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# Hunter New England Health XFG Pandemic Influenza Exercise, 22-26 September 2008

**Interim Exercise Report**

**December 2008**

## Executive Summary

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This is the interim report following XFG, a pandemic exercise that tested the capacity of an area health service to manage a protracted public health emergency. A comprehensive series of reports and tools will be made available on the Hunter New England Public Health Preparedness website (<http://www.hnehealth.nsw.gov.au>) after all evaluation material has been analysed and interpreted (see page 26). This report is structured to provide the key findings and recommendations by each of the exercise objectives. A summary of the key findings are outlined below.

### *Emergency Department component*

There was good performance in all evaluation domains (80% or greater) except advising patients on hand decontamination, cleaning the triage area and doffing personal protective equipment. Areas for improvement identified by ED staff during After Action Reviews included management of waiting areas, location of communication devices, doffing procedures and communication between HSFAC and EDs

The exercise found that the influenza specimen collection policy currently used within HNEAHS does not align with NSW Health Department policy resulting in confusion that requires clarification. In addition non-mainstream acute units, for example mental health facilities, will need additional investment to ensure timely communication and training of staff in infection control.

### *Public Health Surge*

The secondary support staff identified for public health surveillance were registered nurses working in research, sexual health, tuberculosis and wound management, and they were able to successfully perform their public health surveillance tasks. Ninety seven percent of this surge group indicated that the exercise was a positive experience and that they would be willing to perform these functions during a pandemic containment response.

Important findings included the need for professional counselling for staff who may encounter particularly challenging clinical situations, further epidemiological training, an effective information management system providing timely information on the evolving epidemiological situation to all operational pods, and an ongoing engagement strategy to maintain their skills and enthusiasm. The surge staff utilised were highly experienced nurses who, with appropriate training, would be able to provide leadership to an additional surge staff during a pandemic.

#### *On-line training package*

To prepare public health surge staff for their role during the exercise an on-line training package was developed. While a detailed analysis of available quantitative and qualitative data is currently being conducted, feedback during the exercise indicated that the on-line package was an excellent resource but could not stand alone. An additional half-day of face to face training session prior to deployment would assist in ensuring surge staff preparation.

#### *Public Health enquiry triaging system*

Initial analysis of quantitative findings and debrief data indicates that participating staff were able to provide an effective information service with minimal training and support. The algorithm largely met their needs but could be improved with screen-based navigation and a 'history' log. The ability to rapidly update information, for example current case definitions, must be addressed and adequate surge staff must be identified to accommodate the exhausting nature of this work.

#### *NetEpi data management system*

The Exercise found that NetEpi does not fulfill all data management requirements and that there is a need for a holistic data management system, including but not limited to, a case and contact data collection system. Staff found NetEpi difficult to use, data entry was problematic, and analysis and reporting functionalities could not be utilised. The use of NetEpi within an incident command structure needs to be reviewed, as it must be able

to meet the needs of the operations and planning teams, public health incident control and Health Service Functional Area Coordinator (HSFAC). In addition, NetEpi and data collection forms need to take account of local case and contact follow-up processes and data management protocols.

### *Pandemic Exercise Toolkit*

Preparation for XFG was complex and produced a range of resources relating to exercise scenario development and exercise play across the domains of clinical operations and public health. During the exercise there was critical evaluation and validation by the external evaluators of all the resources that had been developed. These will now be revised in response to the evaluation and made available to other jurisdictions for use in planning their own exercises.

### *Pandemic plans*

Working under a command and control structure is challenging for public health staff, particularly in shedding usual work patterns. This transition would be assisted by more clearly defined roles in response plans. During the exercise, working areas were sub-optimal and limited by existing buildings and funds. It is important to explore resources through the district emergency management structure to address these deficiencies.

Communication over multiple sites and down the incident control structure was problematic emphasising the need for more streamlined information management and data management tools. The expectation placed on local public health units to provide data to inform a local response as well as state and national responses was evident throughout the exercise. Plans at all levels need to clearly articulate information requirements as too many competing requests will hamper the local public health unit's ability to respond effectively.

### *Conclusion*

It is already clear that this large-scale exercise and adaptations already occurring in response to Exercise recommendations will enhance the ability of HNEAHS and

NSWHealth to respond to future large-scale infectious disease epidemics and protracted public health emergencies.

Many challenges remain, in particular the need for: identifying appropriate surge resources and triggers for successive stages of a pandemic response and testing their activation; appropriate contact management and antiviral deployment plans; bolstering laboratory capacity; investigating appropriate effective containment strategies in Indigenous communities; and defining and delivering optimal pre-pandemic risk communication.

## Background

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### Exercise history

XFG is the third in a series of exercises to test broad public health pandemic preparedness in the Hunter New England Area Health Service (HNEAHS) during the past three years. In 2006 Exercise Cumpston was conducted by the Commonwealth and HNEAHS had some exercise involvement with border spill-over from Queensland. In the same year, Exercise Paton, a NSW Health initiative, had a more direct impact on public health units (PHUs) with all Emergency Department's (EDs) in New South Wales state activated and two EDs in each health area received a single "case" for management on a single day with four "contacts" managed by each PHU. In addition, in March 2008 HNEAHS also conducted Australia's first pandemic mass vaccination clinic exercise offering influenza vaccination to all residents of Aberdeen in the Hunter Valley to test mass clinic plans.

In planning XFG, there was recognition that a pandemic poses particular challenges. Unlike many other health emergencies, a pandemic event has a protracted course that may demand an emergency response spanning many weeks or months. This was recognised in a recommendation in the Exercise Cumpston Report: *"ensure surge capacity for prolonged emergency operations and review the skill base of workers to ensure the required breadth of capabilities."* Other important differences between pandemic responses and other more common emergency responses include the likely geographical extent of the response and staff required and the combat role that Health will play. XFG was designed to begin to explore these challenging requirements at AHS level.

### Preparation

Prior to XFG a complementary desktop exercise (Exercise Enza) was conducted within all HNEAHS EDs to prepare them for recognising, triaging and managing pandemic cases. Exercise Enza was timed to coincide with the start of the influenza season to

emphasise the generic advantages of pandemic planning for management of respiratory ED presentations.

The HNEAHS Workforce Taskforce coordinated recruitment of public health surveillance surge staff. This group of nurses consisted of Clinical Nurse Consultants, Nurse Educators and Nurse Practitioners from clinical and research areas that are not critical during the containment phase of an influenza pandemic.

The HNEAHS Referral and Information Centre (RIC), a Community Health triage service, was engaged to manage local community concerns and encourage compliance with containment measures. Their involvement permitted testing of a specifically developed telephone triage algorithm and the integration of rumour surveillance into public health planning during the exercise.

An on-line training program consisting of eight modules was designed and developed by HNEAHS staff for pre-exercise training of public health surveillance surge staff. Its usefulness for preparing these staff was evaluated during XFG. On-the-job training was conducted during the exercise for surge public health logistics, planning, operations and RIC staff with support readily available from experienced practitioners, a situation designed to mirror an actual response.

All response plans were reviewed against Incident Control System guidelines; Job Action Sheets (JASs) were prepared for each role and Standard Operating Guidelines (SOGs) were developed for each function.

### **Exercise Scenario:**

Pandemic Influenza Australian Phase 5 has been declared following human to human transmission with a novel influenza strain. Pandemic cases begin presenting at HNE EDs. They require triaging and management according to described protocols (Hospital response to Pandemic Influenza Part 1: Emergency Department response PD2007\_048

[http://www.health.nsw.gov.au/policies/pd/2007/pdf/PD2007\\_048.pdf](http://www.health.nsw.gov.au/policies/pd/2007/pdf/PD2007_048.pdf)) and using strict infection control measures. In this response phase, all cases are isolated within an acute care facility.

Following notification to the PHU, contact tracing and public health interventions are commenced. Surge staff are co-opted to assist with public health duties as the incident escalates.

Contacts are referred to home quarantine and the preferred anti-viral delivery method, secure home delivery, is discussed with contacts. Daily monitoring is not required.

### **Evaluation**

A comprehensive evaluation plan was developed for all aspects of the exercise, including the 36 ED visits by “cases”, public health follow-up of 170 “contacts” over four days, deployment of the RIC for dealing with 200 telephone enquiries over a five hour period, and ICS functioning of HNEAHS, particularly the HSFAC, Communications and Public Health. A facilitation and evaluation team was formed by colleagues from Tasmania, Queensland, Western Australia, the Commonwealth, Switzerland and the NSW Biopreparedness Unit. This team provided impartial evaluation and facilitation. In addition, participants were surveyed and key components, such as the On-line Training Package, were evaluated pre and post exercise. Debriefings at the end of each day provided synthesis of key observations. On Friday 26 September, a formal After Action Review was conducted and subsequent debriefings were conducted with each ICS team and ED.

## Exercise Objectives

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1. To test the capacity of all EDs to recognise a person with suspected pandemic influenza (PI), triage them appropriately, manage accompanying people who may have been exposed, inform the public health unit, complete clinical management and maintain strict infection control;
2. To evaluate ambulance transfers with suspected PI cases;
3. To test public health surge capacity by using all cases, plus contacts of these cases. This will necessitate the use of secondary support staff;
4. To use and evaluate an on-line training package currently in development, to prepare secondary support PHU staff for their role;
5. To test the public enquiry triaging system to manage callers seeking information;
6. To use the NetEpi data management system for recording case and contact details plus extract epidemiological data for planning requirements and situation reports;
7. To test departmental pandemic plans and the links with the Area plan as relevant within the scope of the exercise;
8. To develop a generic Pandemic Exercise Toolkit.

**Objective 1:**

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*"To test the capacity of all EDs to recognise a person with suspected pandemic influenza, triage them appropriately, manage accompanying people who may have been exposed, inform the public health unit, complete clinical management and maintain strict infection control."*

During XFG, a standardised independent evaluation was conducted at all HNEAHS EDs against the requirements in NSW Health Policy Directive 2007\_048 - Hospital Response to Pandemic Influenza Part 1: Emergency Department Response Guidelines. To prepare all EDs to participate in XFG, a facility-specific Infectious Disease Emergency Response Sub Plan was developed and implemented in 35 Emergency Departments (28 hospitals and 7 Multi-Purpose Centres), two first aid posts and an Acute Mental Health Assessment Unit utilising a desktop exercise, Exercise Enza in the four-month period prior to XFG. Exercise Enza allowed facility staff the opportunity of identifying and addressing issues that prevented successful implementation of PD 2007\_048.

Over a four-day period during XFG all 35 EDs and the Acute Mental Health Assessment Facility were successfully tested by 43 evaluators with infection control and public health surveillance expertise. All 36 facilities implemented enhanced triage from Sunday 21 September until the evening of Thursday 25 September when they were stood down by the HNEH HSFAC. The 36 facilities implemented four different screening case definitions during the exercise and each facility received at least one patient meeting a current case definition.

A scoring system was developed and all evaluators received uniform training to ensure standardized feedback and reduce evaluator bias. The evaluation tool was based on PD 2007\_048.

HNEAHS EDs achieved an average score of 91% against the predetermined ED sub-objectives of the exercise. The overall results were excellent with 89% of facilities

scoring between 80% and 100%. There was good performance in all evaluation domains (80% or greater), with the exception of advising patients on hand decontamination, cleaning the triage area and doffing personal protective equipment. The influenza specimen collection policy currently used within HNEAHS does not align with NSW Health Department policy resulting in confusion and requires clarification.

A short debrief was held at each facility and staff provided qualitative assessment of their experiences at the completion of each site visit. The most common theme was that staff had found the exercise was useful in identifying areas for improvement, including management of waiting areas, location of communication devices, doffing procedures and communication between HSFAC and EDs.

While ED staff indicated that they were comfortable with applying the current protocol in managing single suspected cases when a raised level of alert was in place, they were concerned about their ability to respond to large numbers of cases and particularly the ability of EDs to detect cases during a period of lower alert. Non-mainstream acute units, for example mental health facilities, will need additional investment to ensure timely communication and training of staff in infection control.

Detailed ED-specific reports are being prepared to guide the preparation and training of front-line ED staff, and improving clinical operations response to an infectious disease emergency.

**Objective 2:**

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*“To evaluate ambulance transfers with suspected PI cases.”*

The NSW Ambulance Service participated in XFG with two ambulance transfers; one from a private residence to an ED and the second between two EDs. This allowed NSW Ambulance to test their draft pandemic plan.

Exercise sub-objectives included: implementing case definition triage by call takers at the Northern Operations Centre (NOC), Newcastle; ambulance personnel reporting any contact, treatment or transport of a suspected case meeting the case definition; ambulance personnel following all infectious disease and PPE protocols and procedures described in the draft pandemic plan; NOC notifying the receiving facility ahead of arrival of the suspected case and identification of an appropriate offloading/receiving area; and implementation of Ambulance SOGs to decontaminate vehicles.

The NSW Ambulance Service used internal evaluators and is preparing a detailed evaluation report to guide revision of the draft pandemic plan.

**Objective 3:**

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*“To test public health surge capacity by using all ED presentations of “cases”, plus contacts of these “cases”. This will necessitate the use of secondary support staff.”*

While previous exercises have not directly tested surge capacity, both Exercise Cumpston and Exercise Paton made recommendations pertaining to surge staff. Cumpston recommended that the health department should ensure surge capacity for prolonged emergency operations and review the skill base of workers to ensure the required breadth of capabilities. During Exercise Paton HNEAHS exercised a model of surge capacity with additional staff from the Population Health Unit. Exercise Paton recommended that the NSW Department of Health continues to work with AHSs to develop models for enhancing workforce response capacity.

Following Exercise Paton, HNEAHS convened an Area Influenza Pandemic Workforce Taskgroup. One of the major roles of the Task Group was to identify appropriate surge staff for each operational area relative to an influenza pandemic response and coordinate this activity so that surge staff were not simultaneously allocated to different areas. The secondary support staff identified for public health surveillance were registered nurses working in non-front line service delivery positions or areas where community contact tracing was an established position responsibility, including research nurses, sexual health nurses and wound management.

After identification, these surge staff were engaged, and prepared for their role during XFG using an on-line training package specifically developed by HNEAHS for this task (the training package is discussed under Objective 4). The surge staff are highly experienced nurses who, with appropriate training, would be able to provide leadership to an additional surge of staff behind them.

XFG demonstrated the appropriateness of selection of this staffing cohort and indicated that their preparation and training had equipped them to effectively function in public

health surveillance. Sixty of the 62 surge staff deployed during the exercise for one day each, indicated that the exercise was a positive experience and that they would be willing to perform these functions during a pandemic containment response. There is a need for ensuring professional counselling to staff who may encounter particularly challenging clinical situations. It became clear that there would be benefits in providing them with further epidemiological training and ensure an effective information management system providing timely information on the evolving epidemiological situation to all operational pods.

Surge staff reported the value of intense brief refresher training on the day of deployment and appreciated the support provided by pod leaders. There was scope for improving facilities and accommodation for responding operational staff and options should be explored in the intra-pandemic period.

Surge staff expressed their desire to remain engaged and ongoing dialogue and future refresher training must be planned to enhance any future response.

**Objective 4:**

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*“To use and evaluate an on-line training package currently in development, to prepare secondary support PHU staff for their role.”*

To prepare surge staff for their public health role an on-line training package was developed. The training package was based on adult learning principles and was available for identified surge staff to complete at their own preferred time. The package provided a background to an influenza pandemic and the eight modules covered topic areas such as infection control, stress management, case follow-up, contact follow-up and data entry. The on-line platform enabled staff from a large geographic area to access the resources and learning guides from any internet connected computer at a time that was convenient to them.

While a detailed evaluation of the package is currently underway, feedback from surge staff during XFG indicated that the on-line training package was an excellent resource but that specific time should have been allocated within their current roles to support their completion of the package. Staff also reported that the package could not stand alone in preparing them for their role, but recommended a half day training session prior to deployment during which they could role-play scenarios under expert tutoring.

The training package was relatively basic as it was developed within a limited budget. It is possible that it could be more engaging with use of more sophisticated tertiary training software options.

The HNEAHS Pandemic Workforce Taskgroup has identified that a number of the modules developed for Public Health surveillance surge staff could form the backbone of a general package for health staff preparing them to work during a pandemic. Area-specific additional modules will need to be developed to support additional surge functions.

**Objective 5:**

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*“To test the public enquiry triaging system to manage callers seeking information.”*

A major public education plan will need to be rolled out at the start of a pandemic or health emergency to allay fear, provide information and encourage compliance with containment measures. Experience from previous disasters suggests that local communities will demand information and guidance from local health service providers.

The major day time call centre within HNEAHS, the Community Health Referral and Information Centre (RIC), participated in XFG on Tuesday 23 September with an expert evaluator from GP After Hours Access. RIC staff had been provided access to the on-line training package a month before XFG. In addition an algorithm was developed that directed users of the algorithm to selected websites and factsheets. Two 90 minute workshops were held prior to the Exercise to provide background information and familiarise staff with the algorithm.

Questions were sourced from NSW Biopreparedness network experts and lay people. One hundred challenging questions were selected and model answers drafted using algorithm resources. Over a five hour period calls were made to the five RIC staff, escalating from approximately 16/hour to 50/hour.

Algorithm topic areas (animals, personal protection, mental health, physical needs, health, emergency services, health care workers, workplace, situation reports) and an A – Z ready reference tool, appeared to adequately cover the vast majority of telephone enquiries. An experienced public health Nurse Consultant was available for support as required. Where appropriate, some calls were transferred to specific specialist agencies such as the NSW Department of Community Services.

Seventy-five percent of RIC responses were graded as either good (32.4%) or excellent (42.6%). On a scale of 1-10, the RIC team scored emotional support on average as 8.4,

technical support as 7.6, support materials as 7.3, clarity of role as 6.8, the algorithm as 7.1 and resources as 7.0. The telephone system (eSolidus) performed adequately with only four calls dropping out.

Although a detailed analysis and report are currently being prepared, initial analysis of quantitative findings and debrief data indicates that participating staff were able to provide an effective information service with minimal training and support. The algorithm largely met their needs but could be improved with screen-based navigation and a 'history' log. The ability to rapidly update information, for example current case definitions, must be addressed and adequate surge staff must be identified to accommodate the exhausting nature of this work.

**Objective 6:**

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*To use the NetEpi data management system for recording case and contact details plus extract epidemiological data for planning requirements and situation reports;*

Previous national and state exercises have evaluated the use of NetEpi as a pandemic data management system. Exercise Cumpston found that there was a lack of national consistency in the use of NetEpi and that there was a lag time between notification of cases and updating of NetEpi leading to discrepancies between National and State reports.

Exercise Paton found that NetEpi needed further refinement to make it user friendly and that the data collection forms needed adaptation to enhance their utility for collecting data and describing disease epidemiology.

NSW Health provided the latest version of NetEpi for XFG, and adapted versions of the case and contact data collection forms were used to ensure their appropriateness for telephone interviewing and use by new staff members. Case and contact data were captured by operations team members, forms were entered onto NetEpi by data entry officers and planning team members extracted this data to prepare surveillance reports.

During XFG a number of improvements in NetEpi were obvious including increased ease of data entry and improved flow with use of revised data collection forms. However, the timeliness of data entry was problematic given the reporting demands during the exercise. Improved timeliness would require a different approach to data entry; ideally this would involve a data entry person in the same location as each pod. The reporting facility on NetEpi was not available and was not tested, however, data could be extracted and manipulated in Excel. The demand for timely data during XFG and the lack of a reporting facility contributed to the development of duplicate datasets. Some of the data entered into NetEpi was not required for the response. An agreed minimum dataset would contribute to timeliness. Attempts to identify potential common exposure risks involved a

number of strategies including case conferences with the public health physician and then the creation of a case coordinator, with exposure data collected outside of NetEpi. Ideally this important task should be supported by NetEpi. Staff should be familiar with the data systems that will be used during a pandemic response. If NetEpi is the agreed database for use in health emergencies, then it needs to be incorporated in routine work to build skills and familiarity.

The Exercise highlighted the need for a holistic data management system, including but not limited to a case and contact data collection system. The system would also need to manage rumor surveillance, influenza-like illness data, population data, geographic mapping, antiviral usage, adverse events data, and staffing capacity to ensure an effective and efficient response.

The expectation placed on local public health units to provide data to inform a local response as well as state and national responses was evident throughout the exercise. It is important to ensure all data requests are based on need and are coordinated at all levels. Data requirements in response plans should be prioritised according to the objectives for each phase in a pandemic response. Data requirements should reflect the minimum level of data needed to inform response activities and additional requirements should be contingent on available resources.

Data management needs to be coordinated across the public health unit incident control structure, the state's disaster structure, and the Commonwealth government. During XFG, there were times when multiple spreadsheets were being used to collate case and contact information in the Public Health Emergency Operations Centre (PHEOC) and the Area Emergency Operations Centre (EOC) resulting in duplicated work and inconsistent data summaries. On occasions, cases and contacts were contacted on multiple times by the operations team as NetEpi was failing to serve as an up-to-date central registry of known cases and contacts.

The need for forecasting and risk assessments arose during the exercise. Based on case data, the local HSFAC implemented strategies to minimise risk to the health system by cohorting patients in fewer locations and by setting up screening stations. Risk assessments by location and forecasting of possible scenarios in specific communities would assist in guiding such decisions. The PHEOC should be able to provide forward planning for public health and inform planning by the local health service. This further highlighted the data and planning demands placed on local public health units.

XFG reinforced findings from Exercise Paton that NetEpi requires further refinement to make it user friendly for new and existing staff and that data collection needs to be prioritised to the minimum necessary to facilitate response. Analysis and reporting functionality of NetEpi could not be utilised as clear instructions had not yet been developed. The use of NetEpi within an incident command structure needs to be reviewed, as it must be able to meet the needs of the operation and planning teams, public health incident control and HSFAC. In addition, NetEpi and data collection forms need to take account of local case and contact follow-up processes and data management protocols.

Recommendation 6 from Exercise Cumpston stated that a nationally agreed framework for pandemic influenza surveillance should form an annex to the Australian Health Management Plan for Pandemic Influenza, and should be underpinned by operational plans, improved information and communications technology. The findings from XFG support this recommendation and highlight the need for a framework where data requests can be justified against the objectives of a specific pandemic response phase.

Data are integral to an influenza pandemic response and investment in developing and refining data management systems and protocols, will benefit all disaster responses.

**Objective 7:**

*“To test departmental pandemic plans and the links with the Area plan as relevant within the scope of the exercise.”*

Recommendations from Exercise Cumpston focused on national influenza pandemic plans and national communication arrangements. XFG provided clarity on these recommendation at the front-line AHS response level. Recommendations include:

1. National pandemic plans (the Australian Health Management Plan for Pandemic Influenza, the National Action Plan and other relevant plans) need updating to provide a more flexible layering of preparedness and response measures according to the severity of the pandemic and available response capacity.
2. The Australian Health Management Plan for Pandemic Influenza needs greater clarity on a number of key issues including triggers for border quarantine, social distancing, access to antivirals and vaccines, and deployment of influenza assessment centres, and to provide very clear and nationally consistent approaches to containment.
3. Procedures for health incident rooms and operations centres need to be reviewed to ensure seamless decision making and appropriate exercise of command, control and coordination functions during public health emergencies.

*Roles and Responsibilities*

In preparation for XFG, response plans were reviewed and utilised to develop job action sheets and standard operating guidelines. Exercise activities indicated that response plans were too long and were deficient in operational detail. The functions of each position under the ICS were not clear.

While the response team functioned well under the current structure, modifications to roles occurred as the exercise progressed to meet identified deficiencies. Working under a command and control structure is challenging for public health staff, particularly in shedding usual work patterns. This transition would be assisted by more clearly defined

roles in response plans. Response plans should also reflect changes in responsibilities as the pandemic evolves. The control and command structures based on ICS need to be enhanced and clarified to enhance public health responses to health disasters.

### *Communication*

During non-disaster times communication between public health staff is non-hierarchical. Communication pathways and tools need to be detailed in plans and included in any training conducted pre-event. During a response that covers large geographical areas multiple operational sites are a reality. This requires good communication channels to ensure all sites are kept informed and not isolated from the main incident command centre. The response team employed videoconferencing very effectively during the event and operations pod staff maintained regular contact by telephone. However the need for more streamlined information management and data management tools that could communicate over multiple sites was evident.

Ensuring information is communicated down the chain of command is essential. Response plans clearly articulate that information must be communicated up to the local incident commander and to the state to ensure decisions can be made. However mechanisms to ensure current situations and decisions are communicated back down to the individuals working in pods is often not detailed in plans. By ensuring this communication all staff will feel engaged in the response.

### *Resources*

Logistics is an extremely important role during an emergency response. If staff are not provided with the appropriate tools to do their jobs then the response can be severely hampered. The PHEOC was set up according to specifications; computers, telephones, desks and videoconferencing facilities were all available and working. A noticeable absence was boards / screens on walls throughout the room displaying current situational information including updated epidemiology, case definitions and the daily timetable. While teams or individuals situated within the PHEOC were supported, there was less

support for teams situated outside the main PHEOC. Some pods lacked resources such as whiteboards and were unclear of the process to request and obtain required resources.

During XFG, working areas were limited by existing buildings and funds, but it is important to explore resources through the district emergency services e.g. portable accommodation. This planning should ideally be completed during intra-pandemic periods.

While staff reported feeling supported during the exercise, staff stress and personal safety could be an issue during a real situation, particularly if this was prolonged. Protocols for ensuring staff health should be clearly articulated in plans.

### *Information and data management*

Information management and data management are critical to any response; they are processes that are normally not adequately detailed in response plans. During a response it is extremely important to be working from the latest information that is available through a single central data collection tool. Data management is discussed under objective 6. Information needs to be dated and timed on receipt with appropriate filing of original documents. While all members in the PHEOC utilised log books, a central register would have facilitated access to information.

While XFG concentrated on the initial case and contact follow-up, it also provided clarity on a number of issues categorized as out of exercise scope. The exercise indicated that operational pods will require considerable more resources to monitor contacts daily, distribute antivirals and provide vaccinations. The triage algorithm developed for health call centre staff to deal with public health enquires would also be beneficial for public health staff assisting people in home quarantine but this would necessitate appropriate training. The exercise also highlighted the need for clear transition plans between pandemic phases and levels within a phase.

During the exercise the HNEAHS HSFAC had the opportunity to test and evaluate aspects of the HNEH Infectious Disease Emergency Response Plan including the HSFAC ICS structure; communication between the HSFAC and Chief Executive and clinical lead managers; patient transport issues; pharmacy and antiviral distribution; and the coordinated response between the HSFAC and the Public Health Controller within the PHEOC.

**Objective 8:**

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*“To develop a generic Pandemic Exercise Toolkit.”*

Preparation for XFG was complex and produced a range of resources relating to exercise scenario development and exercise play across the domains of clinical operations and public health. Scenario development included preparation of detailed scripts for all cases, contacts and enquiries, media injects and other supportive material, like maps. Where material from relevant previous exercises was available it made aspects of preparations much more efficient,

During the exercise there was critical evaluation and validation by the external evaluators of all the resources that had been developed. These will be now be revised in response to the evaluation and be made available to other jurisdictions for use in planning their own exercises.

## Post XFG - the way forward

This interim report provides a brief overview of XFG and certain of the major lessons emerging from this Exercise. It provides clear direction for more detailed analysis of the data collected during Exercise evaluation. This report will be reviewed and updated by July 2009 following completion of detailed analysis of all XFG data.

An action plan has been developed with recommendations in the following areas:

1. Revision of Public Health ICS structure and Plan, JASs and SOGs;
2. Preparation of a pandemic containment exercise toolkit;

Internal reports:

3. HNE individual detailed Emergency Department reports;
4. Indigenous considerations in case and contact follow-up;

External peer-reviewed reports:

5. Effective pandemic public health enquiry telephone triage;
6. Determinants of effective Emergency Department pandemic containment;
7. Equipping Public Health surge staff for the challenge of pandemic influenza surveillance;
8. An evidence-based sustainable public health pandemic containment response in Australia.

The revised Public Health Plan and supportive material; Pandemic Exercise toolkit and external peer-reviewed reports will be made publicly available to assist other jurisdictions with their pandemic planning.