

Restricted Distribution

Public Health Emergency Operations Centre Requirements



August 2017

Why we have a PHEOC

The Public Health Emergency Operations Centre (PHEOC) is the state operations centre for public health responses led by the Chief Health Officer (the State Public Health Controller), Ministry of Health and Health Protection NSW.

It is one of a number of operations centres, both within the NSW Health system (such as NSW Ambulance and major hospitals) as well as other Essential Services Agencies.

The requirement of a PHEOC is outlined in the Public Health Services Supporting Plan to the NSW Health Services Functional Area Supporting Plan (http://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=PD2015_002).

The PHEOC also is a key resource for the Chief Health Officer and Health Protection NSW to meet requirements or objectives under:

- The NSW Public Health Act – which include objectives to control the risk to public health:
- The New South Wales Health Services Functional Area Supporting Plan (NSW HEALTHPLAN) which outlines the arrangements for managing emergencies impacting human health issues – public health services are one of the key pillars to the whole of health response (http://www.health.nsw.gov.au/emergency_preparedness/planning/Pages/default.aspx)
- The NSW Emergency Management Plan (EMPLAN) which outlines the principles of emergency management in NSW, the legislative and policy framework. EMPLAN identifies NSW Health as the combat agency for a pandemic. In the event of a pandemic the Chief Health Officer and the broader public health network would be core responders to NSW Health response.

The PHEOC links in closely with Local Health District public health operations, the State Health Emergency Operations Centre (based at NSW Ambulance), the Commonwealth Department of Health National Incident Room, and other State government emergency operation centres.

When would we activate the PHEOC

The PHEOC is staffed using the Incident Command Structure (ICS) which is scalable and defines clear roles and responsibilities to individuals. ICS is a standardised approach to the command, control and coordination of an emergency response or incident across Governments. It provides a hierarchy within responders from multiple agencies are aware and can operate effectively within. It enables staff to be drawn from multiple agencies who do not routinely work together.

Within an ICS structure, staff are assigned to a role/function which means that if an event escalates, so can the staffing levels, and if the response lasts for an extended period, there is no reliance on an individual but on the roles. It enables a response to be scalable and resourced appropriate from the initial presentation to conclusion

Examples of when the PHEOC would be activated:

- Influenza pandemic (global outbreak) – NSW Health is the combat agency for the state response (as in the 2009 H1N1 pandemic).
- Emerging infectious diseases (e.g. Ebola virus, SARS-CoV, MERS-CoV)
- Management of a major Legionnaires' disease outbreak (as in the 2015 CBD Legionnaires' disease outbreak)
- Measles outbreaks requiring state-wide coordination and surge staff deployment
- Major environmental hazard such as a toxic chemical release (as in the 2011 Orica chemical spill)
- Major water incident (as in the 1998 Cryptosporidiosis / Sydney Water incident)
- Coordinating surveillance and response during a severe influenza season
- Coordination of large events/ mass gathering with potential public health (as in 2000 Sydney Olympics, 2008 World Youth Day in Sydney)
- PH emergency exercises – testing of PH emergency responses for response staff as well as maintenance and testing of key infrastructure.
- PH emergency response training activities

The PHEOC may also be activated to support Chief Health Officer and other senior Ministry and pillar executives to:

- Manage of wide-scale /complex medication and medical device contamination, recalls or shortages that are having significant impacts on the NSW health system
- Manage the public health response to a major terrorist attack or mass casualty (to support Ministry's executive response) though not affecting the building itself.

The PHEOC could be activated for short responses (a few days) up to long protracted responses for many months, such as for influenza pandemic response or a SARS outbreak.

The Current PHEOC

The PHEOC is currently located on Level 7 at the Ministry of Health, 73 Miller Street, North Sydney.

Current design is 2 x medium sized (16 person) meeting rooms that can be combined into a large meeting room with movable walls.

The PHEOC space has the potential to be opened up (by removing a temporary wall) to incorporate surrounding office space.

The current PHEOC has dedicated analogue lines routed to the PHEOC (not PABX) in the event there is a PABX or power outage. The analogue numbers are circulated to stakeholders and are a known contact method for the PHEOC. This also enables outgoing communication.

Limitations

The PHEOC currently does not fully meet the requirements of the Ministry of Health. Recent PHEOC responses, including the 2015 CBD Legionella outbreak response and pandemic exercises have identified a number of shortcomings which will need to be addressed at the new site. These include:

- Very crowded space when converted to an EOC layout with ICS team work spaces. Results in insufficient walkways/passage around the room.
- Lack of effective control of temperature and noise makes for an uncomfortable for EOC staff to work in, particularly for extended shifts.
- There is limited storage space for equipment and information displays
- Lack of space for the PHEOC controller and team leaders to meet and provide briefings or to hold stakeholder teleconferences without disturbing the rest of the PHEOC.

This document is designed to give detail on the PHEOC physical and technological requirements of the space.

PHEOC Requirements

The PHEOC needs to be available 24 hours a day, 7 days a week, 365 days a year. The PHEOC needs to be able to be made operational within 60 minutes of activation.

It should be noted however that:

- this facility does not need to be the only point of control in the event of a public health emergency. For instance, Health emergencies can occur when the responsible NSW Health executive is not at the building and in these circumstances, work can be coordinated from other locations in the interim;
- as such, there are options for managing public health emergency responses outside of the building, for instance the new building is located adjacent to Royal North Shore Hospital which has an emergency response operations room.

The PHEOC needs to comply with Occupational Health and Safety legislation and regulations.

Physical Facility

The physical resources required to support operations in an EOC include the following:

- Display Boards e.g. White boards/SMART boards/display boards
- Computers
- Audio / visual equipment
- Printers/Scanners available in neighbouring Utility room (Black/White and Colour).

Data

The PHEOC is a multiple use room and requires significant data connections/connectivity to allow for the connection of computers/laptops to allow staff to respond and work within the response. This is due to the requirement to have devices connected within multiple layout options being day to day meeting use and public health response use.

As the response may commence after hours, it is not practical to rely on Technology Services Centre (TSC) staff to attend to activate data ports at the start of a response. Therefore the PHEOC connectivity capabilities need to be available at all time or be easily activated by PHEOC staff.

Power

The PHEOC is a multiple use room and requires significant power connections. This is due to the requirement to have devices connected within multiple layout options being day to day meeting use and public health response use. Power is currently connected to the desks to assist in the connectivity of devices.

Communications Systems

The PHEOC is a centre of communication which needs the ability to communicate and confer between a range of stakeholders involved in the emergency response. Communications systems and processes are used to support the primary business needs of the PHEOC.

Phone systems

PHEOC phones are better serviced if operated through direct exchange connection rather than through the general office system (PABX), and with analogue line options.

Dedicated Printer with Dual Secure Fax Lines

Dedicated printer(s) within the PHEOC enable staff to print information securely and display information within the PHEOC without the requirement to leave the workspace to find a printer.

Secure power supply

Business continuity is critical in an emergency and operation of the PHEOC.

There should be arrangements for power switching, generator backup, and uninterrupted power supply (UPS) incorporated into the communication rack, plus telephonic communications (phones and faxes) in the event of network outages or power outages.

Information displays

Multiple information displays and space on walls are required within the room. Information displays may range from paper displays (key contacts/ rosters), electronic displays (maps or case numbers, projection from computer) to media walls (news/weather updates). These displays ensure everyone is aware of the current situation, key tasks and priorities, as well as logistical information such as rosters and key contacts.

Additional wall space for staff to write on is also critical part of developing appropriate response strategies. By using frosted/white backed glass panelling, both on the walls and for the movable walls would be of advantage in both meeting and response phases.

Using glass removes the requirement for whiteboards as staff can write on the glass, project images onto the glass and display information (photos, printouts etc.).

PHEOC Layout

Design

A number of PHEOC design layouts should be possible, including Boardroom, Stadium, and Mission Control room and table arrangements (Figures 1-6). The PHEOC should be scalable to accommodate a range of response sizes from a small team of 8 staff up to a full scale response of 70 staff (e.g. a SARS or pandemic influenza response that may go on for multiple months). The upper figure is based on 2009 pandemic staffing of the PHEOC plus contingency to enable full surge capacity.

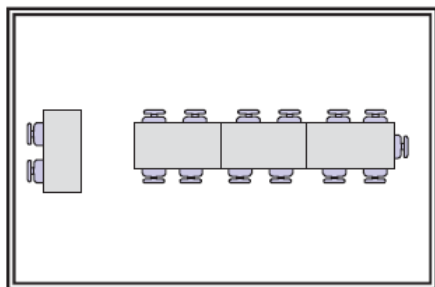


Fig 1: Boardroom Example 1

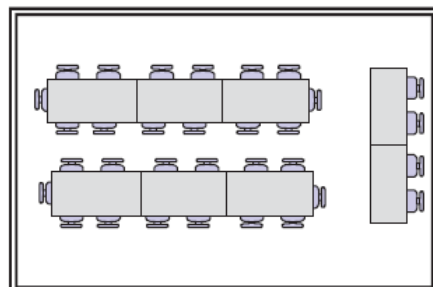


Fig 2: Boardroom Example 2

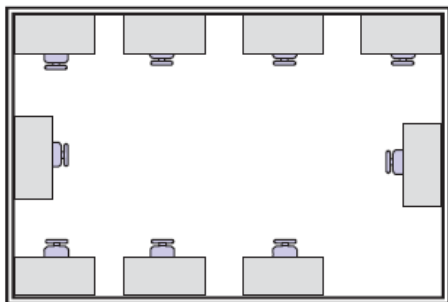


Fig 3: Stadium Example 1

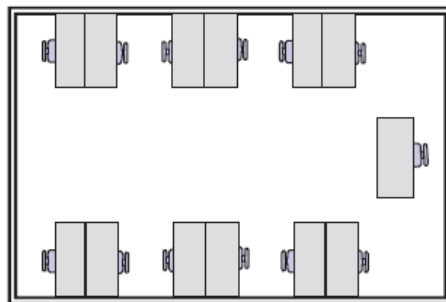


Fig 4: Stadium Example 2



Fig 5: Mission Control Example 1

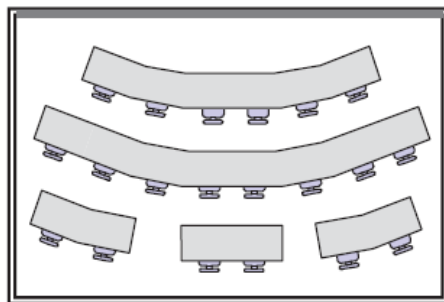


Fig 6: Mission Control Example 2

Co-location of PHEOC staff in the PHEOC (as opposed to a virtual PHEOC) is fundamental to support information sharing and, collaboration, as well as maintain privacy in protracted responses.

Staff work stations

PHEOC staff require individual workplaces with sufficient space to hold computer/laptop, keyboard phone and monitors, plus space to write notes, and store response resources (e.g. key documents/ phone contact lists).

PHEOC staff workplaces should be orientated to allow monitoring of information displays.

PHEOC staff need to be co-located within their ICS response structure. This also helps in managing staff workloads/requirements during extended emergency responses.

Additional Space Requirements

Specific PHEOC space requirements include:

1. Storage space for PHEOC key equipment -
This could be accessed from the PHEOC or in close proximity. This allows increased functionality of the room by allowing the storage of all technological aspects when the room is utilised for meeting and also of the public health cache equipment to help support responses. The storage space should include sufficient power and data to ensure the readiness of equipment for deployment.
2. Separate meeting rooms (1-2)
Frequent teleconferences with LHD and national stakeholders is a consistent characteristic of PH emergency responses. There needs to be a capacity to have these in a room or rooms adjacent to but not in the main PHEOC space to avoid interruption to PHEOC operations. These can also provide a separate work space for the PH Controller/Chief Health Officer, and meeting spaces for PHEOC team to have briefings and coordinate their approach before dispersing to their work areas in the main PHEOC.
3. Personal storage space (such as lockers) for PHEOC staff.
Safe storage space for personal belongings helps to ensure the PHEOC work area is kept tidy and hazard free.
4. Additional break-out spaces – Most EOCS have adjacent spaces able to be used as breakout rooms or eating areas. There may also be a need for quiet rooms for case interviews during a response.
5. Noise reduction – intense work activity will be underway in the PHEOC (e.g. phone calls, team discussions, teleconferences), so design will need to incorporate mechanisms to reduce noise impacts on staff in the PHEOC and staff working in adjacent areas.

Rapid accessibility

Early activation of the PHEOC is critical for controlling and managing public health threats. Therefore rapid access to the space is required at any time of day or night. Ensuring the facility is both readily accessible and available ensures the rapid establishment to any response.

Security

Appropriate security for staff and PHEOC information is critical.

Sensitive information pertaining to an outbreak, including case or contact information may be held in the PHEOC.

Responses often call for staff to be at work outside of standard building access times. Ensuring security in and out of the site is important.

Adaptability and Scalability

The space should have tables, desks and walls which can be rearranged and configured to individual workstations up to meeting tables to suit response requirements and non-response use.

Having multiple capabilities for IT infrastructure (e.g. data, computer, telephone ports) in floors, tables and walls allow flexibility for the space to suit small response to a large response. It support scalability and adaptability plus ensures a suitable working environment for staff, especially over prolonged periods.

Lighting and Air Conditioning Requirements

During responses staff comfort and wellbeing is increased through a sense of space and an awareness of their external surroundings. Having external windows allows staff to be more aware of time of day, weather and their external surroundings

Sufficient lighting is required for the meeting room spaces. By installing high ceilings and allowing for external light through windows increases the lighting within a space and comfort of staff, and minimises fatigue.

Air conditioning is required that can be independently operated outside of normal business hours to ensure staff comfort during a response.

Staff Amenities

Staff may be required to work after hours, in shifts. Having staff amenities in close proximity is required, including restrooms, a meal area and a kitchenette with hot and cold water. This enables staff to remain refreshed and also to take time away from the operations centre when required, and ensure appropriate security after hours.

A response may require additional staff (surge-staff) to be brought in to assist with staffing levels. These staff will more than likely not be familiar with the working environment and having things in close proximity to the working area.

Additional references

The NSW Office of Emergency Management have outlined a number of minimum requirements and key considerations for an emergency operation centre. Please find below an extract from the Emergency Operation Centre Policy Document (https://www.emergency.nsw.gov.au/media/admin/824/_mw9q36qxmdu60wgsgw/Policy_EOC_20131101.pdf)

**Public Health Emergency Operations Centre
Requirements
RESTRICTED DISTRIBUTION**



EOC OPERATIONAL READINESS AUDIT REPORT

Location :

Month / Year

Conducted By :

RESOURCE / ISSUE	INDICATOR	✓ or x	COMMENT
Availability and access	Immediate access available on a 24 hour basis.		
	Key holder details confirmed.		
Alternate EOC	Alternate facility identified.		
Audio Visual equipment	Commercial and/or Subscription Television available.		
	Commercial Radio available.		
	Data Projector available.		
	Smart Boards available.		
Back Up power	Emergency generator available.		
	UPS attached to computers.		
Bathroom facilities	Toilets and washing available.		
Clock	24 hours clock clearly visible to all within EOC.		
Communications devices	Appropriate number of telephones handset available.		
	Facsimile available.		
Contact lists	Current and located within EOC.		
EOC SOPs	Current and located within EOC.		
Furniture	Quantities adequate for expected personnel numbers.		
	In good and working condition.		
Information Technology	Appropriate number of computers available.		
	Printer network available.		
	Internet and email connectivity available and tested.		
	Photocopier available.		
Kitchen facilities	Kitchen area offering refrigeration, light meal cooking and		

RESOURCE / ISSUE	INDICATOR	✓ or x	COMMENT
	tea/coffee facilities available.		
Maps & GeoSpatial	Large laminated map/s of Local Government Area(s) available.		
	Dedicated Geospatial Information System (GIS) computer / system available.		
	Plotter / A3 Printer networked to GIS system.		
Meal area	Suitable area available for staff to consume meals.		
Meeting / debrief area available	Discrete area available for meetings and debrief.		
Occupational Health & Safety	Risk assessment undertaken to ensure safe working environment.		
Parking	Secure parking available.		
	All weather parking available.		
Plans	Current hardcopies located in EOC.		
	Electronic versions available through website.		
Rest area	Discrete area available to allow for staff stand down.		
Security	Security of EOC able to be facilitated.		
Stationery	Sufficient supplies available for each work station.		
Tabards	Access to full set of appropriate tabards for position holders and agency liaison officers.		
Whiteboards	Sufficient whiteboards to depict information.		