centre. The State Emergency Operations Controller is ultimately responsible for the activation of a major evacuation centre in the event that local resources are not equipped to manage the accommodation requirements following a decision to evacuate a population. Activation of a major evacuation centre will require multi agency consultation and response.

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NSW GOVERNMENT Health

GUIDELINE SUMMARY

MAJOR EVACUATION CENTRES: PUBLIC HEALTH CONSIDERATIONS

PURPOSE

The primary purpose of Major Evacuation Centres: Public Health Considerations is to provide guidance to NSW public health services regarding matters that may need to be considered in the establishment and monitoring of a major evacuation centre. It considers evacuation centre physical requirements and health protection and health promotion amongst evacuees.

KEY PRINCIPLES

The impact of some emergencies may exceed the capability of existing evacuation centre arrangements. The number of people presenting at the centre, the size of the facility required and the length of time it will need to operate may instigate the establishment of a major evacuation centre. Planning for a major evacuation centre needs to address many public health concerns. These include the physical amenities and space required for well-being, minimising the risk of communicable disease outbreaks and the need to promote the health of evacuees to prevent the acute exacerbation of chronic diseases. The State Emergency Operations Controller is ultimately responsible for the activation of a major evacuation centre in the event that local resources are not equipped to manage the accommodation requirements following a decision to evacuate a population. Activation of a major evacuation centre will require multi-agency consultation and response.

USE OF THE GUIDELINE

Preparing for and responding to a public health emergency is a whole-of-health responsibility. This document provides guidance regarding public health matters that may need to be considered in the establishment and monitoring of a major evacuation centre. However, as in any emergency situation, there may be factors which cannot be covered by a single set of guidelines. This document should be used as a guide for consideration rather than a mandatory directive. It does not replace the need for the application of expert judgement to each individual situation. This guideline should also be read in conjunction with NSW emergency management plans:

- The NSW State Disaster Plan (*Displan*) details emergency preparedness, response and recovery arrangements for New South Wales to ensure the coordinated response to emergencies by all agencies having responsibilities and functions in emergencies.
- In addition to the *Displan*, there are sub plans, which address specific hazards and supporting plans, which outline arrangements for groups of agencies which may be acting in a supporting role. These plans are available at: http://emergency.nsw.gov.au/content.php/475.html
- Healthplan is the supporting plan that provides for five major contributing health service components which constitutes the whole of health response and outlines

their agreed roles and functions. Healthplan is available at: http://emergency.nsw.gov.au/content.php/562.html

REVISION HISTORY

Version	Approved by	Amendment notes
January 2018 (GL2018_002)	Deputy Secretary, Population and Public Health	Updated guideline. Incorporates contemporary international recommendations and resources, clarifies LHD roles and responsibilities, simplifies document structure and provides updated considerations for environmental health assessment form for centres.
August 2011 (GL2011_011)	Deputy Director-General Population Health and Chief Health Officer	New guideline.

ATTACHMENTS

1. Major Evacuation Centres: Public Health Considerations - Guideline

Major Evacuation Centres: Public Health Considerations

NSW GOVERNMENT Health

Guideline

Issue date: January-2018

GL2018_002

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1. Introduction

An evacuation centre provides disaster affected people with basic human needs, including accommodation, food and water[i].

Local and regional EMPLANs detail facilities which could be utilised as evacuation centres during emergencies. However the impact of some emergencies may be of a scale and complexity that exceeds the capability of existing evacuation centre arrangements, placing additional demands on Government services.

A major evacuation centre (MEC) will be established following a decision by the State Emergency Operations Controller (SEOCON) to evacuate a population, in the event that local resources are not equipped to manage accommodation requirements themselves. This decision will be made in consultation with members of the State Emergency Management Committee (SEMC), according to the expected number of people and companion animals presenting at the centre, size of the facility and the length of time it will need to operate[i].

Activation of an MEC will require multi-agency consultation and response. NSW Health may be asked to provide public health recommendations on the appropriateness of a facility prior to its selection, or about the modification and management of a selected facility.

Planning for an MEC needs to address many public health concerns. This involves ensuring that physical amenities, space and access to clean water are optimised, risk of communicable disease outbreaks is minimised and acute exacerbation of chronic diseases is prevented.

1.1 Purpose

This document is intended as a guide to assist NSW Local Health Districts in providing advice on public health aspects of the planning and management of MECs in the event of a severe and catastrophic event.

It should be used as a guide only. It does not replace the need for the application of expert judgement and managerial discretion to each individual situation. This document does not consider provision of medical or mental health services, although these too will have a significant impact on the health of the evacuee population.

1.2 Key documents

Key documents related to evacuation are:

- Major Evacuation Centre Guidelines
- Evacuation Management Guidelines
- Evacuation Decision Guidelines for Private Health and Residential Care Facilities

These plans are available at www.emergency.nsw.gov.au/publications/guidelines-legislation-policies/guidelines_legislation_policies.html.

Resources on the practical aspects of planning for an MEC are listed in Appendix 1. Useful guidance is available from the Sphere Project's *Humanitarian Charter and Minimum Standards in Disaster Response*[ii], as adopted by the World Health Organization, from Emergency Management Australia[iii], Emergency Preparedness Canada[iv], and the United States Centers for Disease Control and Prevention[v].

1.3 Who uses major evacuation centres?

In 2005, Hurricane Katrina displaced thousands of urban residents in New Orleans, USA. This event provided valuable lessons for public health organisations on how MECs should be used. Experience gained here showed that vulnerable populations with poor social supports and limited financial means are likely to require emergency accommodation. Many of these people are likely to have chronic health problems such as diabetes, cardiac disease or mental illness[vi].

MEC planning should be culturally appropriate to the greatest extent practicable, including consideration of family arrangements, individual privacy, prayer rooms and provision of information in various languages.

MEC organisers should attempt to understand community demographics when undertaking planning so that any particular requirements can be accommodated to the greatest extent practicable. For example, Aboriginal people have higher chronic disease prevalence than non-Aboriginal populations and may benefit from support with ongoing monitoring of their chronic disease conditions.

2. Physical amenities

Selection of an MEC site and management of the centre is the responsibility of other agencies. The information below provides guidance for public health services if they are asked to provide advice as to the adequacy of planned facilities. Additionally, an Environmental Health Assessment checklist is provided at Appendix 2, to assist Environmental Health Officers or centre staff in rapid assessment of MECs.

Further details on physical requirements and site layout are outlined in Sections 15 and 16 of the NSW State Emergency Management Plan - Major Evacuation Centre guidelines.

2.1 Location

Where possible and safe, evacuees should be accommodated near their homes.

Any building should be structurally sound and have sufficient fire and emergency exits. Ensure that gas, electricity, water and sewerage systems have been checked by the relevant authorities.

The facility will likely host those with limited physical mobility or chronic illnesses – including those in wheelchairs, those using mobility or breathing aides and those with very young children in prams. This should be considered when planning an evacuation site.

2.2 Areas for consideration

The centre may require:

- Administration/staff area
- Registration area
- Mud/disinfecting area (to prevent mud and debris being tracked into the building – this will simplify cleaning and also reduce the risk of falls on wet floors)
- Sleeping area (including 'addresses' within the sleeping area so that evacuees can be easily located for follow-up of social or medical issues)
- Eating area
- Shower and toilet facilities
- Kitchen/ food preparation area
- Hand-washing stations
- Garbage collection area
- Sharps disposal facilities
- Women's hygiene product disposal facilities
- Clinic area
- Isolation area for potentially infectious people
- Secure storage area for any medical supplies
- Laundry
- Recreation areas (e.g. play area)
- Crèche
- Special purpose areas (e.g. depending on the population, a prayer area)
- Pet holding area

2.3 Physical space and air circulation

Living areas should be well ventilated with a reasonable supply of fresh air. People should have sufficient covered living space providing thermal comfort, fresh air and protection from the climate, ensuring their privacy, safety and health. A covered floor area in excess of 3.5m^2 per person will often be required to meet these considerations[ii].

The floor-to-ceiling height is also a key factor, with greater height being preferable in hot and humid climates to aid air circulation, while a lower height is preferable in cold climates to minimise the internal volume that requires heating. The internal floor-to-ceiling height should be no less than two metres[ii].

The ambient temperature of the building should ideally be 15-19^{o}C. High temperatures may lead to heat stress, while lower temperatures may leave vulnerable persons prone to hypothermia.

There should be no smoking in the centre (see Section 3.11 below) and cooking should only occur in the food preparation area.

2.4 Safety, privacy, rights and responsibilities

The MEC should be a safe space for all occupants and staff. Where possible, families should be accommodated together, or as culturally appropriate. For instance, Aboriginal people often have large extended families, and attempts to situate families together should be made where practicable.

Well-planned access routes through the MEC should be highlighted. Materials to screen personal space and opportunities for internal subdivision within the MEC should be provided[vii]. Individual spaces can support privacy and safety.

Learnings from Hurricane Katrina demonstrated the need for security measures to minimise the threat of domestic violence and assault against women in an evacuation setting. Where necessary, the MEC should provide adequate security staffing to ensure the safety of the centre.

People seeking or receiving assistance in an MEC and those who provide that care have the right to be treated with respect. All care will be provided in a manner that shows courtesy and consideration for a person's culture, religious beliefs, sexual orientation, issues arising from a disability and right to privacy[vii].

2.5 Water requirements

The quantities of water needed for domestic use may vary according to the climate, the sanitation facilities available, people's normal habits, their religious and cultural practices, the food they cook, the clothes they wear, and so on. Requisite water quantities for basic survival needs are described at Table 1.

Table 1. Basic survival water needs

Survival needs: water intake (drinking and food)	2.5–3 litres per day	Depends on the climate and individual physiology
Basic hygiene practices	2–6 litres per day	Depends on social and cultural norms
Basic cooking needs	3–6 litres per day	Depends on food type and social and cultural norms
Total basic water needs	7.5–15 litres per day	

Reference: The Sphere Project (2011) *Humanitarian Charter and Minimum Standards in Disaster Response.*

In an absolute emergency 7L of water should be provided, per person per day. Ideally at least 15L should be supplied, per person per day, for drinking, cooking and personal hygiene requirements. The very young and the elderly are most at risk of dehydration. The allocated amount may need to be increased in hot conditions or where heavy work is being carried out.

Consider the number of people per tap and the water flow – a rough guide is 250 people per tap when the water flow is 7.5L/min[ii].

2.6 Personal hygiene

Good personal hygiene should be promoted throughout the MEC. Hand hygiene and good respiratory etiquette (covering coughs and sneezes) should be promoted with education materials and distribution of equipment (e.g. alcohol-based hand cleanser, tissues, and garbage bins). Separate hand washing stations should be set up near toilet and meal areas, and there should be systems in place to ensure high compliance (e.g. staff member monitoring station to ensure that people wash their hands before lining up in queue to collect meal).

A ratio of one shower facility per 50 people is suggested if the weather is temperate and one shower facility per 30 people in hot weather.

Caretakers of infants and children under two years should have access to at least three disposable nappies per day with the ability to replenish.

2.7 Mud/disinfecting area

Often evacuees may come from an area that has been contaminated (e.g. by sewage) or is muddy or dusty. In order to maintain the cleanliness of the facility and reduce the chance of introduction of disease, an area at the entrance to the facility should be put aside for cleaning mud from shoes and clothes.

2.8 Toilets

Ideally there should be a maximum of 20 people for each available toilet. In the initial phases of the emergency, a figure of 50 people per toilet may be used until additional facilities are available[ii]. Use of toilets could be arranged by households and/or segregated by sex. The allocation of toilets may depend on the demographics of the evacuees (e.g. predominantly male vs. predominantly female).

Toilet facilities should include provision for the disposal of feminine hygiene products (e.g. bins with tight fitting lids).

Toilets should be sited in such a way as to minimise threats to users (particularly children and females). This includes appropriate lighting, or provision of torches to those in the MEC.

There must be an adequate number of wash basins available – the Sphere Project recommends a minimum of one basin per 100 people[ii]. Soap, water and disposable hand towels should be available in the toilets for hand washing. Posters promoting hand washing should be available in the toilet block. Garbage bins with tight fitting lids should be located in the toilet block.

Facilities for changing infants and for the safe disposal of children's used nappies should be established, including hand washing facilities next to the changing station/s.

Because of the potentially high ratio of residents to toilets, temporary MECs have a particular need for frequent and supervised cleaning and maintenance of toilet facilities. Designated MEC personnel should ensure that surfaces are wiped down with disinfectant at least hourly whilst the premises are occupied.

2.9 Cleaning of living areas

Rosters of personnel (either volunteers or evacuees) should be developed and systematic cleaning undertaken. Cleaning materials should be made available to all residents, and residents should be encouraged to keep the MEC clean and tidy. Any cleaning materials should be safely stored in a designated, secure cupboard.

All floors should be swept, electrostatically mopped or vacuumed daily. Sleeping areas must be kept neat and tidy to facilitate cleaning activities. People should not eat in the sleeping area to facilitate ease of cleaning and reduce the attraction of ants, flies and cockroaches.

Keeping surfaces and items clean helps to reduce the spread of infections amongst people living or working at the MEC. Surfaces should be cleaned with a household detergent on a regular schedule and when visibly dirty. Kitchens and bathrooms should be cleaned at least daily and as necessary (e.g. after use). Bed frames, mattresses and pillows should be cleaned and their coverings laundered between occupants. Other furniture should be cleaned weekly and as needed. Spills should be cleaned up immediately.

Cleaning of high-risk surfaces is particularly important. These include:

- Food preparation surfaces
- Surfaces used for nappy changing
- Surfaces soiled with body fluid (e.g. vomitus, blood, faeces)

In the event of an outbreak of diarrhoeal illness, additional special care must be taken to ensure the cleanliness of door handles, railings and other surfaces.

Household bleach and detergents are dangerous and should be stored securely away from children. People undertaking cleaning activities must ensure they are properly protected.

2.10 Recreation area

A safe, secure recreation area should be put aside for children and adults for physical activity such as sport and games. Children may also require an indoor area for more passive activities.

2.11 Smoking

There is no legal obligation to provide designated smoking areas, and under the *NSW Health Smoke-free Health Care Policy* (PD2015_003), which may be used as a guide, health service grounds are required to be smoke free. However, as the MEC is not classified as a health service, it may be decided to establish a smoking area. In this case, compliance with NSW government smoke laws is required - see: http://www.health.nsw.gov.au/tobacco/Pages/smoke-free-laws.aspx.

To assist in managing nicotine dependence of evacuees and staff, consideration should be given to supplying nicotine replacement therapy or other quit support, as outlined in the NSW Health guidance on managing nicotine dependence – available at: www.health.nsw.gov.au/tobacco/pages/managing-nicotine-dependence.aspx.

Some cultural groups, including Aboriginal people, may have a significantly higher smoking prevalence rate, including during pregnancy, and are therefore more likely to require nicotine replacement therapy provision.

Smoking areas should be:

- Located outdoors, clearly designated and well-ventilated with no possibility that the resultant smoke will contaminate indoor areas
- Located away from entry points, food preparation areas, and areas where people may be congregated, such as dining or transport facilities.
- Provided with ash bins[i].

Should it be decided to establish a designated smoking area, consideration should be given to general duty of care of employers for employee health, or advice should be sought from SafeWork NSW if unclear – available at:

Phone: 13 10 50
Website: http://www.safework.nsw.gov.au/

2.12 Laundry (where available)

Laundry should be processed off-site as far as possible, or undertaken in an area separate to personal hygiene facilities.

If laundry facilities are provided there should be one wash stand per 50 people and approximately 200g of laundry soap should be made available for each individual (per month)[iii].

Garments heavily soiled with faeces should be handled carefully, wearing gloves, and placed in a plastic bag for disposal. If faeces can easily be removed using toilet paper, the garment may be laundered by washing in a washing machine using normal temperature settings and laundry detergent. There is no need to disinfect the tubs of washers or tumblers of dryers if cycles are run until they are completed. Adherence to these instructions should be encouraged through MEC staff supervision or through the provision of visible signage.

Any donated clothing must be washed and screened for appropriateness before distribution. All affected people should have access to sufficient changes of clothing to ensure their thermal comfort, dignity, health and well-being. This will require at least two sets of essential items, particularly underclothes, to enable laundering[ii].

2.13 Waste management

Local council is responsible for waste management in an emergency, however public health services may be asked for advice.

Waste disposal, including disposal of regulated clinical waste such as needles and syringes, should comply with local requirements. Facilities should be provided for the proper disposal of needles and syringes used for medications. Containers designed for sharp waste disposal should be placed where needles and syringes are used. Sharps containers must be AS/NZS compliant. Many people who use needles and syringes may be reluctant to disclose their need publicly; hence all MEC facilities (e.g. toilet blocks, clinic areas) should have some capacity for the safe disposal of needles and syringes.

Garbage receptacles should be lined with plastic bags that can be securely tied shut. Garbage bags should not be overfilled, nor should they be compressed by hand to expel excess air.

Garbage should be placed in an area separated from the living spaces, preferably in garbage bins. Garbage bins should have tight fitting lids to discourage vermin.

Waste pick-ups should be frequently scheduled - daily, if possible. If daily pick-ups are not occurring, ensure the garbage is stored in a shady location in secure bins.

If centralised catering services are provided, bulk bins are a preferable option for wet garbage and these should be located in proximity to kitchens, with smaller bins in the rest of the MEC. If evacuees are cooking for themselves in family lots, then 140L and 240L wheeled bins dispersed at convenient locations are a suitable option. All bins should be placed in positions with ease of access for waste collection.

The type of sewage system in operation should be identified. If onsite, steps should be taken to ensure it is able to cope with the evacuee population. If

portable, a system must be in place to ensure wastewater is safely stored, collected and transported.

3. Food safety

3.1 Eating areas and kitchen hygiene

Evacuees should not bring their own hot food into the MEC as this poses an increased risk of disease outbreak. Food should not be consumed in sleeping areas. The eating area should be swept after each use and washed daily.

MEC kitchen hygiene rules are provided at Appendix 3.

3.2 Serving food

Where possible, food should be prepared off-site in a dedicated food preparation facility where food preparation standards are observed. It is preferable that an Environmental Health Officer from the local council would have inspected the food preparation area prior to its use to ensure it meets the appropriate standards. A separate eating area should be made available to assist in keeping the MEC clean.

Further information regarding the serving and storage of food are available in the publication *Safe Food Australia,* published by the Food Standards Australia and New Zealand (FSANZ). The NSW Food Authority has resources available online: http://www.foodauthority.nsw.gov.au/.

3.3 People with special dietary needs and allergies

Special dietary needs or cultural requirements should be taken into account when planning catering for the MEC, and alternatives provided where possible.

It is also important to identify any allergies that may exist within the evacuee population and take measures to ensure these individuals are not fed any food containing those allergens, and that the potential for cross contact during food preparation and serving is minimised.

4. Pets and public health

The Agricultural and Animal Services Functional Area (led by the NSW Department of Primary Industries) is responsible for and will provide advice on the management of animals in an emergency. There is a risk to public health if people refuse to evacuate because of concern for a pet's welfare and public health services should be prepared to provide advice on this matter.

Whilst having a pet nearby may provide a source of comfort for those who have been evacuated, pets may pose a risk to public health through transmission of

disease, risk of injury and loss of amenity (noise and smell). The appropriateness of housing pets in MECs should be carefully considered. However, assistance animals as defined in the *NSW Companion Animals Act 1998* must be allowed to accompany their owner.

Sometimes, separate areas can be established for pets. Appendix 4 details guidelines for reducing the risk of injury or disease, in instances where there are no alternative separate areas for pets.

5. Control of communicable diseases

Any MEC can provide opportunity for the ready communication of infectious diseases. The risk of a large-scale infectious disease outbreak can be mitigated through good infection control, plans for effective sanitation, careful attention to food handling and storage, and plans for the isolation of people with infectious disease. It is important that a clear message is established and communicated to evacuees, regarding the importance of general infection control. Good personal hygiene practices to be encouraged among evacuees are listed at Appendix 5.

MECs are likely to have limited availability of and/or accessibility to sinks for hand washing. Thus, additional attention should be paid to positioning alcohol-based hand cleanser dispensers in convenient locations such as the entrance to the facility, throughout the living areas (depending on the size of the venue), at the beginning of food service lines and in toilet facilities.

All arriving residents should be provided with advice on basic communicable disease control practices, such as hand/cough/sneeze hygiene, safe food handling, and advice on what they should do if they become ill. Suitable posters should be placed in prominent positions in the MEC (see Appendix 6 for links to relevant resources).

In areas that have been flood-affected, there is an increased chance of wound contamination. Residents should be encouraged to clean wounds appropriately. Where puncture or other contaminated wounds have occurred, people should have their tetanus vaccination status assessed and seek immunisation if their vaccination is not up to date or unknown.

Numbers of mosquitoes can increase significantly following floods in warmer months. Control measures should ensure that water holes or containers capable of holding water are regularly checked for evidence of mosquito breeding.

Where mosquitoes are present, public health officers should provide advice on how best to avoid being bitten.

5.1 Management of people with infectious diseases in major evacuation centres

The arrival of people who may have symptomatic infections, and/or unrecognised or incubating infectious diseases, combined with potential for crowding and limited sanitary infrastructure, increases the risk of infections spreading among residents and between residents and staff. This is particularly true of respiratory infections and diarrhoeal diseases.

MECs should have a clear protocol for staff on the management of potentially ill or infectious people, including screening, isolation and sick bay. A clear referral pathway to hospital care and processes for MEC staff to report disease outbreaks to the local public health unit should also be made available during the accommodation planning and staff training. NSW Health will work with the lead agency managing the MEC to develop these protocols.

Before entering an MEC, all residents should be requested to report the following conditions to centre staff:

- Fever
- Cough (new or changed)
- Vomiting
- Diarrhoea
- Rash

Ideally, people with any of the above conditions should be admitted to the MEC only after appropriate assessment and care, and if symptoms are of mild severity and in normal circumstances could be self-managed at home. Health services should consider establishing a simple system to assess people as they arrive at the MEC.

Residents of the MEC should be asked to report any of the above conditions to the centre staff, who should consult health authorities in a timely fashion, and record in any evacuee data collection conducted (see Section 7).

5.2 ‘Sick bays’/special temporary accommodation centres

There will be circumstances where a person becomes unwell and does not require hospital-level care, but where a separate room is recommended because of the nature of the disease or because of the potential to infect others. This includes individuals who are experiencing the above described conditions at the time of their presentation to the MEC, as well as individuals already residing at the MEC when symptoms appear.

Public health services should be prepared to make recommendations on the appropriate placement of affected people, noting that people in this situation only need the level of care that family or friends would usually provide.

Each MEC should have a clear plan for transferring individuals with potentially infectious diseases from the MEC to an appropriate “sick bay”, either within the centre or nearby. The sick bay should ideally be a room where the sick person can be isolated. Ill individuals with respiratory symptoms should wear a surgical mask if in close proximity to others while awaiting evaluation or transfer. A waiting area should be designated that is separate from the main centre living areas, but which can be closely monitored by MEC staff.

Provision should be made to accommodate at least up to two per cent of people in this fashion. This estimate is based on the prevalence of infectious diseases during the winter period in the population. However, in a closed environment the prevalence is likely to be higher and greater space may be required should an outbreak occur. If this special accommodation is required for a greater number of people, expert advice should be sought from Public Health Units, dependent upon the situation and outbreak type.

This separate area or room to house potentially infectious people should be identified in advance. If several people with similar symptoms are identified, they may be housed together in one area. However, beds should be separated by at least two metres and preferably screened. A dedicated toilet facility should be identified and reserved for use of the ill individuals only.

More than one separate area may be needed if more than one illness is identified in the population, for example, an area for people with diarrhoea and another area for people with a cough and fever. Such separate areas may require staff dedicated to monitoring people housed there and ensuring that the area is kept clean and appropriately supplied. Staff should have some experience in managing minor health concerns (such as teachers, child care workers, or health workers) or have past training in first aid. Requests for extra staff will come through existing emergency management channels.

5.3 Infectious disease management among MEC staff

MEC staff should provide appropriate evidence of vaccination if circumstances permit, depending on their role within the centre (eg. health monitoring, food preparation, etc.). Staff with any of the above symptoms should not work in the centre, but should seek medical evaluation, where available, for assessment and clearance prior to returning to work.

MEC staff working with people who have symptoms of illness should use Standard Precautions for any interactions that require potential contact with body fluids, and should place particular emphasis on hand hygiene. The use of Standard Precautions aims to protect residents and staff from exposure to recognised and unrecognised sources of infection. See the *NSW Health Infection and Control Policy* (PD2017_013) for further detail: http://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2017_013.pdf

6. Other health considerations

6.1 Injury

Staff should identify any injuries related to the MEC and recognise any areas of concern to minimise the risk of injury in evacuees.

6.2 Chronic diseases

People with chronic diseases that require regular medication, such as epilepsy, diabetes or congestive heart failure, should be identified on admission to the MEC. Support from health services may be needed to continue to access this medication.

Many people with chronic diseases may have acute exacerbations or significantly worsen if regular care is not provided. Consideration should be given to the continuous needs of those with health conditions that require intensive treatment in the home (e.g. peritoneal dialysis, access to continuous positive airway pressure devices). Where possible, best endeavours should be made to relocate people with serious chronic conditions to an established health facility.

Exacerbations of chronic diseases should be carefully monitored for in the HIS and steps taken to manage any increase in presentations over that expected.

6.3 Reproductive health

In the aftermath of Hurricane Katrina it was recognised that in addition to the health care needs of women who are already pregnant, health care needs of women who wish to avoid an unintended pregnancy are also important. Women may not have access to their preferred contraceptive method; hence health planning should consider strategies for providing access to contraception, including methods requiring a prescription[viii].

7. Health information systems

Depending on how long the MEC is expected to be open, a standardised health information system (HIS) may be implemented by NSW Health to routinely collect relevant data on evacuee demographics (e.g. age/sex), mortality, morbidity and syndromic surveillance and to support timely outbreak detection.

The HIS may be based in the Notifiable Conditions Information Management System (NCIMS), or may require another data capture tool. Standard confidentiality practices must be maintained.

Supplementary data from other relevant sources (e.g. disaster victim registration) may be used to assist in the interpretation of surveillance data and to guide decision making. Data from such a registration system may be able to

be imported or extracted and re-entered into surveillance tools such as the NCIMS. NSW Health will explore such options if required, during a prolonged evacuation operation.

A regular epidemiological report should be generated and shared with relevant agencies, decision-makers and the community. The frequency of the report will vary depending on the emergency type and stage.

8. Returning home information

When it is time for people to return home after a cyclone, flood, or other natural disaster, public health services should be prepared to provide information and guidance in order to reduce the probability of illness, disease or injury to individuals and families from hazards resulting from the disaster[ix]. This may include clean up information, safety precautions and utilities supply, as well as advice about who to contact if any ill health effects develop – such as Healthdirect, a general practitioner or local hospital.

Specific assistance and advice may be required for people with existing illness or injuries prior to returning home, such as:

- Adequate prescription medication supply and storage facility (e.g. insulin and refrigeration)
- Specific medical equipment (e.g. blood glucose monitor, oxygen cylinders, bandages)

9. Appendices

Appendix 1 – Key references

[i] SEMC Evacuations Working Group, (2014). *State Emergency Management Plan: Major Evacuation Centre Guideline.* Accessed 19 October 2017 online at: https://www.emergency.nsw.gov.au/media/admin/267/_/7f5jsgi07dvugwk4c4/Guideline_MajorEvacuationCentre_20140601.pdf

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Appendix 2 – Environmental health assessment form for centres

This form is designed to assist centres and Environmental Health Officers with rapid assessment of major evacuation centre conditions during an emergency.

State Logo	ENVIRONMENTAL HEALTH ASSESSMENT FORM FOR CENTRES **For Rapid Assessment of Centre Conditions during Disasters**

I. ASSESSING AGENCY DATA

1. Agency /Organisation Name	**96. Immediate Needs Identified: □ Yes □ No**
2. Assessor Name/Title	
3. Phone:	4. Email or Other Contact:

II. FACILITY TYPE, NAME AND CENSUS DATA

5. Centre Type □ Community/Recovery □ Special Needs □ Other _____6 Recreation Facility □ Yes □ No □ Unk/NA 7 ARC Code ____

8. Date Centre Opened __ __ /__ __/__ __ (mm/dd/yr) 9 Date Assessed __ __ /__ __/__ __ (mm/dd/yr) 10 Time Assessed __ __ : __ __

11. Reason for Assessment □ Preoperational □ Initial □ Routine □ Other

12. Location Name and Description

13. Street Address

14. City 15. State 16. Post Code

18. Facility Contact / Title 19. Facility Type □ School □ Arena/Convention centre □ Other

20. Phone 21. Fax 22. E-mail or Other Contact

23. Current Population _____ 24. Estimated Capacity _____25. Number of Residents _____26. Number of Staff / Volunteers _____

III. FACILITY		**VIII. SOLID WASTE GENERATED**	
27. Structural damage	□ Yes □ No □ Unk/NA	72. Adequate number of collection receptacles	□ Yes □ No □ Unk/NA
28. Security / law enforcement available	□ Yes □ No □ Unk/NA	73. Appropriate separation	□ Yes □ No □ Unk/NA
29. Water system operational	□ Yes □ No □ Unk/NA	74. Appropriate disposal	□ Yes □ No □ Unk/NA
30. Hot water available	□ Yes □ No □ Unk/NA	75. Appropriate storage	□ Yes □ No □ Unk/NA
31. Heating and/or air-conditioning system operational	□ Yes □ No □ Unk/NA	76. Timely removal	□ Yes □ No □ Unk/NA
32. Adequate ventilation	□ Yes □ No □ Unk/NA	77. Types	□ Solid □ Hazardous □ Medical □ Sharps □ Unk/NA □ Soiled nappies, sanitary items
33. Adequate space per person	□ Yes □ No □ Unk/NA	**IX. CHILDCARE AREA**	
34. Free of injury /occupational hazards	□ Yes □ No □ Unk/NA	78. Clean nappy changing facilities	□ Yes □ No □ Unk/NA
35. Free of pest / vector issues	□ Yes □ No □ Unk/NA	79. Hand-washing facilities available	□ Yes □ No □ Unk/NA
36. Acceptable level of cleanliness	□ Yes □ No □ Unk/NA	80. Adequate toy hygiene	□ Yes □ No □ Unk/NA
37. Electrical grid system operational	□ Yes □ No □ Unk/NA	81. Safe toys	□ Yes □ No □ Unk/NA
38. Generator in use and safely located	□ Yes □ No □ Unk/NA	82. Clean food/bottle preparation area	□ Yes □ No □ Unk/NA
38 a) If yes, type:		83. Adequate child/caregiver ratio	□ Yes □ No □ Unk/NA
39. Indoor temperature _____ degrees C	□ Yes □ No □ Unk/NA	84. Acceptable level of cleanliness	□ Yes □ No □ Unk/NA
40. Safe chemical and cleaning product storage	□ Yes □ No □ Unk/NA	**X. SLEEPING AREA**	
41. Refrigeration for pharmaceutical products	□ Yes □ No □ Unk/NA	85. Adequate number of cots/beds/mats	
IV. FOOD		86. Adequate supply of bedding	
42. Preparation on site	□ Yes □ No □ Unk/NA	87. Bedding changed regularly	□ Yes □ No □ Unk/NA
43. Served on site	□ Yes □ No □ Unk/NA	88. Adequate spacing (see page three)	□ Yes □ No □ Unk/NA
44. Food supplier appropriately accredited or on site supervision provided	□ Yes □ No □ Unk/NA	89. Acceptable level of cleanliness	□ Yes □ No □ Unk/NA
45. Adequate supply	□ Yes □ No □ Unk/NA	**XI. COMPANION ANIMALS**	
46. Appropriate storage	□ Yes □ No □ Unk/NA	90. Companion animals present	□ Yes □ No □ Unk/NA
47. Appropriate temperatures	□ Yes □ No □ Unk/NA	91. Animal care available	□ Yes □ No □ Unk/NA
48. Hand-washing facilities available	□ Yes □ No □ Unk/NA	92. Designated animal area	□ Yes □ No □ Unk/NA
49. Safe food handling	□ Yes □ No □ Unk/NA	93. Acceptable level of cleanliness	□ Yes □ No □ Unk/NA
50. Separate dishwashing facilities available	□ Yes □ No □ Unk/NA	**XII. OTHER CONSIDERATIONS**	
51. Clean kitchen area	□ Yes □ No □ Unk/NA	94. Disabled accessibility	□ Yes □ No □ Unk/NA
V. DRINKING WATER AND ICE		95. Designated smoking areas	□ Yes □ No □ Unk/NA
52. Adequate water supply	□ Yes □ No □ Unk/NA	96. Appropriate health signage displayed	□ Yes □ No □ Unk/NA
53. Adequate ice supply	□ Yes □ No □ Unk/NA	**COMMENTS *(List Critical Needs on Immediate Needs Sheet)***	
54. Potable water source	□ Yes □ No □ Unk/NA		
55. Potable ice source	□ Yes □ No □ Unk/NA		

56. Safe storage for water and ice		
VI. HEALTH / MEDICAL		
57. Reported outbreaks, unusual illness / injuries	☐ Yes ☐ No ☐ Unk/NA	
58. System in place to report outbreaks, unusual illness		
59. Medical care services on site	☐ Yes ☐ No ☐ Unk/NA	
60. Counseling services available	☐ Yes ☐ No ☐ Unk/NA	
61. Isolation area available		
VII. SANITATION		
62. Adequate laundry services	☐ Yes ☐ No ☐ Unk/NA	
63. Adequate number of toilets	☐ Yes ☐ No ☐ Unk/NA	
64. Adequate number of showers	☐ Yes ☐ No ☐ Unk/NA	
65. Adequate number of hand-washing stations	☐ Yes ☐ No ☐ Unk/NA	
66. Hand-washing supplies available	☐ Yes ☐ No ☐ Unk/NA	
67. Toilet supplies available	☐ Yes ☐ No ☐ Unk/NA	
68. Acceptable level of cleanliness	☐ Yes ☐ No ☐ Unk/NA	
69. Adequate signage of sanitation instructions	☐ Yes ☐ No ☐ Unk/NA	
70. Adequate supply of female hygiene disposal bins	☐ Yes ☐ No ☐ Unk/NA	
71. Sewage system type ☐ Community ☐ On site ☐ Portable ☐ Unk/NA		
71 a) If onsite – system is able to cope with population	☐ Yes ☐ No ☐ Unk/NA	
71 b) If portable – wastewater is safely stored, collected and transported	☐ Yes ☐ No ☐ Unk/NA	

XIV. IMMEDIATE NEEDS SHEET

Item #	Description

Appendix 3 – Kitchen hygiene rules

- Sponges and scourers should be washed daily or discarded and replaced daily.
- When storing and preparing food, do not let raw meat juices drip onto other foods.
- Keep raw and cooked food separate. It is preferable to have separate utensils for raw and cooked foods, especially cutting boards. If this is not possible, ensure that they are cleaned and sanitised between being used for raw foods and cooked foods.
- Food supplies should be kept in containers with tight fitting lids.
- Keep benches, kitchen equipment and tableware clean.
- Wash hands with soap and running water thoroughly before starting to prepare or eat any food, even a snack.
- Do not handle food for others if you are sick with symptoms of gastroenteritis (e.g. vomiting, diarrhoea) or for 48 hours after you completely recover.
- If a food that is meant to be refrigerated is left out of the fridge for two hours or more, avoid eating it.
- Cook and reheat foods until they are steaming hot.

Appendix 4 – Guidelines to reduce risk where pets are kept in shared areas

- If a pet is kept at a human evacuation centre, it should not be allowed to freely roam the facility and should be kept under control at all times, either via caging or a leash. This is for the animal's safety, as well as the safety of the people in the evacuation centre.
- Animals must be kept out of food preparation areas.
- Dogs and cats should be treated for intestinal parasites while staying at the human centre. This is particularly important when the pet is younger than 6 months old.
- Dogs and cats should be treated with medications to kill fleas and ticks. Care should be taken to administer treatments that are safe for that particular species of animal (i.e. not all treatments that are safe for dogs are safe for cats).
- Furred or feathered pets should be housed in areas separate from people with allergies or asthma triggered by fur, feathers, or dander.
- Cats should be kept in a cage with a litter box that is cleaned frequently (at least once every 24 hours). Pregnant women or immunocompromised people should not have contact with used litter.
- Dogs should be walked regularly on a leash outside the centre to allow them to urinate and defaecate in designated areas. Any faeces should be immediately collected and disposed of.
- Anyone bitten by an animal should speak with a healthcare provider to discuss associated concerns (e.g. tissue trauma, infection). Bites and scratches should be thoroughly cleaned with soap and water.
- People caring for pets in evacuation centres should practice good hygiene by cleaning up after their pets (e.g. disposal of faeces) and frequently washing their hands.
- Children younger than 5 years old should not handle reptiles without adult supervision, and should always wash their hands after doing so. Hand washing should be monitored by an adult.
- Pregnant women and immunocompromised people should avoid contact with cat feaces, and with pet rodents such as hamsters, gerbils, and guinea pigs.
- People should not share food with their pets, nor allow pets to lick their faces.

From US Centers for Disease Control and Prevention (CDC) – Animals in Public Evacuation Centers. Available online: https://www.cdc.gov/disasters/animalspubevac.html

Appendix 5 – Personal hygiene practices to support infection control

Practices to be encouraged among evacuees include:

- Covering coughs with tissues and disposing of tissues in the garbage after one use.
- Washing hands or using alcohol-based hand cleanser after coughing, after going to the toilet and before eating.
- Providing tissues and garbage bins in MEC living areas.
- Preparing food hygienically.
- Not sharing eating utensils or drinking containers.
- Not sharing personal care items such as combs, razors, toothbrushes, or towels.
- Having sharps disposal containers available.

Appendix 6 – Evacuation centre posters and factsheets

NSW Health Evacuation Centres and Posters
Including play areas, baby health station, hand hygiene, diabetes, blood glucose monitoring, high blood pressure, cough etiquette:
http://www.health.nsw.gov.au/emergency_preparedness/planning/Pages/evacuation-centres-and-posters.aspx

NSW Fight the Bite campaign:
http://www.health.nsw.gov.au/environment/pests/vector/Pages/resources.aspx

Queensland Health Evacuation Centre posters
Including food storage, hand hygiene, drinking water, mosquito management and hot weather considerations:
https://www.health.qld.gov.au/public-health/disaster/evacuation-centers

Hand Hygiene Australia:
http://www.hha.org.au/ForHealthcareWorkers/promotion.aspx

US Centers for Disease Control and Prevention, Information for Evacuation Centres:
https://www.cdc.gov/disasters/evaccenters.html