

Exercise POMARE

Post Exercise Report
20 September 2018

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Contents

1	Executive Summary	1
2	Introduction	2
2.1	Background.....	3
2.2	Exercise management.....	3
2.2.1	Exercise management structure.....	3
2.3	Aim, objectives and key performance indicators	4
2.4	Exercise type, scope and design.....	4
2.5	Participating organisations	7
2.6	Timeline of events.....	8
3	Evaluation	9
3.1	What went well.....	9
3.2	What could be improved.....	11
4	INSIGHTS, LESSONS IDENTIFIED AND Recommendations	13
4.1	Key recommendations for action	13
4.2	Agency roles and responsibilities	13
4.3	Border planning	14
4.4	Business continuity planning	14
4.5	Communications and public information management	15
4.6	Governance models for recovery	16
4.7	Historical insights.....	17
4.8	Impacts/consequences.....	17
4.9	Inter-agency collaboration	18
4.10	Pandemic readiness	19
4.11	Personnel management	20
4.12	Planning considerations	21
4.13	Summary of Recommendations	22
5	Conclusions	23
	APPENDIX 1: METHODOLOGY FOR EVALUATION	24
	Appendix 2: NATIONAL objectives and KEY Performance indicators	26
	Appendix 3: EXERCISE objectives and key performance indicators	30

1 EXECUTIVE SUMMARY

The Ministry of Health is the lead agency within the National Security System for human health and infectious disease threats such as influenza pandemics. In order to prepare for an influenza pandemic within New Zealand, the Ministry of Health has established and continues to advance work under the Pandemic Readiness Work Programme (PRWP) across both the health sector and with other government agencies.

Exercise POMARE was a Ministry of Health-led familiarisation exercise based on the New Zealand Influenza Pandemic Plan (NZIPAP, 2nd Edition, 2017). It was conducted as a part of the National Exercise Programme and was designed to enhance all-of-government pandemic readiness. The exercise consisted of four workshops, based on the six phases of the NZIPAP, conducted over a seven month period from 25 October 2017 to 07 May 2018.

- The first workshop, conducted on Wednesday 25 October 2017, familiarised participants with the six phase strategy of pandemic planning in New Zealand, with a focus on the 'Plan for It' phase. Exercise participants gained a better understanding of agency roles and responsibilities, the rationale for planning in order to reduce the health, social and economic impacts of a pandemic and improved their awareness of pandemic-specific business continuity management considerations.
- The second workshop, conducted on Thursday 23 November 2017, familiarised participants with pandemic planning within the context of the 'Keep it out' and 'Stamp it out' phases. This helped participants appreciate the border and containment measures required to delay the spread of pandemic influenza in New Zealand, and the wider impact these measures may have.
- The third workshop, conducted on Wednesday 21 March 2018, familiarised participants with the 'Manage it' and 'Manage it post-peak' phases of a pandemic response. These phases focused on the use of containment measures, epidemic and/or emergency declarations, public health clinical interventions and the need for national level prioritisation decisions, with the aim of reducing the impact of pandemic influenza on the population.
- The fourth and final workshop was conducted on Monday 07 May 2018, and familiarised participants with the "Recover from it" phase of a pandemic response. This phase focused on the need to speed up the recovery of population health, communities and society affected by pandemic influenza, pandemic management measures and/or disruption to normal services.

Post exercise analysis has confirmed that Exercise POMARE achieved its stated aims and objectives, and that the majority of the key performance indicators were met. In addition, the exercise identified a number of lessons at agency, inter-agency and all-of-government levels that need to be addressed. The exercise also identified a number of areas within the NZIPAP 2nd Edition (2017) that require updating or amending.

Given that the last inter-agency influenza pandemic exercise was conducted over a decade ago, it was evident that the collective knowledge base within central government agencies was low. Given the significant threat that a severe influenza pandemic poses to both the international community and New Zealand, it is strongly recommended that an influenza pandemic activity is programmed into the National Exercise Programme at least every four years to ensure that central government agencies are able to effectively respond to an emerging health threat.

The construct used to deliver Exercise POMARE proved to be extremely successful in familiarising participants with the complexities associated with planning for, responding to and recovering from an influenza pandemic. As a consequence, a number of other agencies have indicated that they intend to adopt a similar approach to deliver familiarisation exercises.

2 INTRODUCTION

Introduction

The Ministry of Health (MOH) is the lead agency within the National Security System (NSS) for human health and infectious disease threats such as pandemics. Pandemic influenza is identified as one of the most significant national risks.

In 2006/2007, the MOH planned and coordinated a pandemic exercise programme consisting of two major exercises, Exercise MAKGILL and Exercise CRUICKSHANK. The exercise programme aimed to assess New Zealand's plans for responding to an influenza pandemic.

Exercise MAKGILL was conducted in November 2006 and assessed the health and disability sector's ability around the 'stamp it out' phase of response to an influenza pandemic.

Exercise CRUICKSHANK was conducted in May 2007 and was an all-of-government exercise aimed at practising the response mechanisms set out in the NZIPAP 1st Edition, and strengthening inter-agency readiness to keep out, stamp out, manage and recover from an influenza pandemic at national, regional and local levels.

In the decade since 2007, the NZIPAP has been revised twice, in 2010 and 2017 respectively. The 2010 revision incorporated lessons from the 2009 H1N1 'Swine Flu' pandemic response. The publication of the NZIPAP, 2nd Edition in August 2017 reflected changes in terminology, legislation, agencies names, population based calculations and references to publications and websites.

Link with official exercise programmes

Exercise POMARE was conducted as a part of the National Exercise Programme (NEP) for 2017/2018. Exercise POMARE was designed to enhance all-of-government pandemic readiness in light of the recent revisions to the NZIPAP 2nd Edition (2017) as part of the Pandemic Readiness Work Programme.

Report purpose

The purpose of this report is to provide an overview of the exercise and exercise proceedings, communicate findings from the exercise evaluation, and to recommend actions that will enhance New Zealand's capability and capacity to prepare for, respond to, and recover from an influenza pandemic.

Links with other exercise documentation

This Post Exercise Report is linked to the following documentation:

- Exercise POMARE Warning Order
- Exercise POMARE Coordinating Instructions for the 'Plan for it', 'Keep it out/Stamp it out', 'Manage it/Manage it post-peak' and 'Recover from it' workshops
- New Zealand Influenza Pandemic Plan: A framework for action (Second Edition) in August 2017 (NZIPAP, 2nd Edition, 2017). Note: This is the prime reference for baseline data.

2.1 Background

The MOH initiated planning for Exercise POMARE in October 2016, in accordance with the National Exercise Programme. The initial concept for Exercise POMARE was presented to the National Exercise Programme Planning and Coordination Team in November 2016. It proposed that the National Pandemic Exercise would be a series of half-day workshops conducted over a six month time frame.

Exercise POMARE was developed to enhance all-of-government pandemic readiness by ensuring government agencies understood their roles and responsibilities before, during and after a pandemic response. The exercise would also consider the social, health and economic consequences of a pandemic, and the key decisions which need to be made in accordance with NZIPAP, 2nd Edition (2017).

Initial analysis during the planning phase indicated that the collective knowledge base in relation to an influenza pandemic was very low. It was determined that more value would be gained by exercise participants and their agencies conducting a familiarisation exercise, in order to expand their understanding of an influenza pandemic, rather than conducting a full-scale or table top exercise.

2.2 Exercise management

The MOH was the exercise owner, providing governance, planning and evaluation of the exercise. Given the complexities involved, the exercise planning team had to adopt a collegial approach to the development, design, conduct and evaluation of the exercise. A breakdown of the exercise management structure is outlined below.

2.2.1 Exercise management structure

Exercise Governance Group:	Charles Blanch, Director of Emergency Management Dr Natasha White, Deputy Director of Public Health
Lead Agency:	Ministry of Health
Exercise Director:	Charles Blanch, Director of Emergency Management
Exercise Coordinators:	Felicity McLeod, Senior Advisor, Emergency Management Angie Perry, Senior Advisor, Emergency Management Andrew Brooks, Principal Advisor Readiness
Exercise Planning Team:	Felicity McLeod, Angie Perry, Andrew Brooks, Dr Niki Stefanogiannis, Paul van den Broek, Sally Giles, Jane Pryer
Exercise Facilitators:	Charles Blanch, Dr Natasha White, Felicity McLeod, Angie Perry, Dr Niki Stefanogiannis, Dr Tom Kiedryznski, Ryan Mclean, Jane Pryer, Kate Crawford, Andrew Brooks, Debbie Wing, Andrew Forsyth, Dr William Ranger, Sally Gilbert, Sally Giles, Suz Halligan
Exercise Evaluation Team:	Paul van den Broek, Manager Corporate Security Andrew Brooks, Principal Advisor Readiness

2.3 Aim, objectives and key performance indicators

The overarching aims of Exercise POMARE were to:

- familiarise central government agencies with the NZIPAP 2nd Edition (2017)
- familiarise central government agencies with their role and responsibilities before, during and after a pandemic response, and the key decision points and decisions that must be made in accordance with NZIPAP 2nd Edition (2017).
- apply the lessons learned from the exercise to develop the NZIPAP.

In December 2017, an update of the NEP National Objectives was released and Exercise POMARE objectives were accordingly revised and aligned with these. An outline of the NEP National Objectives for Exercise POMARE are listed below. In addition, MOH objectives specific to each of the Exercise POMARE workshops were developed in conjunction with the NEP objectives. A description of the evaluation methodology is provided in Appendix 1. A full list of both the National and Ministry of Health exercise objectives and key performance indicators (KPIs) are listed in Appendices 2 and 3.

National objectives	Description
NO 1.0	Lead a coordinated interagency response to a significant incident or emerging threat that warrants a National Security System activation. [Achieved]
NO 3.0	Enable high level all-of-government decision making through the National Security System. [Achieved]
NO 4.0	Integrate recovery planning and arrangements into the response ('Recover from it' only). [Achieved]
NO 7.0	The critical functions of government continue to be delivered during a significant incident. [Achieved]
NO 8.0	Integrate previous lessons identified from interagency activities to engender a culture of continuous improvement. [Achieved]

2.4 Exercise type, scope and design

Exercise POMARE consisted of a series of four multi-agency workshops, conducted at the national level over a seven month period from 27 Oct 2017 to 07 May 2018. Each workshop examined a particular phase(s) of the Influenza Pandemic Plan (NZIPAP, 2nd Edition (2017)). Participants were required to consider how their agency would discharge its roles, responsibilities and core functions within the inter-agency environment for each phase.

Before the workshops it was highly recommended that all participants attend a Pandemic 101 training session. Pandemic 101 was specifically developed to familiarise participants with the characteristics of an influenza pandemic and its potentially wide-ranging effects on communities. Participants were also encouraged to read relevant sections of the NZIPAP 2nd Edition (2017) prior to attending each workshop to improve their base knowledge.

An evolving exercise scenario was used as the primary mechanism for sequencing participants through each of the six phases of the NZIPAP in a logical and coherent manner. The scope of Exercise POMARE

meant there was no requirement for agencies to activate their National Coordination Centres or deploy any resources. A brief description of the four workshops is provided below.

Workshop	Description
Exercise POMARE: 'Plan for it' workshop 25 October 2017	<p>This workshop ran from 08:45am – 12:15pm and familiarised exercise participants with the six phase strategy of pandemic planning in New Zealand, focusing on the 'Plan for it' phase. Participants gained a better understanding of agency roles and responsibilities, the rationale for planning in order to reduce the health, social and economic impacts of a pandemic, and improved their awareness of pandemic-specific business continuity planning considerations. This workshop was divided into two sessions:</p> <ul style="list-style-type: none"> • Session 1: Participants gained an understanding of the roles and responsibilities of agencies in a pandemic and the challenges in achieving these functions. Participants identified and discussed: <ul style="list-style-type: none"> ○ critical functions to be maintained during a pandemic ○ what needs to be performed differently during a pandemic and why ○ two key challenges for their functional group ○ gaps in the current NZIPAP. • Session 2: Participants gained an understanding of the key considerations to account for as part of business continuity planning. Participants identified and discussed: <ul style="list-style-type: none"> ○ whether or not their agencies current business continuity plans cover these considerations ○ the common issues and challenges across the functional group ○ any gaps in planning and what is required to address them ○ opportunities for inter-agency collaboration in planning and business continuity management.
Exercise POMARE: 'Keep it out /Stamp it out workshop 23 November 2017	<p>This workshop ran from 08:45am – 12:15pm and familiarised participants with pandemic planning within the context of the 'Keep it out' and 'Stamp it Out' phases. This enabled participants to appreciate the border and containment measures required to delay the spread of pandemic influenza in New Zealand. This workshop was divided into two sessions:</p> <ul style="list-style-type: none"> • Session 1: Participants gained an understanding of the roles and responsibilities of lead and supporting agencies during this stage of a pandemic and associated challenges. Participants identified and discussed: <ul style="list-style-type: none"> ○ the actions their agency is expected to undertake in the 'Keep it out' phase in order to support a national response ○ the potential impact of staff travel to and from infected regions on their agencies' ability to keep operating ○ key pandemic-specific considerations to be included in their agencies' business continuity and emergency management plans. • Session 2: Participants gained an understanding of the measures available to control and contain the spread of a pandemic in New Zealand and the impacts these may have on agencies. Participants identified and discussed: <ul style="list-style-type: none"> ○ actions their agency would consider taking in response to a rapidly changing situation ○ common issues/challenges all agencies will face in this situation.

**Exercise POMARE:
Manage it / Manage it
post-peak Workshop
21 March 2018**

This workshop ran from 08:30am – 12:00pm and familiarised participants with the ‘Manage it’ and ‘Manage it post-peak’ phases of a pandemic response. These phases focused on the use of containment measures, epidemic and/or emergency declarations, public health interventions and the need for national level prioritisation decisions, to reduce the impact of pandemic influenza on the population. This workshop was divided into three sessions:

- Session 1: Participants gained insight into managing the response to influenza pandemics based on reflections from two case studies:
 - a historian’s perspective on lessons learned from the 1918 Influenza Pandemic (Spanish Flu)
 - a District Health Board perspective on the impact of a pandemic on the health sector, based on the 2009 H1N1 response.
- Session 2: Two scenario-based discussion activities were conducted:
 - Participants in the Watch Group focussed on the key decisions likely in this phase, including response coordination arrangements and exploring legislative powers.
 - Participants in the National Health Coordination Centre (NHCC) session focussed on the operational issues, including considering management of concurrent events, such as a severe weather event.
- Session 3: Participants gained an understanding of effective communications in a public health infectious disease event based on lessons identified from the Havelock North water contamination event of 2016.

**Exercise POMARE:
‘Recover from it’
workshop
7 May 2018**

This workshop ran from 08:30am – 12:00pm and familiarised participants with the ‘Recovery phase’ of a pandemic response. This workshop focused on the need to expedite the recovery of population health, communities and society affected by pandemic influenza, pandemic management measures and/or disruption to normal services. This workshop was divided into two sessions:

- Session 1: Participants gained an insight into pandemic-specific recovery considerations. Participants received presentations on:
 - how New Zealand recovered from the 1918 Influenza Pandemic (Spanish Flu)
 - the potential economic impact of a pandemic in 2018.
- Session 2: Participants were briefed on recovery, including what recovery is, the four recovery environments (i.e. built, natural, social and economic) and explored:
 - the impact an influenza pandemic would have on the four recovery environments and the challenges these impacts could have on New Zealand’s recovery efforts
 - options for structuring national governance of recovery after a severe influenza pandemic event.

2.5 Participating organisations

A broad range of government agencies participated in Exercise POMARE. Participants were assigned to functional groups based on the role of their parent agency, (i.e. front line services, public facing services or policy agencies). Groups were assigned a facilitator to help guide the discussion.

Ministry of Business, Innovation and Employment	Department of the Prime Minister and Cabinet
Ministry of Civil Defence and Emergency Management	Crown Law Office
Ministry for Culture and Heritage	Fire and Emergency New Zealand
Ministry of Education	Health Quality and Safety Commission
Ministry for the Environment	Inland Revenue Department
Ministry of Foreign Affairs and Trade	Maritime New Zealand
Ministry of Health	New Zealand Customs Service
Ministry of Justice	New Zealand Defence Force
Ministry for Primary Industries	New Zealand Police
Ministry of Social Development	New Zealand Security and Intelligence Service
Ministry of Transport	State Services Commission
Ministry for Children - Oranga Tamariki	Statistics New Zealand
Accident Compensation Corporation	The Treasury
Department of Corrections	Worksafe
Department of Internal Affairs	

The following subject matter experts also presented at Exercise POMARE workshops:

Professor Geoffrey Rice, University of Canterbury

Sarah Hogan, New Zealand Institute of Economic Research

Sandra Little, Ministry of Civil Defence and Emergency Management

Clare Robertson, Ministry of Civil Defence and Emergency Management

Greg Phillips, Capital and Coast District Health Board

Dr Annette Nesdale, Regional Public Health

Anna Kirk, Hawke's Bay District Health Board.

2.6 Timeline of events

An outline of key exercise events is provided in the table below:

Date	Event
November 2016	Socialise the National Pandemic Exercise concept with the National Exercise Programme Planning And Coordination Team (NEP PACT) (7 November)
January 2017	Refine and develop the exercise concept (12 January)
March 2017	Provide a detailed brief to the NEP PACT on the MOH Pandemic Readiness Work Programme and Inter-agency Pandemic Group (IPG) (7 March) Confirm the approved concept for Exercise POMARE with the NEP PACT (7 March)
May 2017	Exercise POMARE Workshop dates confirmed (12 May)
June 2017	Pandemic Readiness Work Programme letter and Exercise POMARE Warning Order sent to agency Chief Executives (16 June) Exercise POMARE Warning Order distributed via the IPG, Incident Management Reference Group and NEP PACT
August 2017	Development of material for preliminary Pandemic 101 sessions Development of material for Exercise POMARE 'Plan for it'
September 2017	Conduct Pandemic 101 sessions 1 & 2 (1 & 11 September) Disseminate the Coordinating Instruction for Exercise POMARE 'Plan for it' (22 September) Development of material for Exercise POMARE 'Keep it out / Stamp it out'
October 2017	Conduct Pandemic 101 sessions 3 & 4 (2 & 4 October) Disseminate the Coordinating Instruction for Exercise POMARE 'Keep it out / Stamp it out' (12 October) EXCON Rules of Play and Evaluation Plan finalised (16 October) Exercise facilitator guidance and briefing (18 October) Exercise POMARE: 'Plan for It' workshop (25 October)
November 2017	Exercise POMARE: 'Keep it out / Stamp it out' workshop (23 November)
December 2017	Conduct Pandemic 101 session (15 December)
January 2018	Disseminate Coordinating Instruction for Exercise POMARE 'Manage it / Manage it post-peak' (21 January) Conduct Pandemic 101 session (24 January)
February 2018	Exercise POMARE: 'Manage it / Manage it post-peak' workshop was postponed due to a number of agencies being engaged in the Tropical Cyclone GITA response. Conduct Pandemic 101 session (12 February)
March 2018	Exercise POMARE: 'Manage it / Manage it post-peak workshop' (21 March)
April 2018	Disseminate the Coordinating Instruction for Exercise POMARE 'Recover from it' (10 April)
May 2018	Exercise POMARE: 'Recover from it' workshop (7 May)
June /July 2018	Analyse workshop participant and facilitator feedback, and Survey Monkey data
September 2018	Exercise POMARE post exercise report completed

3 EVALUATION

This section provides an overview of what went well during the planning and delivery of the four Exercise POMARE workshops, areas for improvement, and the key insights and lessons identified from an analysis of qualitative feedback.

3.1 What went well

The information contained in this section is derived from post exercise analysis of the feedback questionnaires completed at the end of each workshop, facilitator 'hot-wash' activities, and the subsequent online survey that was emailed to all exercise participants.

Exercise planning	The size of the planning team (6-8 people) was appropriate for the task. The planning team took a proactive and flexible approach and were committed to developing a challenging series of workshops and discussion activities.
Link with National Exercise Programme	Exercise POMARE was conducted as part of the National Exercise Programme (NEP) for 2017/2018. The exercise planning team experienced some initial difficulty identifying the appropriate National Objectives, Training Objectives and KPIs against which to evaluate the exercise. However, by carefully examining each KPI against the exercise construct, the planning team were able to determine the appropriate KPIs to evaluate.
Overall exercise conduct	Feedback received from both participants and observers indicates that Exercise POMARE successfully achieved its stated aims and objectives. Participants rated each of the four workshops as either 'good' or 'excellent', considered their duration to be 'about right', and commented that the workshops were well organised and administered. In particular, the format for each workshop enabled each phase of the NZIPAP to be examined in detail prior to participants engaging in the discussion exercises. The success of this approach has been reflected in the number of agencies who expressed an interest in replicating this model for their own exercises.
Exercise facilitation	The exercise planning team was proactive in its engagement with both the exercise facilitators and presenters. Prior to each workshop, the facilitators were briefed and provided with in-depth notes. Presenters were provided with clear guidance on the scope of their presentations and the key messages to be conveyed. As a consequence, participants rated facilitation of the four workshops as either 'good' or 'excellent'.
Pandemic 101 sessions and recommended pre-reading	Feedback received from participants clearly indicated that those who had attended a Pandemic 101 session and completed the recommended pre-reading were better prepared and more engaged than those who did not. The Pandemic 101 sessions provided participants with relevant background information before undertaking a more focussed and detailed examination of specific phases of the NZIPAP, 2 nd Edition (2017) during the subsequent workshops.
Exercise POMARE – 'Plan for It' workshop	The participant feedback questionnaire and online survey results show that:

- 75% of respondents 'agreed' or 'strongly agreed' that following the workshop they have a better understanding of the roles and responsibilities of their agencies and other Government agencies during a pandemic.
- 85% of respondents 'agreed' or 'strongly agreed' that following the workshop they have a better appreciation of the key planning considerations for business continuity management during a pandemic.
- 90% of respondents 'agreed' or 'strongly agreed' that robust business continuity plans will assist in reducing the health, social and economic impacts of a pandemic on their agency.
- 90% of respondents 'agreed' or 'strongly agreed' that the information obtained from the workshop will assist in developing their agencies' business continuity and pandemic response plans.

**Exercise POMARE –
'Keep it out / Stamp it
out' workshop**

The participant feedback questionnaire and online survey results show that:

- 90% of respondents 'agreed' or 'strongly agreed' that following the workshop they have a better understanding of the roles and responsibilities of their agency and other agencies during the 'Keep It Out / Stamp It Out' phases.
- 86% of respondents 'agreed' or 'strongly agreed' that following the workshop they have a significantly better understanding of the range of border and containment measures that may be applied in the event of a pandemic.
- 90% of respondents identified the objective of the 'Keep it out' phase is to prevent or delay the arrival of the pandemic virus into NZ by implementing border management controls, and preparing for the next phases.
- 72% of respondents correctly identified that the objective of the 'Stamp it out' phase is to control and/or eliminate any clusters that are found in NZ.

**Exercise POMARE –
'Manage it / Manage it
post-peak' workshop**

The participant feedback questionnaire and online survey results show that:

- 70% of respondents 'agreed' or 'strongly agreed' that following the workshop they have a better understanding of the roles and responsibilities of their agencies and other Government agencies during the 'Manage it / Manage it post-peak' phases.
- 100% of respondents 'agreed' or 'strongly agreed' that the presentations contributed to their understanding of the potential impacts that a pandemic may have on New Zealand.
- 60% of respondents correctly identified that the objective of the 'Manage It' phase is to reduce the impact of pandemic influenza on the NZ population.
- 60% of respondents correctly identified that the objective of the 'Manage It post-peak' phase was to move towards the restoration of normal services, expedite recovery, while preparing for a re-escalation of the response.

**Exercise POMARE –
'Recover from it'
workshop**

The participant feedback questionnaire and online survey results show that:

- 82% of respondents 'agreed' or 'strongly agreed' that following the workshop they have a better understanding of the roles and responsibilities of their agencies and other Government agencies during the 'Recover from it' phase.
- 89% of respondents correctly identified that the objective of the 'Recover from It' phase is to expedite the recovery of population health, communities and society where they have been affected by the pandemic, pandemic management measures or disruption to normal services.

3.2 What could be improved

Exercise planning	There was some suggestion that other agencies, including local government and non-government organisations would have benefitted from attendance at Exercise POMARE. With minor modification, Exercise POMARE could be rolled out at the regional level to involve DHBs, local government agencies and non-governmental organisations.
Link with National Exercise Programme	<p>Post-exercise analysis indicated that the interval between Exercise CRUICKSHANK (2007) and Exercise POMARE (2017/2018) was too long, when taking into account the likelihood and potential consequences of a pandemic. The majority of participants displayed a limited understanding of the complexities involved in planning for an influenza pandemic during the ‘Plan for it’ workshop. Pandemic familiarisation workshops and exercises need to be conducted on a more regular basis to ensure that central government agencies maintain the requisite knowledge to effectively respond to an influenza pandemic.</p> <p>Exercise POMARE’s linkages to the National Exercise Programme would have been strengthened had the relevant National Exercise Objectives for each workshop been clearly identified at the beginning of each workshop.</p>
Overall exercise conduct	Due to unforeseen circumstances (i.e. Tropical Cyclone GITA) the exercise timeline had to be extended. As a consequence a number of agencies needed to amend their participation. However this also illustrated the likelihood of responding to concurrent events during a pandemic to participants.
Pandemic 101 sessions and recommended pre-reading	<p>Some participants did not take full advantage of the material made available to them (i.e. Pandemic 101 sessions, NZIPAP 2nd Edition. 2017) prior to attending the workshops, despite plenty of encouragement and opportunity to do so.</p> <ul style="list-style-type: none"> • On average only 58% of respondents attended a preliminary Pandemic 101 session ahead of attending a workshop. All of those who attended a Pandemic 101 session stated that it prepared them ‘well’ or ‘very well’ for the workshop. • On average 83% of respondents completed the recommended pre-reading of the NZIPAP before attending the workshop.
Exercise POMARE – ‘Plan for It’ workshop	<p>36% of the exercise participants (16 out of 44) completed the online survey. 91% completed the participant feedback at the conclusion of the workshop.</p> <p>There were differing views as to whether a better mix of people at tables was required. For example, the composition of tables was pre-allocated in order to group exercise participants with participants from other agencies who had similar responsibilities in a pandemic and to encourage greater discussion across agencies. Feedback from participants identified that the mix of experience across tables could have been improved, and that some agencies preferred not to be</p>

separated from colleagues from their agency. This was changed in future POMARE workshops to reflect the feedback provided.

**Exercise POMARE –
'Keep it out / Stamp it
out' workshop**

38% of the total exercise participants (16 out of 42) completed the online survey whereas 69% (n.29) completed the participant feedback at the conclusion of the workshop.

- 25% of survey respondents claimed they had not gained a better understanding of their agencies' roles and responsibilities during the 'Keep it out/ Stamp it out' phases of a pandemic as a consequence of the workshop. The reasons for this included that they were well versed in their agency's role and responsibilities before the exercise and the topic was not new to them or their organisation.
- how Statistics NZ can provide data support during the 'Keep it out / Stamp it out' phases of a pandemic.

**Exercise POMARE –
'Manage it / Manage it
post-peak' workshop**

27% of the total exercise participants (12 out of 45) completed the online survey whereas 66% (n.30) completed the participant feedback at the conclusion of the workshop.

- 25% of survey respondents claimed they had not gained a better understanding of the key decisions that need to be considered in the 'Manage it/Manage it post-peak' phases of a pandemic as a consequence of the workshop. A walk through of key decisions (or pre-reading about those to support the specific narrative) might have helped.
- Some exercise participants felt that the presentations could have been shorter, allowing greater time for the discussion sessions.
- The Watch Group and NHCC sessions were too short and there were too many people in each group. This meant there was not enough time to hear from all agencies, resulting in limited participation by some agencies. The discussion sessions may be better conducted in smaller groups.

**Exercise POMARE –
'Recover from it'
workshop**

Neither an online survey nor hot-debrief was conducted following this workshop. 77% of the total exercise participants (27 out of 35) completed the participant feedback at the conclusion of the workshop.

- It was felt that it would have been good to identify what actions could be taken to manage the potential impacts and consequences in the longer term.
- Some speakers were quietly spoken and looked down at their notes. Speakers need to be encouraged to speak to the whole room or to use the microphone.

4 INSIGHTS, LESSONS IDENTIFIED AND RECOMMENDATIONS

4.1 Key recommendations for action

This section provides a summary of the insights, lessons identified and recommendations by key theme as a result of the analysis of 169 participant observations. An insight is a learning opportunity based on trends identified through a number of similarly themed observations or a single observation. A lesson is identified when analysis of one or more insights or observations determines a viable course of action that can either sustain a positive action or address an area for improvement.

The recommendations are derived from the insights and lessons identified during Exercise POMARE. Many of the recommendations focus on issues that are inter-sectorial in nature; i.e. requiring action from all of the agencies involved. By and large, they do not focus on detailed recommendations for each agency, rather they serve to inform and shape future work of the Inter-agency Pandemic Group (IPG) and its various work streams.

4.2 Agency roles and responsibilities

Insights	Lessons identified	Recommendations
<p>Those participants whose agencies have a key role in responding to national security events demonstrated better understanding of their roles, responsibilities and core functions during an influenza pandemic than those participants whose agencies do not normally provide an operational response capability.</p>	<p>Government officials require a sound understanding of their agency's roles, responsibilities and core functions during an influenza pandemic; and should possess a satisfactory understanding of the roles and responsibilities of other government agencies, particularly those with whom they are required to collaborate.</p>	<p>Central government agencies should conduct ongoing education and training in order to improve and maintain a base level of corporate knowledge to ensure an effective all-of-government response to an influenza pandemic. This may include promoting their agency's understanding of the best practices and behaviours required to effectively prepare for, respond to and recover from an influenza pandemic.</p>
<p>Post exercise analysis identified that a number of participants were not fully conversant with the roles and responsibilities of their agency during a pandemic response. Furthermore, most participants displayed only a basic understanding of the roles and responsibilities of other government agencies with whom they might be required to collaborate.</p>		
<p>There appeared to be an adequate understanding of the change in practices and behaviours required during a pandemic. However, participants felt that so many things need to be done differently during a pandemic they couldn't all be discussed in the time available during the workshop.</p>	<p>Experiential learning through pandemic-specific training and exercises helps raise agency awareness of the best practices and behaviours required during an influenza pandemic and will enable agencies to develop more effective plans.</p>	

Insights	Lessons identified	Recommendations
<p>Some participants (e.g. MCH /MCOT) identified gaps in the NZIPAP, in terms of their agencies not having specified roles and responsibilities.</p>	<p>The NZIPAP needs to be updated to reflect the current structure of central government agencies. MOH should consult with agencies to determine their roles and responsibilities in the event of an influenza pandemic.</p>	<p>MOH update the NZIPAP to reflect the current structures, roles and responsibilities, and functions of central government agencies. Sections of the NZIPAP also need to be expanded to provide more in-depth guidance.</p> <p>Central government agencies support the update of the NZIPAP.</p>
<p>Exercise participants recognise the value of, and need for, ongoing education and training to ensure that their agencies can effectively prepare for and respond to an influenza pandemic. However, many lack the expertise and capacity to do this without the support of subject matter experts.</p>	<p>To ensure that agencies are adequately prepared to respond to an influenza pandemic, they may need the support of subject matter experts to facilitate staff awareness training to improve their capability and capacity.</p>	<p>MOH and IPG consider how to support central government agencies, to enable them to deliver ongoing pandemic training and education to their staff.</p>

4.3 Border planning

Insights	Lessons identified	Recommendations
<p>During the 'Keep it out / Stamp it out' workshop, participants gained a greater awareness of the key decisions that need to be made during these phases and the range of potential border management and cluster control activities. Participants understand that these phases will overlap, that borders are unlikely to close, and additional resources will be required to implement these controls.</p>	<p>Most participants, except those from the border protection agencies, have a limited understanding of the challenges and potential unintended consequences of closing New Zealand's borders in order to prevent /delay the transmission of the influenza virus.</p>	<p>Central government agencies should conduct ongoing education and training in order to improve and maintain a base level of corporate knowledge an effective all-of-government response to an influenza pandemic. This may include promoting their agency's understanding of the rationale for border protection measures and an appreciation for the resources required to effectively implement them.</p>

4.4 Business continuity planning

Insights	Lessons identified	Recommendations
<p>Exercise participants recognised the strategic value of, and need for, business continuity plans. However, more work needs to be done to ensure agencies have the tools and access to subject matter experts to enable influenza pandemic specific components are included in their business continuity plans.</p>	<p>A number of participants identified their agency's need to update their business continuity plans to cater for an influenza pandemic. In addition, they clearly understand the requirement to be able to conduct simultaneous operations in the event of a concurrent national security event.</p>	<p>MOH and IPG should provide pandemic-specific guidance to assist central government agencies to develop their business continuity plans.</p> <p>Exercise participants apply the lessons they have identified from Exercise POMARE and integrate influenza pandemic planning</p>

Insights	Lessons identified	Recommendations
<p>Exercise participants recognised the value of inter-agency collaboration in planning, a lesson born out of a desire to achieve greater operational alignment among central government agencies.</p>		<p>considerations into the development of their agency's business continuity plans.</p>
<p>Following the workshops, participants displayed a greater understanding of the pandemic considerations that needed to be taken into account as part of business continuity planning. A number of participants were able to identify deficiencies in their agency's business continuity plans.</p>		
<p>Exercise participants identified personnel capacity and capability as the key vulnerabilities to both delivering and sustaining their critical functions throughout an influenza pandemic.</p>	<p>Exercise participants are aware of the challenges they may encounter in delivering and sustaining their critical functions during an influenza pandemic. They appreciate that central government agencies require both the capacity and capability to deliver and sustain their critical functions throughout the duration of an influenza pandemic.</p>	<p>Central government agencies identify, develop and maintain the capacity and capability required to deliver and sustain their critical functions throughout an influenza pandemic.</p>
<p>Some participants are of the opinion that their agency needs to invest more time and effort into planning for specific national security events (i.e. influenza pandemic) rather than adopting a generic approach to business continuity planning; which tends to be predicated on short duration natural hazards.</p>		
<p>Exercise participants gained an insight into the challenges they may encounter in delivering their core services during an influenza pandemic.</p>		
<p>Maximising the use of ICT systems to enable remote work options can reduce the risk of exposure of individuals to pathogens, and help with containment measures.</p>		

4.5 Communications and public information management

Insights	Lessons identified	Recommendations
<p>Exercise participants considered the importance of public information management (PIM) and communications planning to ensure that information is accurate and up to date, situational</p>	<p>Effective communications and public information management (PIM) is an essential component of an influenza pandemic response. During the workshops exercise participants identified a</p>	<p>MOH and IPG develop the Public Information Management strategy and communication sections of the NZIPAP 2nd Edition, (2017) (see Part C and Appendix 1), in order to ensure:</p>

Insights	Lessons identified	Recommendations
<p>awareness is maintained and information is shared with stakeholders in a timely manner. The maintenance of effective communication and PIM is essential to any response.</p>	<p>number of challenges and opportunities for the PIM /communications function to address. These include but were not limited to:</p>	<ul style="list-style-type: none"> • accurate, clear, consistent and authoritative communications and messaging is provided to stakeholders and the public in a timely manner
<p>Workshop discussions were very informative and highlighted a number of challenges and opportunities for inter-agency communication.</p>	<ul style="list-style-type: none"> • the importance of communications planning to ensure clear, consistent and authoritative communications and messaging. • information management, intelligence and the maintenance of situational awareness. • the need to provide accurate information to all stakeholders in a timely manner. 	<ul style="list-style-type: none"> • the effective use of information systems to manage information and provide shared situational awareness.

4.6 Governance models for recovery

Insights	Lessons identified	Recommendations
<p>Exercise participants discussed four conceptual governance models that could be employed during the recovery phase. The aim was to determine the preferred recovery model, however, participants were unable to reach consensus as to a preferred option.</p>	<p>Exercise participants displayed a sound appreciation of the inherent pros and cons associated with the four conceptual governance /coordination models that were discussed.</p>	<p>Central government agencies need to be prepared to lead their sectors response and recovery in accordance with the guidance provided in the NZIPAP.</p>
<p>Noting the inter-dependencies and co-dependencies that exist between government agencies, effective governance is required throughout all phases to ensure that the prioritisation of tasks and the coordination of resources enables the response and recovery.</p>	<p>Government agencies are responsible for leading their own responses and those of the sectors they serve.</p>	

4.7 Historical insights

Insights	Lessons identified	Recommendations
<p>Examining the 1918 influenza pandemic 'Spanish Flu' from a New Zealand perspective gave participants greater insight into the possible consequences of an influenza pandemic, the management of and recovery from a pandemic, and the residual long-term impact on the population.</p>	<p>Guest presentations and the use of case studies (i.e. 1918 influenza pandemic, Havelock North water contamination) enhanced participants' understanding of the complexities involved in responding to and recovering from an influenza pandemic. In particular, participants identified the following issues:</p> <ul style="list-style-type: none"> • the requirement to rapidly implement border and cluster control measures • in home care versus hospital based care • the need for effective public communication • minimising the impact of staff absenteeism on business continuity. 	<p>Central government agencies, where appropriate, should note the benefits of using case studies to highlight the challenges, decisions and lessons learned in preparing for, responding to and recovering from a national security event.</p>
<p>The 1918 influenza pandemic case study provided participants with contextual examples of the challenges involved in responding to the active phases of an influenza pandemic and a more in-depth insight into aspects of the NZIPAP, 2nd Edition, (2017).</p>		
<p>The presentation on the Hawkes Bay District Health Board's public information management of the Havelock North water contamination event provided a contemporary insight into the management of a public health event in the age of social media.</p>		

4.8 Impacts/consequences

Insights	Lessons identified	Recommendations
<p>Global pandemics can have far reaching and long-term consequences. Those engaged in pandemic readiness and response planning must understand the domestic and international implications of a global pandemic, (i.e. what this means in terms of New Zealand's ability to respond effectively). In particular, consideration needs to be given to sourcing critical resources that may be in short supply in a pandemic.</p>	<p>Exercise POMARE provided participants with an insight into the complexities associated with managing the potential scale and duration of an influenza pandemic. In particular, it highlighted the requirement to consider and plan for the potential impact of an influenza pandemic on resources, suppliers and customers/clients.</p>	<p>Central government agencies consider the potential impact that an influenza pandemic may have on the delivery of their critical functions, and how they will mitigate the risks to these functions.</p>
<p>Exercise participants gained a valuable appreciation of the potential human, economic and societal consequences of an influenza pandemic. Participants understand the potential impacts that an influenza pandemic could have at both a regional and national level (i.e. school closures, workplace absenteeism,</p>		

Insights	Lessons identified	Recommendations
supply chain disruption etc.). The recovery workshop also discussed the potential long-term implications for New Zealand.		

4.9 Inter-agency collaboration

Insights	Lessons identified	Recommendations
Effective execution of the NZIPAP will be contingent on extensive inter-agency collaboration and engagement throughout all phases.	<p>Inter-agency collaboration is critical to the development of robust business continuity and response plans. Furthermore, it ensures a more collegial and coherent approach to dealing with complex issues. This is supported by having well-established inter-agency arrangements and procedures under the National Security System.</p>	<p>Central government agencies continue to:</p> <ul style="list-style-type: none"> • promote inter-agency collaboration as an important mechanism for the development and synchronisation of both agency specific and all-of-government plans • ensure that key personnel are familiar with the National Security System, the Coordinated Incident Management System, and the NZIPAP to ensure that New Zealand is prepared to effectively respond to and recover from an influenza pandemic • explore opportunities for enhancing collaboration between central and local government agencies and the private sector to ensure that New Zealand is prepared to effectively respond to and recover from an influenza pandemic.
Exercise participants identified the requirement to develop robust business continuity plans to address the impact of large scale absenteeism. They also recognised the potential to second staff to address personnel capability and capacity shortfalls to ensure that critical functions can still be delivered.		
Participants recognise the value of having well established inter-agency arrangements and procedures (e.g. the National Security System) that facilitate collaboration between and among central government agencies.		
Participants recognise the value of inter-agency collaboration when planning, a lesson born out of a desire to achieve a more coherent and comprehensive approach to resolving a complex problem.		
The workshops reinforced the importance of inter-agency collaboration and the need for shared understanding of the challenges and limitations agencies potentially face.		
Agencies who are members of the IPG have a better understanding of the roles and responsibilities of agencies, the key response priorities and the responsibilities of other government agencies during a pandemic response.	The re-establishment of the IPG, among other inter-agency working groups, appears to be having a positive effect in improving inter-agency collaboration and cooperation within central government agencies.	

Insights	Lessons identified	Recommendations
Sharing information and combined training in the inter-agency environment is aided by effective inter-agency collaboration and supports inter-operability.		

4.10 Pandemic readiness

Insights	Lessons identified	Recommendations			
<p>The Exercise Coordinating Instruction recommended that exercise participants attend a Pandemic 101 session and read relevant sections of the NZIPAP prior to attending the workshops. Those participants who had attended a Pandemic 101 session and completed the recommended pre-reading displayed a greater depth of understanding and were more engaged during the discussion activities.</p>	<p>As each workshop was of a limited duration (3 hours), the Pandemic 101 sessions and recommended reading were valuable tools for front-loading participants with entry level information. Whilst the Pandemic 101 sessions and pre-reading were effective mechanisms for building a foundational knowledge base, not all participants availed themselves of these opportunities.</p>	<p>MOH and IPG consider how to support central government agencies, to enable them to deliver ongoing pandemic training and education to their staff.</p>			
<p>Those participants who did not attend a Pandemic 101 session or complete the recommended reading lacked the background context on the topics that each workshop examined.</p>			<p>Agencies need to regularly exercise their business continuity and response plans to ensure they are fit for purpose.</p>	<p>To ensure that agencies are adequately prepared to respond to an influenza pandemic, they need to regularly validate their business continuity and response plans to ensure they are fit for purpose. Furthermore, they should use existing opportunities to raise staff awareness (i.e. Pandemic 101, seasonal influenza preparedness).</p>	<p>Central government agencies need to conduct ongoing education and training in order to ensure that they are adequately prepared to respond to and recover from an influenza pandemic. In particular, they should regularly validate their business continuity plans to ensure they are fit for purpose.</p>
<p>Agencies need to regularly exercise their business continuity and response plans to ensure they are fit for purpose.</p>	<p>To ensure that agencies are adequately prepared to respond to an influenza pandemic, they need to regularly validate their business continuity and response plans to ensure they are fit for purpose. Furthermore, they should use existing opportunities to raise staff awareness (i.e. Pandemic 101, seasonal influenza preparedness).</p>	<p>Central government agencies need to conduct ongoing education and training in order to ensure that they are adequately prepared to respond to and recover from an influenza pandemic. In particular, they should regularly validate their business continuity plans to ensure they are fit for purpose.</p>			
<p>Agencies should explore other opportunities during business as usual to prepare their staff for an influenza pandemic. For example, improving infection prevention and control processes (e.g. staying home if they are unwell, hand washing and cough etiquette etc.), which can be put in place now as a part of their preparedness activities to enhance any future response.</p>			<p>Raising awareness through agency based Pandemic 101 sessions and collective multi-agency exercises will be of benefit to participants by sharing knowledge and experience.</p>		
<p>Raising awareness through agency based Pandemic 101 sessions and collective multi-agency exercises will be of benefit to participants by sharing knowledge and experience.</p>					

4.11 Personnel management

Insights	Lessons identified	Recommendations	
<p>For a number of agencies it may be possible for staff to work remotely from alternative locations, using mobile ICT systems, in order to reduce their risk of being exposed to the influenza virus. Since the Kaikoura earthquake (2016), a number of central government agencies have invested in mobile ICT systems to better enable their business continuity functions.</p>	<p>The personnel issues and challenges associated with managing influenza pandemics need to be addressed from a business continuity perspective. Consideration should also be given to building depth within and across agencies by ensuring selected staff are capable of performing key functions in accordance with agency response and business continuity plans.</p>	<p>Central government agencies need to determine the following in the development of the human resource component of their business continuity plan:</p> <ul style="list-style-type: none"> • which critical functions, in order of priority, must be maintained and what resources are required to maintain them • the personnel capability and capacity required to deliver and sustain these critical functions • the workforce operating model they will adopt and how this will be enabled (i.e. working from remote locations) • the individual and collective health protection measures they intend to apply within their working environments • the type and quantity of personal protective equipment their agency requires to hold or have available, if appropriate. 	
<p>To minimise the risk of staff being exposed to the influenza virus, agencies need to implement individual and collective health protection measures within their work environment (e.g. social distancing, good cough etiquette etc.) and other precautions as deemed necessary.</p>			
<p>Exercise participants recognised the need for their agency to develop staff capacity and capability in order to improve organisational resilience. By ensuring their workforce is multi-skilled, government agencies may retain the ability to deliver their critical functions when a large proportion of the workforce is absent.</p>			
<p>Exercise participants acknowledged the considerable human resource challenges that would be posed throughout an influenza pandemic. For example:</p> <ul style="list-style-type: none"> • staff absenteeism • availability of essential personnel • health, safety and wellbeing • engagement with unions • communications. 	<p>Exercise participants should apply the human resource management lessons identified during Exercise POMARE to enhance their agencies business continuity plan and address these human resource challenges.</p>		

4.12 Planning considerations

Insights	Lessons identified	Recommendations
<p>A number of exercise participants expressed the view that their agency's business continuity plans would be more robust if they had additional guidance from the government in respect of the critical functions and services that are to be maintained during an influenza pandemic, particularly where multiple agencies contribute to the delivery of a service.</p>	<p>In order for agencies to develop robust business continuity plans, additional government guidance is required. It should clearly communicate to both central and local government agencies those critical functions and services that are to be maintained during an influenza pandemic.</p>	<p>Hazard Risk Board considers whether central government needs to determine and clearly articulate those critical functions and services, in order of priority, which both central and local government agencies need to deliver during a national security event.</p>
<p>Agencies need to ensure that they have sufficient capability and capacity within their workforce to deliver their critical functions or that they have identified alternative options to deliver these functions.</p>		
<p>As a consequence of the 'Plan for it' workshop, participants possess a greater understanding of the nuances associated with influenza pandemic planning (e.g. considerations for maintaining business continuity), and were able to identify potential deficiencies in their respective agency's plan.</p>	<p>Most exercise participants possess a satisfactory understanding of the planning considerations for an influenza pandemic. As a consequence, they should be able to assist in the development of their agency's business continuity plan; including the requirement to plan for concurrent emergencies.</p>	<p>Central government agencies should apply the knowledge their respective participants have gained during the exercise to develop their agency's business continuity plan.</p>
<p>The likelihood of other local, regional or national level emergencies occurring during a pandemic response is high. This will further impact on the ability of agencies to deliver their core and critical functions.</p>		
<p>Exercise participants recognise the value of and need for influenza pandemic specific planning and preparedness. They have a better appreciation of the potential gaps that may exist in their agencies' capabilities and capacity to deliver their critical functions during an influenza pandemic.</p>		

4.13 Summary of Recommendations

This section summarises the recommendations made in section 4.2 – 4.12 above, grouping them together by responsible agency. It is recommended that:

- Hazard Risk Board**
- considers whether central government needs to determine and clearly articulate those critical functions and services, in order of priority, which both central and local government agencies need to deliver during a national security event.
- Central government agencies**
- conduct ongoing education and training in order to improve and maintain a base level of corporate knowledge to ensure an effective all-of-government response to an influenza pandemic (refer 4.2, 4.3 and 4.10)
 - support the update of the NZIPAP (refer 4.2)
 - identify, develop and maintain the capacity and capability required to deliver and sustain their critical functions throughout an influenza pandemic (refer 4.4)
 - be prepared to lead their sectors' response and recovery in accordance with the guidance provided in the NZIPAP (refer 4.6)
 - note the benefits of using case studies to highlight the challenges, decisions and lessons learned in preparing for, responding to and recovering from a national security event (refer 4.7)
 - consider the potential impact that an influenza pandemic may have on the delivery of their critical functions, and how they will mitigate the risks to these functions (refer 4.8)
 - promote inter-agency collaboration as an important mechanism for the development and synchronisation of both agency specific and all-of-government plans (refer 4.9)
 - ensure that key personnel are familiar with the National Security System, the Coordinated Incident Management System, and the NZIPAP to ensure that New Zealand is prepared to effectively respond to and recover from an influenza pandemic (refer 4.9)
 - explore opportunities for enhancing collaboration between central and local government agencies, and the private sector to ensure that New Zealand is prepared to effectively respond to and recover from an influenza pandemic (refer 4.9)
 - regularly validate their business continuity plans to ensure they are fit for purpose (refer 4.10)
 - develop the human resource component of their business continuity plan (refer 4.11)
 - apply the knowledge their respective exercise participants gained during the exercise to develop their agency's business continuity plan (refer 4.12).
- MOH**
- update the NZIPAP to reflect the current structures, roles and responsibilities, and critical functions of central government agencies. Sections of the NZIPAP also need to be expanded to provide more in-depth guidance (refer 4.2).
- MOH and IPG**
- consider how to support central government agencies, to enable them to deliver ongoing pandemic training and education to their staff (refer 4.2 and 4.10)
 - provide pandemic specific guidance to assist central government agencies with the development of their business continuity plans (refer 4.4)
 - develop the Public Information Management strategy and communication sections of the NZIPAP 2nd Edition, (2017) (refer 4.5).
- Exercise participants**
- apply the lessons they have identified from Exercise POMARE and integrate influenza pandemic planning considerations into the development of their agency's business continuity plans (refer 4.4).

5 CONCLUSIONS

In summary, post exercise analysis has confirmed that the majority of exercise objectives and key performance indicators have been met. In addition, Exercise POMARE identified a number of lessons at the agency, inter-agency and all-of-government levels that need to be addressed to ensure that New Zealand is better prepared to respond to an influenza pandemic. Of particular note:

- a number of agencies need to update their business continuity plans to cater for an influenza pandemic. Given the likely duration of an influenza pandemic, agencies also need to consider their ability to respond concurrently to other national security events (i.e. earthquake, flood event, bio-security event)
- the NZIPAP 2nd Edition (2017) needs to be updated to better reflect the current structures, roles and responsibilities, and critical functions of central government agencies. There are also sections of the NZIPAP that need to be expanded to provide more in-depth guidance
- ongoing education and training is required in order to maintain a base level of corporate knowledge across all levels within central government agencies to ensure an effective all-of-government response to an influenza pandemic
- given the significant threat that a severe influenza pandemic poses to both the international community and New Zealand, it is strongly recommended that an influenza pandemic activity be conducted every four years as part of the National Exercise Programme
- exercise participants identified that their agency's business continuity and response plans would benefit from strategic guidance that clearly articulated the government's priorities for the delivery of critical functions and services.

The exercise construct adopted for Exercise POMARE proved conducive to familiarising participants with the complexities associated with preparing for, responding to and recovering from an influenza pandemic. It also promoted active participation on the part of all participants, which aided their understanding of the pandemic phase being discussed. In addition, the historical narrative of the 1918 Influenza Pandemic and its impact on New Zealand, provided further context to the workshops. The success of this particular exercise construct has been reflected in the number of agencies seeking to replicate this approach.

In conclusion, Exercise POMARE successfully achieved its stated aims and objectives, and contributed toward the overall aim of the National Exercise Programme, 'ensuring New Zealand is prepared to effectively respond to national security events on or offshore'.

APPENDIX 1: METHODOLOGY FOR EVALUATION

Purpose of the evaluation

This appendix outlines the evaluation methodology applied to Exercise POMARE in its entirety. The Ministry of Health evaluated all four Exercise POMARE workshops in order to determine whether the National and Exercise Objectives relating to each activity were met, and to confirm that the overall aims of Exercise POMARE had been achieved.

Evaluation methodology

The Exercise Director engaged the support of Mr. Paul Van den Broek, Manager of Corporate Security, NZ Ministry of Health, as the lead evaluator responsible for conducting the exercise evaluation and delivering a Post Exercise Report (PXR) following the completion of Exercise POMARE. Mr. Van den Broek was supported with additional resources for the data collation, data analysis and report writing.

At the conclusion of each workshop, exercise participants were invited to share their feedback and observations on feedback forms provided on the day of the exercise, and subsequently via a Survey Monkey questionnaire provided by an e-mail link. Three sets of questions were developed to address the following key aspects of each of the Exercise POMARE workshops:

- preliminary activities: attendance at a Pandemic 101 session and pre-reading of relevant sections of the NZIPAP
- conduct of the workshop: focussed on gauging individuals' understanding of the various phases of an influenza pandemic response, the key planning considerations and decisions
- administration: venue suitability, access to facilities, morning tea etc.

Data collection, analysis and interpretation

Data collection methods.

Evaluation data for Exercise POMARE was collected from the following sources:

- Exercise participants provided written feedback and observations on a participant feedback form.
 - Plan for it workshop: 40 out of 44 exercise participants (91%) provided written feedback.
 - Keep it out/Stamp it out workshop: 29 out of 42 exercise participants (69%) provided written feedback.
 - Manage it/Manage it post-peak workshop: 30 out of 45 exercise participants (66%) provided written feedback.
 - Recover from it workshop: 27 out of 35 exercise participants (77%) provided written feedback.
- Exercise participants received a link to an online Survey Monkey questionnaire, via e-mail to complete with two weeks of the workshop (first three workshops only).
 - Plan for it workshop: 16 out of 44 exercise participants (36%) completed the online survey.
 - Keep it out/Stamp it out workshop: 16 out of 42 exercise participants (38%) completed the online survey.
 - Manage it/Manage it post-peak workshop: 12 out of 45 exercise participants (27%) completed the online survey.
- In addition, the lead evaluator conducted 'hot debrief' sessions with exercise facilitators immediately following the first two workshops to enable them to share their observations. Facilitators were invited to contribute feedback on what went well, what could be improved, areas for the development of the NZIPAP, additional training needs and administrative points. Facilitators were also invited to provide their feedback in writing to the lead evaluator at the conclusion of each workshop.

Data analysis methods

Qualitative and quantitative data from the sources identified above were analysed to determine whether the National and Exercise Objectives for Exercise POMARE were achieved. Participant feedback and survey results were collated into spreadsheets for ease of analysis. Numerical data was analysed into percentage based findings. These are summarised in sections 3.1 and 3.2 of this report.

Qualitative data from 169 participant observations were entered into an observations collection matrix and categorised according to workshop and source before being analysed by key theme. Thematic analysis aided in determining whether the Exercise POMARE objectives had been achieved and enabled the grouping of themed observations to inform insights and the identification of lessons. Section 3.3 of this report summarises the key insights and lessons identified.

Thematic analysis of the observations resulted in the identification of 11 key themes (types of response):

- agency roles and responsibilities: 14 observations
- border planning: 5 observations
- business continuity planning: 26 observations
- communications and public information management: 16 observations
- governance models: 11 observations
- historical insights: 22 observations
- impacts and consequences: 5 observations
- inter-agency collaboration: 23 observations
- pandemic readiness: 8 observations
- personnel management: 10 observations
- planning considerations: 29 observations.

Evaluation outcomes

The outcomes of Exercise POMARE were assessed in terms of the achievement of National and Exercise objectives and key performance indicators as identified in appendices 2 and 3 respectively. The insights, lessons and recommendations identified in this report will primarily inform the ongoing work of central government agencies, the Ministry of Health and the Inter-agency Pandemic Group.

APPENDIX 2: NATIONAL OBJECTIVES AND KEY PERFORMANCE INDICATORS

The following table reflects the overarching National Objectives and KPIs. The outcome column indicates whether the KPIs were achieved, partially achieved or not achieved. National objectives are indicated by the prefix NO.

National Exercise Objectives – Exercise POMARE	Sub-objectives	Key Performance Indicators	Outcome	Comments
NO 1.0 Lead a coordinated interagency response to a significant incident or emerging threat that warrants a NSS activation.	SO 1.1 Identify significant incident or emerging threat.	KPI 1.1.1 Incident identified as a significant incident or emerging threat requiring activation of the National Security System.	Achieved	Exercise participants were briefed on the national and international mechanisms for tracking and reporting of public health emergencies of international concern (e.g. influenza pandemics). They were also briefed on the thresholds for initiating a pandemic response and activating the NSS.
		KPI 1.1.2 Lead agency understands the activation criteria and coordinates with DPMC to activate the National Security System.	Achieved	All agencies with a lead role, as described in the NZIPAP have a sound understanding of the requisite triggers for requesting the activation of the NSS in response to a pandemic threat.
	SO 1.3 Develop an effective action plan in accordance with standard operating procedures.	KPI 1.3.2 National outcomes/goals are identified and incorporated in guidance and planning.	Achieved	The NZIPAP clearly articulates the strategic aim and operational objectives for each phase of an influenza pandemic. Exercise POMARE validated the current operational response framework: Plan for it; Keep it out; Stamp it out; Manage it; Manage it post-peak; and Recover from it.
		KPI 1.3.4 Likely threats and associated consequences and risks are embedded in the action plan.	Achieved	Exercise participants gained an appreciation of the potential human, social and economic impacts that an influenza pandemic could have on their agency and its ability to contribute to an all of government response.
		KPI 1.3.5 Legal and policy frameworks are taken in to account and appropriately used to support the action plan.	Achieved	Exercise participants examined in detail the range of legislative instruments and associated powers that could be enacted in order to effectively respond to an influenza pandemic.
		KPI 1.3.6 Relevant support agencies are integrated into action planning processes.	Achieved	A number of government agencies have no defined roles or responsibilities in the current version of the NZIPAP (i.e. MCOT, MCH). The majority of agencies have identified ways in which they can contribute to an all of government response. These need to be incorporated into the next edition of the NZIPAP through their continued representation on the IPG.

	SO 1.9 Strengthen personal and interagency collaborative relationships.	KPI 1.9.1 Lead agency personnel work in a collaborative manner with colleagues from other agencies.	Achieved	The exercise format supported the development of collaborative relationships across government agencies. Agency representation demonstrated that personnel from the lead agency worked collaboratively with a number of other government agencies to ensure that Exercise POMARE was well delivered.
		KPI 1.9.2 Information is shared and utilised across agencies to assist in relationship and resilience building.	Achieved	As a consequence of Exercise POMARE a number of government agencies have requested that MOH deliver Pandemic 101 familiarisation training to their staff, and to provide technical advice to support the development of their business continuity plans. MOH will also be required to consult with the IPG and selected agencies to update the NZIPAP.
NO 3.0 Enable high level AoG decision making through the National Security System.	SO 3.1 Agencies fulfil their roles as expected in the National Security System response governance structures.	KPI 3.1.1 NSC, ODESC, and Watch Groups (National Security System) are established according to the scale of the response in a timely manner in accordance with the NSS Handbook.	Achieved	During Exercise POMARE (Manage it/Manage it post-peak) a number of exercise participants, took part in a simulated Watch Group activity. Remaining exercise participants, considered a number of key operational issues.
		KPI 3.1.3 Exercise participants in NSS meetings are knowledgeable about their agencies' roles and responsibilities and contribute to the meetings accordingly.	Achieved	Participants who attended the Watch Group activity were required to represent their agency in developing recommended courses of action for ODESC to consider.
NO 4.0 Integrate recovery planning and arrangements into the response.	SO 4.1 Develop and implement a recovery plan.	KPI 4.1.1 Identify and establish recovery arrangements. This is to include designation of the lead agency for recovery.	Achieved	The exercise participants considered three distinct national governance models for recovery, these were: a designated lead agency, an AoG led response and the establishment of a recovery organisation (e.g. CERA). Exercise participants were also asked to identify other potential models (e.g. bottom up vs top down, outsourcing to a third party, etc.)
NO 7.0 The critical functions of government continue to be delivered during a significant incident.	SO 7.1 Response agencies can maintain their identified critical functions during a significant incident.	KPI 7.1.1 Each agency can demonstrate it has robust Business Continuity Frameworks in place.	Achieved	All government agencies demonstrated that they had robust BC plans in place. However, these plans tended to be predicated on responding to a natural disaster (i.e. earthquake, flooding, volcanic activity) rather than the complexities associated with an influenza pandemic such as duration, local vs national, national vs global, impact on response and recovery agencies.

		KPI 7.1.2 Each agency has identified and prioritised its critical functions, and has appropriate arrangements in place to ensure their continuity.	Achieved	Most agencies have identified and prioritised their critical functions and have the appropriate arrangements in place to ensure their continuity in the event of short term disruption. However, most agencies plans do not specifically cater for an influenza pandemic. The duration and complexities associated with an influenza pandemic would severely stretch the ability of most agencies to sustain their critical functions (i.e. disruption to the workforce, and national and global supply chains).
		KPI 7.1.3 Each agency has exercised its continuity arrangements (plans, key people) in relation to the exercise scenario and deem these are fit for purpose.	Achieved	The majority of agencies have recognised that their current BC plans require significant development or further refinement to cater for the eventuality of an influenza pandemic. A number of agencies have requested SME assistance to develop their BC plans.
	SO 7.2 Agencies can contribute to the response to a significant incident while maintaining core business responsibilities.	KPI 7.2.1 Each agency's business continuity planning includes maintaining capability to respond, and to fulfil agency responsibilities to lead or support an AoG response to a significant incident or emerging threat.	Achieved	Each agency identified that their capability and capacity to respond during a pandemic could vary significantly dependent upon the impact of the influenza virus on their workforce, their inter-dependent workforces, and their ability to source critical commodities.
		KPI 7.2.2 Each agency understands (and plans in accordance with) its place within a system-wide prioritisation of critical government functions.	Achieved	Each agency understood its specific roles and responsibilities in the context of a broader, all-of-government response to an influenza pandemic. A number of government agencies who have no defined roles or responsibilities in the current version of the NZIPAP (i.e. MCOT, MCH) have identified ways in which they can contribute to an all of government response. These need to be incorporated into the next edition of the NZIPAP.
NO 8.0 Integrate previous lessons identified from interagency activities to engender a culture of continuous improvement.	SO 8.1 Evidence that continuous improvement processes are implemented.	KPI 8.1.1 During the development of interagency exercises, opportunities are included to test and validate proposed remedies for gaps and lessons identified in previous exercises or activities.	Achieved	<p>The exercise planning team reviewed the Post Exercise Report for Exercise CRUICKSHANK in order to determine the scope and audience for Exercise POMARE, and validate the concept, aims and objectives.</p> <p>The exercise planning team identified that more benefit would be gained by conducting a series of half-day workshop activities over a 6-8 month period as opposed to a 4 day back-to-back exercise, as this would enable a broader range of exercise participants to engage and gain a better understanding of pandemic readiness, response and recovery.</p>

				At the conclusion of each workshop a review was undertaken by the exercise planning team to determine improvements that could be incorporated into the design and development of subsequent workshops.
		KPI 8.1.2 Best practices are identified, reviewed, and shared between agencies.	Achieved	A number of the recommendations made in the PXR suggest further revision of the NZIPAP is required in line with the lessons identified, as a part of the ongoing pandemic readiness work being undertaken by the Inter-agency Pandemic Group. In addition, best practices for BC during an influenza pandemic are being shared between agencies as a part of ongoing BC planning.
	SO 8.2 Participating agencies commit to evaluation, and post-exercise reporting.	KPI 8.2.1 Lead agency coordinates evaluation against relevant National Objectives.	Achieved	An update of the NEP National Objectives was released in December 2017. As a consequence, the objectives for Exercise POMARE were reviewed and aligned to the new objectives.
		KPI 8.2.3 Post-exercise reports, with lessons identified for inter-agency capability building, are stored in a central location by a central agency.	Achieved	The Post Exercise Report (PXR) has two key deliverables; the first being to identify lessons for inter-agency capability building in the event of an influenza pandemic and the other being to identify areas for improvement to NZIPAP 2 nd Edition.
	SO 8.3 Participating agencies commit to improvement and corrective actions.	KPI 8.3.1 Post-exercise reports are shared with other agencies to inform future exercise planning and ensure that lessons identified are reflected in agencies' planning processes.	Achieved	The Exercise POMARE PXR will be shared with other agencies to inform future exercise planning and ensure that the lessons identified can be incorporated into agencies' planning processes. As previously stated, a number of agencies have requested MOH assistance to deliver Pandemic 101 familiarisation training to their staff, and to provide technical advice to support the development of their business continuity plans.
		KPI 8.3.2 Corrective actions, identified in post-exercise reports, are implemented by the appropriate agency and in collaboration with other agencies where necessary.	To be achieved	The PXR has recommended that the NZIPAP be updated to reflect changes to organisational structures, roles and responsibilities, and to address the lessons identified. It is envisaged that the majority of corrective actions will be addressed by the Inter-agency Pandemic Group as part of MOH's pandemic readiness work programme.

APPENDIX 3: EXERCISE OBJECTIVES AND KEY PERFORMANCE INDICATORS

The following tables reflect the Ministry of Health exercise objectives and KPI's by workshop. The outcome column indicate whether the KPIs were achieved, partially achieved or not achieved.

Exercise Objectives – 'Plan for it' Workshop	Training sub-objectives	Key Performance Indicators	Outcome	Comments
1.0 Understand the overarching strategy and framework for pandemic preparedness and response as outlined in the NZIPAP 2nd Edition. (2017).	1.1 Agencies are able to demonstrate understanding of the pandemic planning and preparedness strategy.	1.1.1 The strategic goals and operational objectives of the NZIPAP are understood.	Achieved	Exercise participants displayed a sound understanding of the strategic goals of the NZIPAP. Those exercise participants who had previously attended a Pandemic 101 session and completed the reading generally demonstrated a greater understanding of the goals and objectives of the six-phase planning strategy.
		1.1.2 The strategic goals of New Zealand pandemic planning and preparation are understood.	Achieved	The strategic goals of New Zealand pandemic planning and preparation are well understood in the context of the generic AoG response to an emergency / natural disaster (i.e. preserve life, preserve critical infrastructure, preserve property, sustain core functions of govt. and recover). The overall aim being to minimise the human, social and economic impact of an event.
		1.1.3 Specific objectives for each phase of the six phase planning strategy are understood.	Achieved	Most exercise participants understood the specific objectives associated with each phase of the six phase planning strategy. Once again, those exercise participants who had attended a Pandemic 101 familiarisation session and completed the recommended reading displayed a greater understanding. On reflection, the exercise should have placed greater emphasis on the operational objectives for each phase.
2.0 Understand the roles and responsibilities of agencies in a pandemic.	2.1 Agencies are able to demonstrate knowledge of their core functions.	2.1.1 Agencies know their core functions in responding to an all of government response.	Achieved	Exercise participants possessed a sound understanding of their agencies roles and responsibilities in an AoG response.
		2.1.2 Agencies know their roles and responsibilities as identified in the NZIPAP.	Partially achieved	Exercise participants possessed a satisfactory understanding of their agencies roles and responsibilities as identified in the NZIPAP. However the NZIPAP needs to be updated to reflect the current structure of the state sector. Consideration should also be given to including a number of other government agencies who currently have no clearly defined role or responsibilities in respect of a pandemic. A number of exercise

				participants struggled to see the relevant role that their agency would play in a pandemic other than maintaining core government services.
	2.2 Agencies are able to demonstrate understanding of their roles and responsibilities during a pandemic.	2.2.1 Agencies know what critical functions must be maintained during a pandemic.	Achieved	Exercise participants demonstrated a sound understanding of their agencies critical business functions, predicated on their current BC plans. However, the nuances of an influenza pandemic challenged their ability to deliver and sustain these critical functions over a protracted period of time (e.g. duration, influenza waves, staff absenteeism etc.). Furthermore, the preventative measures associated with an influenza pandemic such as social distancing and infection control measures, further challenged their extant BC plans. In addition there is a general assumption that the national lifelines infrastructure will be able to sustain remote working and core services for a prolonged period of time despite the impact of the influenza pandemic on the workforce who maintain this infrastructure.
		2.2.2 Agencies demonstrate an understanding of what needs to be performed differently in a pandemic.	Partially achieved	Exercise participants gained a greater understanding as to how an influenza pandemic could impact their workforce and their operating environment, they started to examine and identify alternative solutions as to how they might deliver their core services and also contribute to an AoG response. The IPG will used as the conduit to further familiarise and educate all agencies on this topic.
		2.2.3 Agencies can articulate the challenges for their functional group in achieving these functions.	Partially achieved	Some of the functional groupings into which exercise participants were placed were more coherent than others and this lead to differences between the groups. The IPG will address these issues going forward.
3.0 Understand the key pandemic planning considerations to account for as part of business continuity planning.	3.1 Agencies are aware of the key pandemic planning considerations and implications for business continuity.	3.1.1 The key pandemic planning considerations for business continuity are discussed and understood.	Achieved	The majority of exercise participants concluded that their respective agencies BCP did not cater for an influenza pandemic. As a consequence a number of agencies have requested that MOH delivers pandemic familiarisation training to their staff and assist in the development of their BCP.
		3.1.2 The key issues for agencies and sectors in maintaining their critical functions during a pandemic are identified.	Achieved	During the group discussion activity exercise participants demonstrated a sound understanding of the effects that an influenza pandemic could have on their workforce and their operating environment. Furthermore, they also gained an insight

				<p>into the broader socio-economic impacts and flow on effects at the regional, national and international level.</p> <p>Exercise participants were able to identify gaps in their BCP. There was a realisation of the part of a number of exercise participants that they require external specialist assistance to develop their agency BCP to cater for an influenza pandemic. Consequently, a number have requested support from the MOH for this purpose.</p>
		3.1.3 The opportunities for inter-agency collaboration in planning and business continuity response to a pandemic are understood.	Achieved	<p>Exercise participants were able to identify a number of opportunities for further collaboration in planning and business continuity management in both the context of an influenza pandemic and generic emergency response (i.e. procurement and holding of specialist equipment (e.g. PPE), joint training opportunities and common procedural approaches). However the practicality and feasibility of these initiatives would need to be examined in greater detail by an inter-agency working group.</p>

Exercise Objectives – ‘Keep it out / Stamp it out’ workshop	Training sub-objectives	Key Performance Indicators	Outcome	Comments
4.0 Understand the scope of the ‘Keep it Out’ and ‘Stamp it Out’ phases and the key decisions within these phases.	4.1 Agencies are able to demonstrate understanding of the ‘Keep it Out’ and ‘Stamp it Out’ phases.	4.1.1 The scope of the ‘Keep it Out’ and ‘Stamp it Out’ phases are understood.	Achieved	Exercise participants displayed a satisfactory understanding of the scope of the ‘Keep it out’ and ‘Stamp it out’ phases of an influenza pandemic.
		4.1.2 The key decisions within the ‘Keep it Out’ and ‘Stamp it Out’ phases are understood.	Achieved	Exercise participants displayed a satisfactory understanding of the key decisions which need to be made during the ‘Keep it out’ and ‘Stamp it out’ phases an influenza pandemic.
5.0 Understand the range of border and containment measures that may be implemented during the	5.1 Agencies are able to demonstrate understanding of the border and containment measures that may be	5.1.1 Agencies understand the control measures applied at international borders within NZ.	Achieved	Exercise participants gained a greater appreciation of the range of border management controls that could be applied in the event of an influenza pandemic. This included potentially screening travellers heading to the Pacific Islands. A number of exercise participants struggled to understand the complexities involved in a decision to close New Zealand’s borders to

'Keep it Out' and 'Stamp it Out' phases.	implemented during these phases.			inbound passengers and freight; and the very high likelihood that the influenza virus had already penetrated our border.
		5.1.2 Agencies understand the rationale for cluster containment measures and their application in a NZ context.	Achieved	During the 'Stamp it out' phase, exercise participants gained an insight into how cluster containment measures may be implemented in the event of an influenza pandemic.
6.0 Identify the pandemic planning and response considerations for government agencies and work-streams during the 'Keep it Out' and 'Stamp it Out' phases.	6.1 Agencies are able to identify the pandemic planning and response considerations for the 'Keep it Out' and 'Stamp it Out' phases.	6.1.1 Pandemic planning and response considerations for the 'Keep it Out' and 'Stamp it Out' phases are identified.	Achieved	The majority of exercise participants were able to identify the pandemic planning and response considerations for the 'Keep it Out' and 'Stamp it Out' phases of an influenza pandemic.
7.0 Understand how the range of measures can be applied to other emerging disease threats.	7.1 Agencies are able to demonstrate understanding of how the range of border and containment measures can be applied to other emerging disease threats.	7.1.1 Agencies understand how border control measures can be applied to other emerging disease threats.	Achieved	Exercise participants gained a satisfactory understanding of how a range of border management controls can be applied to other emerging disease threats; including the use of health alerts and advisories, targeted screening of travellers, measures to manage symptomatic or exposed travellers, and exit measures.
		7.1.2 Agencies understand how cluster containment measures can be applied to other emerging disease threats.	Achieved	Exercise participants gained a satisfactory understanding of how a range of cluster containment and control measures can be applied to other emerging disease threats; including the early identification and management of cases and contacts, use of isolation and quarantine practices, basic hygiene and social distancing practices, movement restrictions and closure of educational institutions.

Exercise Objectives – 'Manage it / Manage it post-peak'	Training sub-objectives	Key Performance Indicators	Measurement	Comments
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8.0 Understand the scope of the 'Manage it' and 'Manage it post-peak' phases and the key decisions within these phases.	8.1 Agencies are able to demonstrate understanding of the "Manage it" and 'Manage it post-peak' phases.	8.1.1 The scope of the 'Manage it' and 'Manage it post-peak' phases are understood.	Achieved	Exercise participants displayed a sound understanding of the scope of the 'Manage it' and 'Manage it post-peak' phases of an influenza pandemic.
		8.1.2 The key decisions within the 'Manage it' and 'Manage it post-peak' phases are understood.	Achieved	Exercise participants displayed a satisfactory understanding of the key decisions which need to be made during the "Manage it" and 'Manage it post-peak' phases of an influenza pandemic.
9.0 Understand the range of mitigation and containment measures that may be implemented during the 'Manage it' and 'Manage it post-peak' phases.	9.1 Agencies are able to demonstrate understanding of the range of mitigation measures that may be implemented during the "Manage it" and 'Manage it post-peak' phases.	9.1.1 Agencies understand the range of mitigation measures that may be implemented during the "Manage it" and 'Manage it post-peak' phases.	Achieved	Exercise participants demonstrated a satisfactory understanding of the range of mitigation measures that could be implemented during the "Manage it" and 'Manage it post-peak' phases of an influenza pandemic.
10.0 Identify the planning and response considerations for government agencies and work-streams during the 'Manage it' and 'Manage it post-peak' phases.	10.1 Agencies are able to identify the pandemic planning and response considerations for the 'Manage it' and 'Manage it post-peak' phases.	10.1.1 Pandemic planning and response considerations for the 'Manage it' and 'Manage it post-peak' phases are identified.	Achieved	Exercise participants were able to identify the key planning and response considerations for the 'Manage it' and 'Manage it post-peak' phases of an influenza pandemic.
11.0 Understand the impact these phases will have on the national health sector, as well as the global sector as a whole.	11.1 Agencies are able to demonstrate understanding of the impact these phases will have on the national health sector, as well as the global sector as a whole.	11.1.1 Agencies understand the impacts the 'Manage it' and 'Manage it post-peak' phases will have on the national health sector.	Achieved	Exercise participants gained an appreciation of the impact that the 'Manage it' and 'Manage it post-peak' phases may have on both the national health sector and their agencies.
		11.1.2 Agencies understand the impacts the 'Manage it' and 'Manage it post-peak' phases will have on the global sector.	Achieved	Exercise participants gained an appreciation of the potential impact that the 'Manage it' and 'Manage it post-peak' phases could have on the global sector and how this may impact New Zealand's ability to both respond to and recover from an influenza pandemic (i.e. the time required to source and manufacture influenza vaccine, the potential disruption to global supply chains, particularly critical commodities).

Exercise Objectives – ‘Recover from it’	Training sub-objectives	Key Performance Indicators	Measurement	Comments
12.0 Understand the scope of the ‘Recover from it’ phase and the key decisions within this phase.	12.1 Agencies are able to demonstrate understanding of the ‘Recover from it’ phase.	12.1.1 The scope of the ‘Recover from it’ phase is understood.	Achieved	Exercise participants displayed a sound understanding of the scope of the ‘Recover from it’ phase of an influenza pandemic.
		12.1.2 The key decisions within the ‘Recover from it’ phase are understood.	Achieved	Exercise participants displayed a sound understanding of the key decisions which need to be made during the ‘Recover from it’ phase of an influenza pandemic.
13.0 Understand the range of national and global economic and societal impacts an influenza pandemic may have.	13.1 Agencies are able to demonstrate understanding of the range of national and global economic and societal impacts an influenza pandemic may have.	13.1.1 Agencies understand the range of national and global economic and societal impacts an influenza pandemic may have.	Achieved	Exercise participants gained an appreciation of the potential human, economic and societal consequences of both a national and global level influenza pandemic. The historical case study of the 1918 Influenza Pandemic (Spanish Flu) provided a sobering insight into the potential consequences of a global pandemic.
14.0 Identify the planning and response considerations for government agency work-streams during the ‘Recover from it’ phase.	14.1 Agencies are able to identify the pandemic planning and response considerations for government agency work-streams during the ‘Recover from it’ phase	14.1.1 Pandemic planning and response considerations for the government agencies and work-streams during the ‘Recover from it’ phase.	Achieved	Exercise participants possessed a sound understanding of the planning considerations for government agencies and work-streams during the ‘Recover from it’ phase.

<p>15.0 Understand the measures which may need to be taken to expedite the recovery of population health, communities and society.</p>	<p>15.1 Agencies are able to demonstrate understanding of the measures which may need to be taken to expedite the recovery of population health, communities and society.</p>	<p>15.1.1 Agencies understand the measures which may need to be taken to expedite the recovery of population health, communities and society.</p>	<p>Achieved</p>	<p>Exercise participants displayed a satisfactory understanding of the measures that may need to be taken to expedite the recovery of population health, communities and society during the 'Recover from it' phase of an influenza pandemic. The case study of the 1918 Influenza Pandemic (Spanish Flu) also highlighted the long term health issues on both the population and the economy.</p>
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