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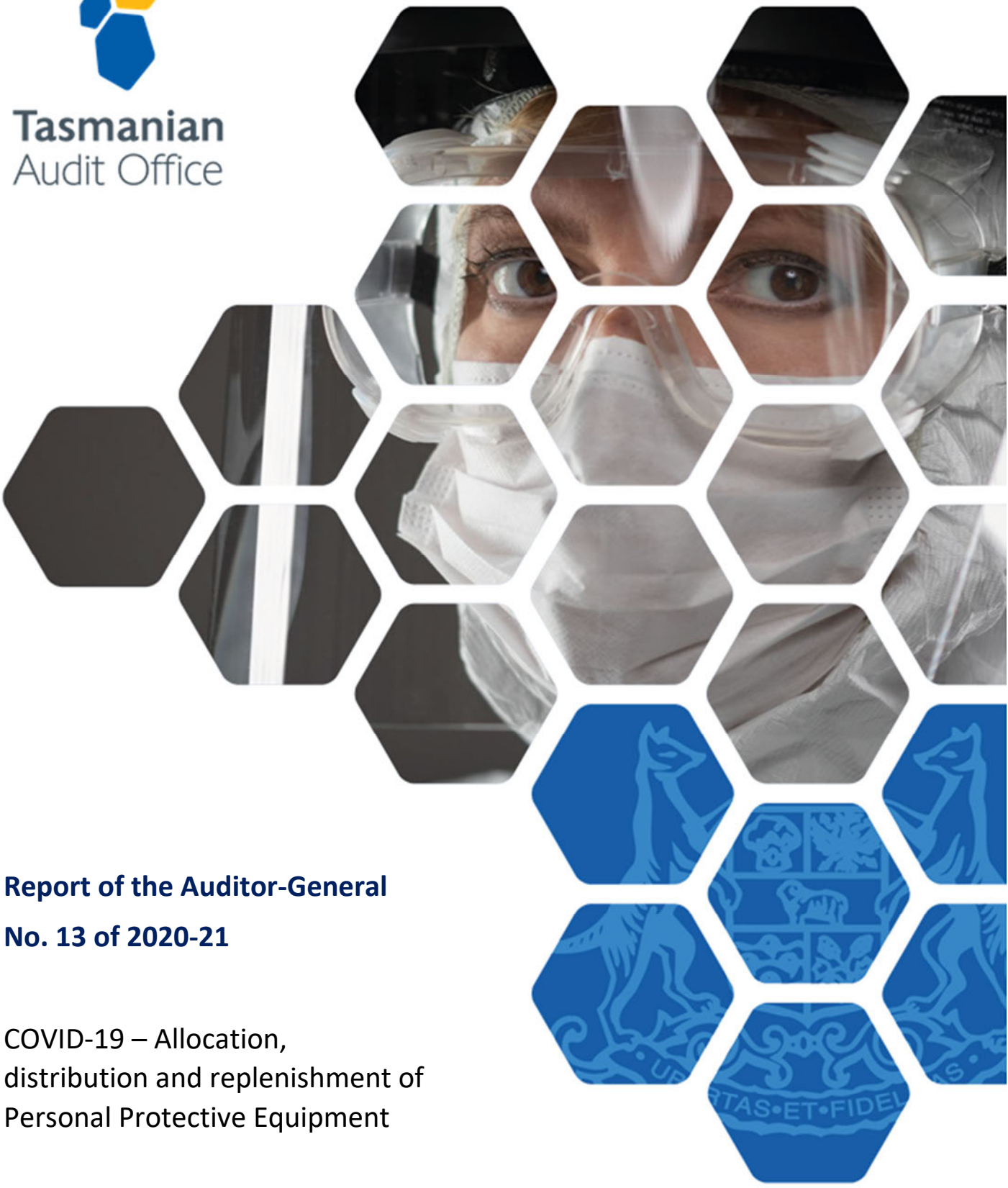

Report of the Auditor-General

No. 13 of 2020-21

COVID-19 – Allocation, distribution and replenishment of Personal Protective Equipment

24 June 2021

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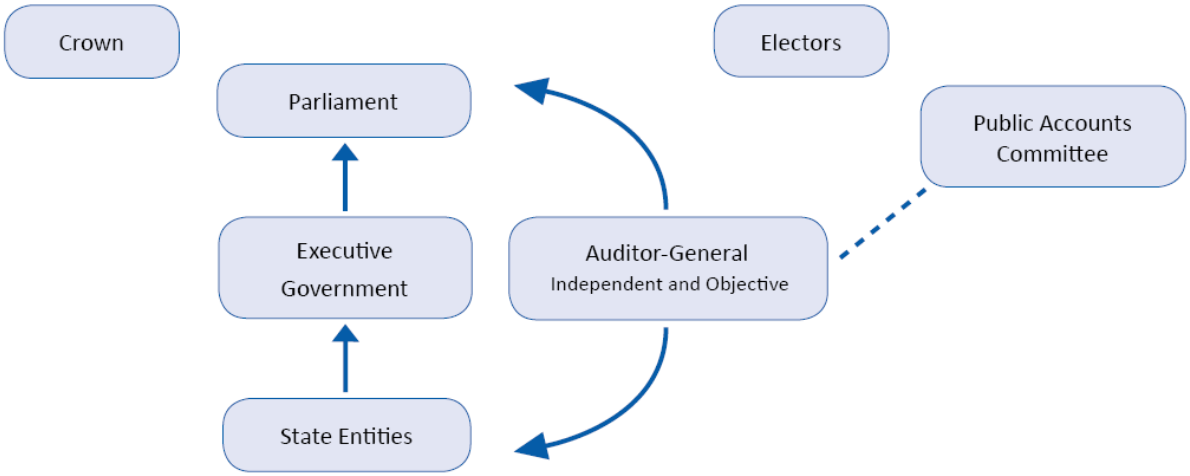

2021 (No. 6)

2021
PARLIAMENT OF TASMANIA

COVID-19- Allocation, distribution and replenishment of Personal Protective Equipment

24 June 2021

Presented to both Houses of Parliament pursuant to
Section 30(1) of the *Audit Act 2008*

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Tasmanian Audit Office

GPO Box 851
Hobart
TASMANIA 7001

Phone: (03) 6173 0900, Fax (03) 6173 0999
Email: admin@audit.tas.gov.au
Website: www.audit.tas.gov.au

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Tasmanian Audit Office

Level 8, 144 Macquarie Street, Hobart, Tasmania, 7000
Postal Address: GPO Box 851, Hobart, Tasmania, 7001
Phone: 03 6173 0900 | Fax: 03 6173 0999
Email: admin@audit.tas.gov.au
Web: www.audit.tas.gov.au

24 June 2021

President, Legislative Council
Speaker, House of Assembly
Parliament House
HOBART TAS 7000

Dear Mr President, Mr Speaker

Report of the Auditor-General No. 13 of 2020-21 – COVID-19 – Allocation, distribution and replenishment of Personal Protective Equipment

This report has been prepared consequent to examinations and investigations conducted under section 23 of the *Audit Act 2008*. The objective of the review was to express a limited assurance conclusion on the effectiveness of the allocation, distribution and replenishment of personal protective equipment by public-sector agencies during the COVID-19 pandemic in Tasmania.

Yours sincerely

[redacted]

Rod Whitehead
Auditor-General

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Foreword

It would be difficult to look back at 2020 without framing it in terms of the impact of the COVID-19 pandemic on our lives. Tasmania, like every jurisdiction in the world, had to consider the importance of protecting frontline workers from infection, while allowing them to continue essential work, as well as limiting the spread of the disease. While a vaccine is being deployed to the Tasmanian community throughout 2021, it will be some months before the majority of the population is vaccinated. The need to continue to protect essential workers and the general population brought personal protective equipment (PPE) into the spotlight as an integral part of Tasmania's response to the 2019 novel coronavirus (COVID-19). Having enough of the right PPE is essential in ensuring the continued safety of our workforce and the community.

This review compliments a number of other parliamentary, internal and external reviews of aspects of the Tasmanian Government's COVID-19 response. This report adds to that body of work, though it may differ in focus and approach.

The aim of this review is twofold. Firstly, to bring some assurance to Parliament and, more broadly, the community on the effectiveness of the allocation, distribution and replenishment of PPE by public sector agencies during the COVID-19 pandemic in Tasmania. Secondly, to provide some useful recommendations to help improve the public-sector's capacity to respond to any future health emergency.

Rod Whitehead

Auditor-General

24 June 2021

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Independent assurance report

This independent assurance report is addressed to the President of the Legislative Council and the Speaker of the House of Assembly.

Review objective

The objective of the review was to express a limited assurance conclusion on the effectiveness of the allocation, distribution and replenishment of PPE by public sector agencies during the first 10 months of the COVID-19 pandemic in Tasmania.

Review scope

The review looked at plans that were already in place to manage PPE supplies in the event of a pandemic, and the modification of those plans in response to COVID-19. It examined the allocation, distribution and replenishment of PPE from 17 March 2020, the date the Director of Public Health declared a Public Health Emergency for Tasmania, to February 2021, the date our fieldwork concluded.

The review did not examine guidance or decisions on the use of PPE in clinical and non-clinical settings, nor did it specifically consider the quality of PPE.

The following Departments were included within the scope of this review:

PPE high-need Departments

- Department of Health (DoH), including the Tasmanian Health Service (THS) and Ambulance Tasmania (AT)
- Department of Police, Fire and Emergency Management (DPFEM).

PPE low-need Departments

- Department of Primary Industries, Parks, Water and Environment (DPIPWE)
- Department of Communities Tasmania (Communities Tasmania)
- Department of State Growth (State Growth).

These departments are referred to as ‘agency’ or ‘agencies’ in this report.

Review approach

The review was conducted in accordance with Australian Standard on Assurance Engagements ASAE 3500 *Performance Engagements* issued by the Australian Auditing and Assurance Standards Board, for the purpose of expressing a limited assurance conclusion.

The procedures performed in a limited assurance review vary in nature and timing from, and are less in extent than for, a reasonable assurance review. Consequently, the level of assurance obtained in a limited assurance review is substantially lower than the assurance that would have been obtained had a reasonable assurance review been performed.

The review evaluated the following criteria:

1. Were governance arrangements relating to PPE effective?
    1.1. Was there a whole-of-government approach to provide an effective governance framework for the storage, allocation, distribution and replenishment of PPE in the event of a pandemic?
    1.2. Did agencies have a planned and collaborative approach to the storage, allocation, distribution and replenishment of PPE in the event of a pandemic?
    1.3. Were governance arrangements relating to PPE agile and responsive to feedback and changing circumstances?
2. Were controls over physical PPE stock held effective?
    2.1. Was there an understanding of the quantity of PPE required?
    2.2. Was the quantity of PPE held known?
    2.3. Was PPE stored in a suitable and secure environment?
3. Were controls over the allocation and distribution of PPE effective?
    3.1. Were policies or guidelines for the allocation of PPE effective?
    3.2. Was there timely and relevant information to aid allocation decisions?
    3.3. Was distribution appropriate and effective?
4. Was the replenishment of PPE during the pandemic managed effectively?
    4.1. Was there an understanding of when replenishment needed to occur?
    4.2. Were procurement processes efficient and effective?
    4.3. Were stock quantities updated for replenishments?

I have conducted my limited assurance review by making such enquiries and performing such procedures I considered reasonable in the circumstances.

Evidence for the review was obtained primarily through discussions with relevant personnel and examining corroborative documentation.

I believe the evidence I have obtained is sufficient and appropriate to provide a basis for my conclusion.

Responsibilities of management

In the context of this review, DoH had responsibility for directing agencies to take any action to limit or prevent the spread of COVID-19. All agencies were responsible for effectively managing the allocation, distribution and replenishment of PPE during the pandemic.

Responsibilities of the Auditor-General

My responsibility was to express a limited assurance conclusion on whether DoH effectively directed agencies to take actions to limit or prevent the spread of COVID-19 and whether the allocation, distribution and replenishment of PPE by agencies during the COVID-19 pandemic in Tasmania was effective, as evaluated against the criteria.

Independence and quality control

I have complied with the independence and other relevant ethical requirements relating to assurance engagements, and have applied Auditing Standard ASQC *1 Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, and Other Assurance Engagements* in undertaking this review.

Qualified conclusion

Based on the procedures I have performed and the evidence I have collected, except for the matter described in the paragraph below, nothing has come to my attention that causes me to believe that, in all material aspects, the allocation, distribution and replenishment of PPE, during the first 10 months of the COVID-19 pandemic, was not effective, as evaluated against the review criteria.

Basis for qualified conclusion

Controls over physical PPE stock held were not fully effective for two agencies prior to and at the beginning of the COVID-19 pandemic. This is because stock records did not accurately record the quantity of PPE stock held at the beginning of the COVID-19 pandemic, there were shortfalls in recommended levels of PPE stock required to be held for a pandemic response and there were instances where PPE stock was not fit for use due to expiry past its use by date or quality deficiencies. These matters were promptly addressed by the agencies once they were identified.

Rod Whitehead

Auditor-General

24 June 2021

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Executive summary

Summary of findings

Overall, PPE was generally available for use by frontline workers across Tasmanian Government agencies. While there were some areas where PPE was harder to obtain, as the COVID-19 pandemic continued, agencies responded well in managing the allocation, distribution and replenishment of PPE. Initial plans for the distribution of PPE were not implemented, and it was evident not all stocks were at required levels or quality prior to the pandemic.

Pre-pandemic, at a whole-of-government level, there were planning documents developed by DoH that considered the use of PPE during a pandemic. These were supported by other DoH plans that primarily focused on a public health emergency relating to an influenza pandemic.

Due to resource constraints and the extent of the emerging public health emergency at the start of the pandemic, these plans could only be partially enacted, as DoH, including Public Health Services (PHS), was limited in its capacity to perform the planned lead and strategic response roles in relation to PPE. Only one third of the PPE stock held was known to be at levels recommended by DoH's pandemic plan. Of all the stock held, two thirds was without a manufacturer indicated expiry date and had to be manually checked before distribution. Some agencies supporting the health response were unable to obtain PPE or guidance on its use from PHS.

To respond to the lack of availability of PPE for a pandemic, agencies, including DoH, developed their own approach to obtain and distribute PPE. Most agencies had emergency planning documents prior to the pandemic with specific COVID-19 plans developed as the pandemic progressed. Agency plans still tended to lack detail on PPE but the governance and management arrangements for it improved and were appropriate to the quantities of PPE used by agencies. Most frontline workers had access to the PPE they required.

Until the establishment of the State Control Centre (SCC), collaboration between agencies was limited and ad hoc. The SCC facilitated a whole-of-Government approach and tasked State Growth to assist non-health agencies and essential services to gain better access to PPE.

DoH developed effective and detailed controls to better understand PPE stock levels, demand and replenishment needs. DoH also managed to significantly increase the stock levels of PPE in the Emergency Medical Stockpile (State Stockpile) between April and August 2020. The second largest user of PPE was DPFEM, which maintained a central store to allocate PPE for local use. Those agencies that required less PPE to support the response developed effective procedures appropriate to their needs.

PPE stocks were generally stored by agencies in suitable and secure environments. DoH stored PPE in appropriately secured facilities. DPFEM experienced minor storage difficulties as stock levels grew but this did not impact stock security or its response. Agencies with lower levels of PPE had suitable storage arrangements consistent with their needs.

There was initially a lack of guidance for agencies on the allocation of PPE but this was addressed as the pandemic progressed. DoH was guided in its allocation of PPE by the priority groupings described in the *Tasmanian Health Action Plan for Pandemic Influenza 2016* (THAPPI). However, these were flexibly applied given the extraordinary circumstances. DoH ensured hospitals were prioritised for the receipt of PPE, with all other requests assessed on a case-by-case basis. Access to the State Stockpile was limited for non-health agencies[1] because of limited availability of PPE. Non-health agencies developed flexible approaches that were appropriate to their needs, ensuring frontline staff were prioritised. DPFEM used its existing command structure to allocate PPE.

Despite the difficulties in procuring stocks, sufficient PPE was available to meet agencies' needs. By late January 2020, the supply of PPE was seriously disrupted by the pandemic, with traditional supply chains overwhelmed and rapid price increases occurring. Amid this uncertain environment, revised procurement processes were introduced by the Department of Treasury and Finance to assist agencies to more easily replenish PPE stocks. Agencies took steps to secure PPE supplies, proportionate to their requirements. They reduced demand for PPE by limiting operations and allowing staff to work offsite. DoH had access to the Australian Government's National Medical Stockpile (NMS), which ensured sufficient PPE was available until commercial supplies were obtained to replenish the State Stockpile.

DoH and DPFEM used modelling to better determine PPE requirements, while low-need agencies were able to determine their needs without the necessity for modelling. Both DoH and DPFEM built up substantial stocks of PPE, while Biosecurity Tasmania (DPIPWE) secured enough masks for its border security requirements. The Government also took steps to assist non-health agencies access PPE for their future needs over the next 10 years.

We have made four recommendations that build on lessons gained from the current emergency response and support improvements in the allocation, distribution and replenishment of PPE to meet possible future requirements. We would like to thank the agencies for their cooperation and support in undertaking this review while they were still busy responding to the pandemic.

Recommendations

We recommend:

1. Whole-of-government and agency plans are refreshed to strengthen guidance on the allocation, distribution and replenishment of PPE.
2. Agencies develop plans for greater collaboration for sharing of expertise and resources across departments with regard to PPE.
3. Agencies model the future demand for PPE in a pandemic, maintain stock levels proportionate to their needs and ensure visibility of the type and quantity of PPE held.

[1] Non-health agencies are those departments and entities outside of DoH. Both THS and AT are part of DoH.

4. Agencies regularly check and refresh PPE stocks in accordance with plans and manufacturers' directions to ensure PPE remains usable.

Submissions and comments received

In accordance with section 30(2) of the *Audit Act 2008* (Audit Act), a summary of findings or copy of the report was provided to the Treasurer, and other persons who, in our opinion, had a special interest in the report, with a request for submissions or comments.

Submissions and comments that we receive are not subject to the review nor the evidentiary standards required in reaching a review conclusion. Responsibility for the accuracy, fairness and balance of these comments rests solely with those who provided the response. However, views expressed by the responders were considered in reaching review conclusions.

Section 30(3) of the Act requires that this report include any submissions or comments made under section 30(2) or a fair summary of them. Submissions received are included below.

Response from the Secretary of the Department of Communities Tasmania

I note that COVID-19 has and continues to present Tasmania, Australia and the world with unprecedented challenges which have required collaboration and new services to be rapidly developed. The cooperation of all Agencies contributing to the response in Tasmania is to be commended.

I note your findings that PPE levels were sufficient against a backdrop of worldwide supply chain disruption and increased demand. This is a credit to all Agencies involved in the response.

As part of the Tasmania response, Communities Tasmania managed the Hotel Quarantine program, and this required my Agency to access PPE that we would not ordinarily use. I acknowledge the cooperation of Departments of Primary Industries, Parks, Water and Environment, Police Fire and Emergency Management and Health in providing my Department with PPE supplies to enable robust infection prevention and control within the Hotel Quarantine setting.

I welcome the Report's recommendations and, as part of my Department's program of continuous learning and response to the current Pandemic and planning for any future events, I am committed to continuing to work with other Agencies collaboratively to achieve the best outcomes.

Michael Pervan

Response from the Secretary of the Department of Health

On review of the Report, I am pleased to see that your findings and overall conclusion reflect positively on the agencies involved. It is important to note, as you recognise in your Report, that agencies were operating in highly complex and unprecedented circumstances and that many of the challenges with the supply and management of personal protective equipment (PPE) resulted from extraordinary supply chain disruption and global demand.

When faced with these challenges and increased uncertainty, the Department of Health acted quickly to mitigate the risks by taking significant and early action to strengthen our supply chain options, quality assurance processes, inventory management systems, monitoring and reporting, stockpile arrangements, and overall strategic management of PPE.

These and other measures taken by the Department reflect the importance we place on ensuring that the right quantity, type, and standard of PPE is available to health care workers statewide to protect themselves, their patients and prevent disease transmission in the healthcare setting.

This work continues as we keep Tasmania safe and includes major investment in the establishment and maintenance of the State Emergency Medical Stockpile, which holds more than six-months supply of PPE based on peak pandemic usage, providing confidence in our capacity to respond to any future COVID-19 outbreak, supply chain disruption, and/or other public health emergency.

I welcome the Report's recommendations and, as part of my Department's program of continuous improvement, I am committed to working with other agencies to action accordingly.

Kathrine Morgan-Wicks

Response from the Secretary of the Department of Primary Industries, Parks, Water and Environment

The Department notes the findings of the review and is supportive of the four recommendations arising.

The recommendations from the review will assist in informing the Department's ongoing improvements in procedures to keep our staff and the Tasmanian community safe, as we continue to adapt to the changes arising from the Coronavirus pandemic.

Tim Baker

Response from the Secretary of the Department of Police, Fire and Emergency Management

One of the myriad challenges associated with the global COVID-19 pandemic was allocation, distribution and replenishment of a range of Personal Protective Equipment (PPE). As a significant user of PPE, the scale and nature of the COVID pandemic created unforeseen challenges that required existing DPFEM plans to be urgently reviewed and stock levels substantially increased, especially in the early stages of the response. DPFEM centralised management of PPE supplies ensuring that distribution and supply was effective in meeting operational needs. Importantly, frontline DPFEM workers had access to the PPE they required and DPFEM was also able to assist other agencies with their needs. On establishment of the State Control Centre within DPFEM, a whole of government approach to PPE allocation, distribution and replenishment was implemented. This approach significantly improved the coordination of PPE-related measures.

DPFEM supports the performance review's recommendations.

Commissioner Darren Hine

Response from the Secretary of the Department of State Growth

As you are aware, the COVID-19 pandemic caused a range of disruptions to Tasmanians, and it continues to significantly impact on the lives of people across the world. In the initial stages of the pandemic, the demand for PPE was reaching unprecedented levels globally. This combined with disruptions to distribution networks, added significant pressure to the challenges of securing large volumes of PPE.

The Department of State Growth was pleased to be part of the whole of government response to this challenge.

I note the Tasmanian Audit Office's engagement throughout this audit and thank the office for the liaison with our team.

Kim Evans

1. Introduction

Tasmanian Response to the Covid-19 Pandemic

1.1 A novel coronavirus was first identified in Wuhan, China, in late 2019. In early January 2020, the coronavirus was identified by China and reported by the World Health Organisation as SARS-CoV-2 (COVID-19). On 25 January 2020, the Australian Government confirmed Australia's first case of COVID-19.

1.2 DoH started to prepare its response to a potential outbreak of the virus in Tasmania from late January 2020, by activating a Level 1 health emergency response under its planning arrangements. The response was led by the Director of Public Health as Incident Controller with support from the Chief Medical Officer and the establishment of an Incident Management Team within PHS.

1.3 On 2 February 2020, the Premier established a Heads of Agency Coronavirus Interdepartmental Committee, which met regularly throughout February 2020 to provide cross-agency oversight and coordination of the pandemic response. The Interdepartmental Committee continued to meet until the State Emergency Management Committee (SEMC), under the *Emergency Management Act 2006* (EMA) was activated on 2 March 2020, following confirmation of Tasmania's first case of COVID-19. The SEMC's role is to provide oversight of the Tasmanian Government's emergency management plans. It has functions under the EMA such as advising the State Emergency Management Controller (State Controller) and reviewing the management of emergencies if they impact more than one region.[2]

1.4 The Secretary of DoH, as State Health Commander, authorised the escalation of the health emergency response to Level 2 and activated DoH's Emergency Coordination Centre (ECC) on 5 March 2020. The ECC provided strategic oversight and coordination of the health response to the pandemic and was led by a Senior Executive Service employee from another agency, who assumed the Incident Controller role from the Director of Public Health, leaving the Director to focus on his statutory functions and providing high level public health advice.

1.5 On 11 March 2020, the World Health Organisation officially declared COVID-19 a global pandemic. On the same date, the State Controller authorised the establishment of the State ECC to facilitate cross-agency coordination and consequence management of the pandemic and to support DoH. On 17 March 2020, the Acting Director of Public Health declared a Public Health Emergency for Tasmania under the *Public Health Act 1997*, for a period of 12 weeks. The Director of Public Health has extended the Public Health Emergency several times, each for a period of 12 weeks, since the initial declaration.

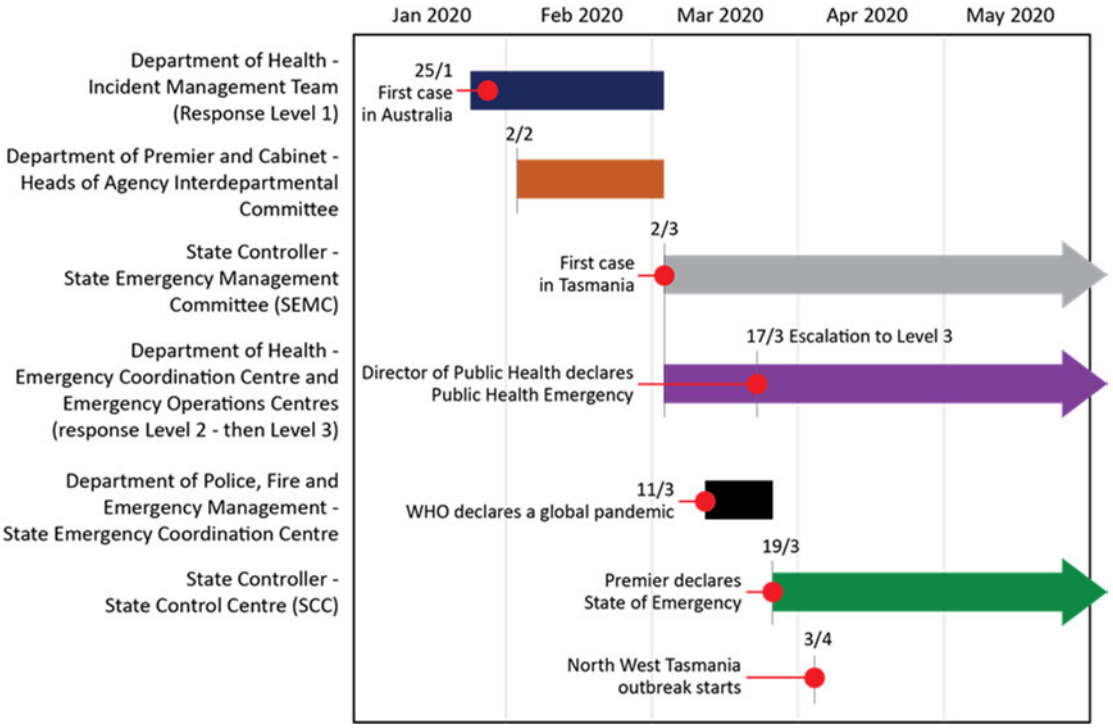
1.6 The Premier declared a State of Emergency on 19 March 2020 and appointed the State Controller to lead the whole-of-government response to COVID-19. The SCC,

[2] State Emergency Management Controller is the Commissioner for Police and agency head for DPFEM.

where the whole-of-government emergency management policy and strategy was coordinated during response operations or exercises, was stood up on the same day. The Premier also announced border restrictions with all non-essential travellers entering Tasmania required to quarantine for 14 days.

1.7 The timeline of key events is outlined in Figure 1.

Figure 1. Timeline of key events



Source: TAO

1.8 While the response to the pandemic has been a whole-of-government effort, this review focused on five agencies who were involved in the allocation, distribution and replenishment of PPE for frontline workers within their agencies and elements of the broader community. The role and responsibilities of each agency in responding to COVID-19, including managing the allocation, distribution and replenishment of PPE, is outlined below:

- DoH is the Response Management Authority for a pandemic hazard under the Tasmanian Emergency Management Arrangements (TEMA) and the Director of Public Health is the accountable person under legislation to declare and respond to a Public Health Emergency.[3]
- DPFEM is responsible for TEMA, which sets out Tasmania's preparedness, response and recovery from emergencies. TEMA defines the governance and legislative frameworks, supported by key plans, roles and structures to manage an emergency event. The Secretary of DPFEM/Commissioner of Police

[3] The Response Management Authority is the agency responsible for managing the actual hazard. In this case, a coronavirus, which is the responsibility of PHS, part of DoH. If it were a bushfire, it would be the Tasmania Fire Service, part of DPFEM. Every hazard in the TEMA has a relevant Response Management Authority.

fulfils the statutory role under EMA of State Controller, who is the accountable person for leading emergency responses and chairing the SEMC.

- State Growth was tasked by the SCC to co-ordinate and assist agencies gain access to PPE. In addition, State Growth on behalf of the Government established a non-health essential services PPE stockpile.
- DPIPWE has responsibilities under State Special Emergency Management Plans (SSEMP) in implementing and coordinating border control measures.
- Communities Tasmania under SSEMP, has responsibility to continue delivering social recovery services. Communities Tasmania, subsequently took on responsibility for the hotel quarantine program.

COVID-19 and the importance of PPE in preventing infection

1.9 COVID-19 is a coronavirus, which is similar to influenza in that they both cause respiratory disease and are both transmitted by contact, droplets, surfaces, clothing, furniture etc. However, there are differences, including[4]:

- Influenza has a shorter median incubation period and a shorter serial interval (the time between successive cases) than the COVID-19 virus — three days compared to five to six days.
- Pre-symptomatic transmission of influenza appears to be higher than for COVID-19.
- The number of secondary infections generated from one infected individual appears to be higher for COVID-19 than for influenza.
- Eighty percent of COVID-19 infections were mild or asymptomatic, 15% were severe requiring oxygen and 5% were critical, requiring ventilation. The percentages for severe and critical were higher than for influenza infection.
- Mortality for COVID-19 appeared higher than for influenza, especially seasonal influenza.

1.10 While vaccines are available for seasonal influenza, a vaccine had never been developed for a coronavirus. As of March 2021, a number of COVID-19 vaccines had been developed with a growing number of countries having commenced vaccination programs for their residents from late 2020 with Australia commencing its vaccination program from late February 2021.

1.11 PPE is an integral part of infection control both in healthcare settings and in the broader community and was the last resort for protection for many essential workers.

[4] World Health Organisation, *Coronavirus disease (COVID-19): Similarities and differences with influenza,* 17 March 2020, https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/coronavirus-disease-covid-19-similarities-and-differences-with-influenza

Prevention measures are used to protect workers from exposure to infected droplets from coughing and sneezing and from other potentially infectious materials such as contaminated surfaces. Figure 2 shows the main types of PPE used to prevent the spread of COVID-19 in healthcare settings.

Figure 2: Main types of PPE used to prevent the spread of COVID-19

Source: TAO

1.12 Getting accurate information concerning the prevention and control of COVID-19 is important. At a government level:

- The Australian Government, through the Commonwealth Department of Health, provides guidance to the community on how to protect against the spread of COVID-19, which includes, good hygiene, physical distancing and the use of masks.
- Communicable Diseases Network Australia, a sub-committee of the Australian Health Protection Principal Committee[5], has developed national clinical guidelines for COVID-19, as part of its Series of National Guidelines (SoNGS).

[5] The Australian Health Protection Principal Committee is the key decision making committee for health emergencies. It is comprised of all state and territory Chief Health Officers and is chaired by the Australian Chief Medical Officer.

- The Tasmanian Government, through PHS, provides online advice to the community on infection prevention and control, which includes information on COVID-19.
- The Australian and Tasmanian governments have both run extensive public education campaigns to better inform the community about how to prevent the spread of COVID-19.
- Primary Health Tasmania, a non-government, not-for-profit organisation, provides information to the public and health professionals on the management of COVID-19.

1.13 Health professionals, such as doctors and nurses, have access to more detailed and technical information on infection prevention and control through professional bodies, such as the Royal Australian College of General Practitioners.

2. Were governance arrangements relating to PPE effective?

In this chapter, we assess whether the governance arrangements relating to the need for PPE as a result of the pandemic were effective by determining whether:

- there was a whole-of-government approach to provide an effective governance framework for the storage, allocation, distribution and replenishment of PPE in the event of a pandemic
- agencies had a planned and collaborative approach to the storage, allocation, distribution and replenishment of PPE in the event of a pandemic
- governance arrangements relating to PPE were agile and responsive to feedback and changing circumstances.

Chapter summary

Prior to the pandemic, at a whole-of-government level, there were plans and other supporting documents developed by DoH that considered the use of PPE during a pandemic. These plans outlined that DoH would lead the distribution and allocation of PPE to both health staff and staff from other agencies supporting a pandemic emergency response.

At the commencement of the pandemic, DoH, including PHS, was limited in its capacity to perform planned roles and respond fully to all the demands placed on it. To compensate for a lack of a centralised approach, agencies, including DoH, developed their own approach to ensure PPE needs were met.

Most agencies developed planning documents prior to the pandemic to assist them in responding to such an event. These were adapted during the pandemic to be more COVID-19 focused. While giving clinical direction on the use of PPE, they still lacked direction and detail for the allocation, distribution and replenishment of PPE.

To compensate for this, governance and management arrangements at an agency level were improved to support the allocation and distribution of PPE, which were appropriate for the quantities used by individual agencies.

The lack of a whole-of-government approach limited opportunities for collaboration between agencies. While there were some examples of collaboration, there were also missed opportunities for more effective approaches to support the best use of resources across the public sector, especially in the early stages of the pandemic. This improved with State Growth taking a leading role in supporting non-health agencies gain access to PPE.

Responsibilities for the provision of PPE in an emergency were established at a whole-of-government level

2.1 Prior to the pandemic, at a whole-of-government level, there was a plan and supporting documents that considered the use of PPE during a pandemic. While supporting documents contained references to PPE, they lacked sufficient detail of the pivotal role PPE plays in keeping people safe during a pandemic. The Tasmanian Public Health Emergencies Management Plan 2014 (TPHEMP) clearly outlined DoH's role in supporting the availability and access to PPE from the State Stockpile.

2.2 EMA required a range of emergency plans, collectively known as SSEMP, to be developed at the State, regional and municipal level as well as plans in respect of a particular risk or emergency, or class of risk or emergency, such as bushfires, floods, biosecurity and public-health emergencies. A pandemic influenza SSEMP was developed in November 2019, which was supported by plans at both the national and State level.

2.3 In addressing PPE responsibilities, the pandemic influenza SSEMP makes reference to the following DoH plans:

- TPHEMP:
  - DoH, AT and THS to provide and maintain critical resources, including PPE, to support public health emergency management planning, response and recovery functions
  - DoH to have resource sharing arrangements with a number of emergency service agencies, including DPFEM, AT and councils during general emergencies to assist addressing shortfalls, such as specific PPE
  - PPE to be supplied to a service provider supporting the coordinated response to a public health emergency supplied and, where available, access to the State Stockpile.
- THAPPI:
  - DoH to distribute guidelines to stakeholders on the use of PPE
  - All government health services recommended to have at least six weeks supply of PPE (based on normal needs) on hand at any one time, with these supplies supplemented by stock managed under Australian Government's NMS arrangements
  - THS to monitor PPE usage and seek replenishment from medical stockpiles if required, as per distribution guidelines

- AT and THS to maintain resilient resupply arrangements and seek replenishment to prescribed stockpile levels
- Primary Health Tasmania to assist in the coordination and distribution of PPE, if required
- general practices, private and non-government health services to be responsible for sourcing, storing and providing PPE for their staff and patients. General medical practices were encouraged to have four weeks of normal use PPE as recommended by the Royal Australian College of General Practice.

2.4 THAPPI's recommendation for the maintenance of a six week supply of PPE, based on normal needs, arose from an internal DoH review conducted in 2013. The supply level was based on an acknowledgement Tasmania only had resources available to maintain a modest holding of PPE given limitations on staff, funding and storage capacity. The six week level was not based on any modelling or scenario testing.

2.5 A COVID-19 SSEMP was developed in March 2020 following the emergence of COVID-19 cases in Tasmania. It documented Tasmania's whole-of-government COVID-19 response and recovery arrangements. The COVID-19 SSEMP aligned with agreed national and health-sector arrangements so as to minimise social, economic and health impacts. The COVID-19 SSEMP considers SoNGS, TPHEMP and THAPPI as supporting or related documents.

2.6 The objectives of the COVID-19 SSEMP centred on Tasmania's command, control and coordination arrangements, roles and responsibilities and whole-of-government capabilities. The COVID-19 SSEMP noted the NMS can be accessed to draw down PPE to supplement the State Stockpile.

2.7 In 2016, a whole-of-government review of Tasmania's planned response to a pandemic influenza was undertaken. The review noted PPE as a mitigation strategy/protective measure and was considered to be part of any preparedness planning. However, other than noting the existence of the State Stockpile and that a pathway existed to access the NMS, the State Stockpile's adequacy or condition was not specifically assessed.

Due to DoH and PHS limitations, a whole-of-government approach to PPE could not be implemented

2.8 DoH plays a central role in the event of a public health emergency. In response to COVID-19, DoH activated its ECC which supported the coordination of the pandemic response and consequence management and brought together many different areas within DoH. PHS, a part of the DoH, had initial responsibility to lead the response to the pandemic, based on the tiered DoH response model. Agencies had an expectation

that in a public health emergency they could access PHS and DoH for advice and assistance.

2.9 Due to the scale, changing nature and escalation of the pandemic, there were limitations with DoH's capacity, including PHS, to respond fully to all of the demands placed on it. This included the frequency of changes to clinical advice, with the COVID-19 SoNG updated 41 times between January and October 2020. PHS's limited capacity in a pandemic environment was recognised early by DoH, with PHS's role becoming more focused on strategic public health advice and contact tracing.[6] Agencies commented that, in the early days of the pandemic, advice was sought from DoH and PHS concerning access to and clinical assistance concerning PPE, but they struggled to assist. With DoH limited in its capacity to provide guidance during the initial period of the COVID-19 pandemic, and very limited access to the State Stockpile, agencies developed their own strategies to secure sufficient PPE.

Agencies responded effectively to the pandemic in the absence of a whole-of-government approach

2.10 Other non-health agencies were able to respond effectively and with agility to the pandemic, despite a lack of availability of PPE for a major pandemic, together with DoH's initial limited capacity to provide support.

2.11 DPFEM responded effectively despite not holding planned amounts of PPE. DPFEM had reviewed its existing influenza specific plan in June 2019. The plan:

- allocated responsibility for researching and acquiring adequate supplies of PPE to the Manager, Work Health and Safety
- contained information on amounts of PPE stock to be acquired at the various stages of a pandemic, including disposable respirators, gowns/suits, latex gloves and protective eyewear
- detailed the clinical use of PPE.

2.12 DPFEM developed a COVID-19 specific plan in March 2020, which outlined its response to the pandemic, including levels of response, allocation of responsibilities and applicable regulations. It contained information on PPE stockpiling of disposable respirators and PPE kits for staff.

Other agencies

2.13 Low-need agencies were able to mitigate potential PPE shortages. Prior to the pandemic, agencies developed their own approach to emergency management planning to respond to disasters, such as bushfires and pandemics. For instance:

[6]Tasmanian Audit Office, *Report of the Auditor-General No. 10 of 2020-21, COVID-19 – Pandemic response and mobilisation,* Hobart 2021.

- In 2019, State Growth developed an emergency management framework, which took an all hazard approach, including pandemic influenza, bushfire, severe weather or tsunami. It documented emergency management activities across prevention, preparedness and response, and recovery.
- In 2009, DPIPWE developed the Influenza Preparedness Handbook, which outlined the action it would take to prepare for an influenza pandemic and how it would continue to operate and deliver essential services during a pandemic. This was updated in March 2020 in response to COVID-19.

2.14 While the plans were detailed, they paid little attention to PPE. However, it is perhaps unrealistic to expect low-need agencies to have detailed plans for the allocation, distribution and replenishment of PPE.

The lack of a whole-of-government approach reduced the opportunities for collaboration between agencies

2.15 Collaboration between agencies with regard to PPE was limited during the initial first few months of the pandemic but improved during the pandemic. We noted missed opportunities, such as access to advice, provision of PPE, and instances where use of available resources were not maximised between agencies.

2.16 Despite the missed opportunities for collaboration, we noted a number of instances where agencies collaborated with other agencies in obtaining PPE. For instance:

- AT purchased specialised coveralls from DPFEM because they were not a normal stock item carried by AT or DoH
- DoH, DPIPWE (Biosecurity Tasmania) and DPFEM supplied PPE to Communities Tasmania during the hotel quarantine program
- State Growth sourced masks for DPIPWE staff and provided donated PPE to non-departmental public-sector entities.

2.17 A more collaborative approach to PPE during the initial first few months of the pandemic could have facilitated a better sharing of resources among agencies.

Department of State Growth assisted with access to PPE for non-health organisations

2.18 State Growth assisted non-health agencies and essential services gain better access to PPE. Though governance arrangements existed at the whole-of-government level for access to PPE through THAPPI, the SCC recognised by early April 2020 agencies were experiencing difficulties accessing sufficient PPE. The SCC tasked State Growth to improve the coordination of supply chains for PPE to essential services. This resulted in State Growth establishing a website to put users in contact with PPE suppliers. State Growth accepted donations of PPE and distributed it to both government and non-government organisations in need of PPE. In May 2020, State Growth asked a major

supplier of PPE to contact priority nominated government agencies, health and peak bodies representing organisations with specific interests to:

- determine the status of agencies current PPE stock levels and supply arrangements
- determine immediate PPE
- identify future PPE needs
- work with local producers and suppliers to source PPE wherever possible.

2.19 The list of nominated organisations focused on health related services, utility service providers and building associations. The list of nominated organisations did not include non-government social service organisations. We were advised by State Growth it was informed by the Australian Government and the National Disability Insurance Scheme (NDIS) that the Australian Government and NDIS had the responsibility for supporting PPE supply for non-government social service organisations. The NDIS and Australian Government websites provided information on how community service and primary health providers could register for supplies from the NMS.

3. Were controls over physical PPE stock effective?

In this chapter, we assess whether the controls over physical PPE stock held were effective by determining whether:

- there was an understanding of the quantity of PPE required
- the quantity of PPE held was known
- PPE was stored in a suitable and secure environment.

Chapter summary

The NMS and State Stockpile was established a number of years prior to the pandemic. While the whole-of government plan recommended six weeks of business as usual PPE should be maintained by all government health services, the amount of usable stock held was less than specified. It was not entirely clear at the beginning of the pandemic, if these reduced stock levels, or quality issues with stock held, were known about.

As the pandemic progressed, DoH developed improved stock controls that were effective. DPFEM's central store had visibility of PPE stocks but maintained only a limited knowledge of PPE stocks more widely held across districts, divisions and stations. Low-need agencies developed effective procedures and controls appropriate to the level of PPE required.

PPE stocks were generally stored by agencies in suitable and secure environments, appropriate to their needs with DoH's PPE stock held in secure warehouses with sufficient levels of security. DPFEM experienced difficulties with its PPE storage as its stockholding outgrew the initial available space, but this did not impact on the security of the stock nor on DPFEM's response. Low-need agencies' PPE storage arrangements were in accordance with their needs and on a much smaller scale.

Our inquiries did not identify any significant thefts of PPE or damage to PPE in storage during the pandemic.

The importance of an emergency medical stockpile was acknowledged

3.1 Both the Tasmanian and Australian governments recognised the importance of establishing stockpiles, containing essential medical and PPE supplies, to be drawn upon in the event of a public health emergency.

3.2 In 2002, following the 2001 terrorist attacks in the United States of America, the Australian Government established the NMS at various locations around Australia, including Tasmania. The NMS contains pharmaceuticals, vaccines, antidotes and PPE available for use as part of the national response to a public health emergency or for counter-terrorism. Since its establishment the NMS expanded to include items necessary to combat an influenza pandemic event. The NMS was established to

supplement state and territory supplies in a health emergency. During the pandemic the NMS also supplied PPE to aged and disability care providers as well as primary and allied healthcare, and private healthcare providers.

3.3 An ongoing memorandum of understanding concerning access to the NMS was signed by the Tasmanian and Australian governments in 2010.

3.4 Although there was no legislated requirement for the Tasmanian Government to maintain an emergency medical stockpile, in 2006 the then Department of Health and Human Services established the State Stockpile at an initial cost of $265 000. In 2015, $57 000 was spent on stock replenishment and development of a PPE training module. Unlike the NMS, which held anti-virals and other medications in addition to PPE, the State Stockpile consisted primarily of PPE. Prior to COVID-19, there were very few occasions where the State Stockpile was accessed, with the only major withdrawal being during the H1N1-2009 'Swine Flu' outbreak in 2009.

Challenges exist in determining the PPE stockpile required in preparing for a pandemic

3.5 The level of PPE required to respond to a pandemic is determined by the degree of transmissibility and severity of the virus or disease and the anticipated supply chain stress attributed to a panicked procurement response.

3.6 THAPPI stated all government health services should have at least a six week supply of PPE (based on normal needs) on hand at any one time. This was based on a recommendation contained in a 2013 internal DoH review. The supply level was based on an acknowledgement Tasmania only had resources available to maintain a modest holding of PPE, given limitations of supply staff, funding and storage capacity. The six-week level was not based on any modelling or scenario testing.

3.7 Maintaining a State Stockpile, supplemented by the NMS, sufficient for all possible pandemic scenarios, required considerable ongoing investment in stockpile maintenance and storage, not just the cost of PPE items.

3.8 To mitigate risks associated with the estimation of pre-pandemic PPE stock levels, it is imperative procurement and supply chain arrangements are robust, yet flexible, to ensure adequate supplies of PPE can be secured to effectively respond to a pandemic. These arrangements are examined in chapters 4 and 5 of this report.

Shortfalls were evident in the quantity and quality of PPE stock at the beginning of the COVID-19 pandemic

3.9 At the beginning of the COVID-19 pandemic, most agencies only had a limited understanding of the quantity and quality of PPE stocks held.

3.10 At the commencement of the COVID-19 pandemic, it was unclear whether there was six weeks of normal use PPE stored across all of the health services. We were advised THS had four to five weeks of PPE in its warehouses, the State Stockpile held less than

six weeks of PPE and AT did not track PPE stock levels at that time. While no individual facility held six weeks of PPE, because of the absence of accurate stock records, we were unable to determine whether combined, there was six-weeks of business as usual supply of PPE for the whole of DoH.

3.11 The amount of PPE held in the State Stockpile at 31 January 2020 is shown in Table 1, together with DoH's assessment of how long each item of PPE would last using business as usual as the demand driver.

Table 1: PPE stock held in the State Stockpile as at 31 January 2020

Item description	Unit	Quantity	Stock availability (based on normal needs)
N95/P2 masks	Single units	70 500	6 weeks/ 5 days
Surgical masks	Single unit	82 000	6 weeks/ 4 days
Gowns	Single units	11 700	2 days
Face shields	Single units	144	No BAU data
Safety frames and lenses	Single units	7 800	No BAU data
Hand hygiene solution	Litres	250	1 week

Source: DoH

3.12 Table 1 shows there was more than six weeks supply of mask respirators and surgical masks, based on business as usual, but there was significantly less gowns and hand hygiene solution. There was no business as usual data for face shields and safety frames and lenses.

3.13 We were advised face shield supplies as at 31 January 2020 had passed their expiry date, while the only other PPE with a manufacturer indicated expiry date was hand sanitiser, which was within date. The remaining four items of stock, which did not have a manufacturer indicated expiry date had to be checked for usability. Most of the stock contained in the State Stockpile as at 31 January 2020 had been drawn down and used by the end of April 2020, as initial demand for PPE was high. Consequently, DoH requested PPE supplies from the NMS to supplement its own supplies until PPE purchase orders were fulfilled by commercial suppliers.

3.14 The DPFEM influenza pandemic plan specified quantities of disposable respirators and PPE kits to be held. DPFEM had 17 500 disposable respirators in storage as at February 2020 compared to the 60 000 specified in the influenza pandemic plan, with only 12 500 of those held usable.

3.15 At the beginning of the pandemic, advice from the Australian Health Protection Principal Committee stated that where there was low community transmission of COVID-19, wearing a mask in the community when a person was generally well was

not generally recommended. Low-need agencies only held PPE stocks based on what they needed for business as usual usage, although they were able to minimise the need for PPE with some staff working at home or not undertaking their normal duties for safety reasons. For instance, DPIPWE suspended some of its operations from April until May 2020, due to the closure of national parks. This was repeated across agencies until health restrictions were eased.

3.16 Shortages in fit-for-purpose PPE stock at the beginning of the COVID-19 pandemic, exposed the public sector to the risk of being unable to supply PPE as COVID-19 infections increased. However, the reduction in non-essential operations and the easing of COVID-19 infections in Tasmania relieved pressure on PPE demand.

Mechanisms to control PPE stock levels broadly improved over time

3.17 As the pandemic progressed, mechanisms to control PPE supplies across the high-need agencies improved. DoH reported hospitals were not always recording PPE deliveries accurately in their stock systems. However by May 2020, new procedures for the receipt of PPE stock at hospitals were implemented and new documentation, such as procedural flowcharts, were developed to assist with better PPE stock control. DoH reported there were now no ongoing problems.

3.18 Improvements implemented by DoH since the beginning of COVID-19 to better monitor available PPE stocks included:

- provision of daily detailed PPE stock reports to the DoH Secretary, with a summarised weekly version circulated to all DoH staff
- tracking of all PPE stock through DoH's finance and inventory systems
- receipt of sent electronic updates on stock movements from most external contractors
- commencement of six monthly stocktakes of PPE held in the State Stockpile
- recording of PPE stock expiry rates to facilitate stock rotation and prevent stock losses due to expiry dates being exceeded
- fortnightly checking of hospital stock levels
- reporting of stock levels to the DoH finance team with weekly meetings held to review PPE stock numbers.

3.19 DPFEM achieved visibility and control over PPE stock levels by storing the majority of its PPE stock in a central warehouse in Hobart and recording stock movements and balances in an inventory system. There was less visibility of PPE stocks held across districts, divisions and stations, although frequent discussions were held with the central store regarding stock availability and requirements.

3.20 Low-need agencies did not generally hold detailed PPE stock records electronically. If they did, they were usually on standalone spreadsheets with limited visibility outside

the section using the PPE. This was appropriate given the relatively low levels of PPE stock held and required.

PPE stocks were generally stored in suitable and secure environments

3.21 PPE stocks were generally stored by agencies in suitable and secure environments, appropriate to their needs.

3.22 The State Stockpile was held in a suitable and secure environment. While initially located in central Hobart, it was relocated to a privately contracted warehouse in Greater Hobart.[7] Security at the warehouse included site fencing, a solid concrete tilt slab building, limited access points and electronic security including remote access control and live video monitoring of access points. The contract for the storage of the State Stockpile contained obligations for the contractor to check the condition of PPE stock received, to properly store the stock, keep inventory records of stock stored at the location and undertake biannual stocktakes in the presence of a DoH appointed delegate.

3.23 THS maintained PPE stock off-site at three warehouses located in the three main regions of Tasmania. The warehouse in the South was privately operated and had video surveillance and barbed wire fences. The other two warehouses were both operated by THS and were near the Launceston General and Mersey Community hospitals. They were both staffed during the day by THS personnel and monitored electronically by hospital security staff at night.

3.24 The Royal Hobart, Launceston General, Mersey Community and North West Regional hospitals held operational levels of PPE with out-of-hours access restricted to authorised personnel. Manual records were maintained to track the PPE movements with daily replenishments drawn from the three warehouses. PPE stocks held by the hospitals were not recorded in THS's inventory system as they were treated as consumables.

3.25 DPFEM's PPE was initially stored in a separate store room in the central store, away from other items. The central store had live camera surveillance and was locked in the evening but was accessible by electronic swipe card. DPFEM advised its stockholding outgrew the initial available space as its holding of PPE grew. While PPE stock was stored in its central store, we considered this to be less secure, as it was no longer held in a separate room away from other stock. However, DPFEM advised us that it did not suffer any PPE stock losses nor did it impact on the effectiveness of its response.

[7] A second warehouse was also being used in Greater Hobart until the main warehouse can be expanded in capacity to fully house the State Stockpile.

3.26 Low-need agencies broadly stored PPE in a locked room or cupboard with access limited to a few designated people. We consider this to be appropriate given the low value and quantities of PPE stored.

3.27 Our inquiries did not identify any evidence of significant misappropriation of PPE while in storage, though following a theft of hand sanitiser at the Mersey Community Hospital, controls over the storage of PPE at hospitals were tightened. There was also no significant loss of PPE due to environmental circumstances such as water damage or pest infestation.

4. Were the controls over the allocation and distribution of PPE effective?

In this chapter, we assess whether the controls over the allocation and distribution of PPE were effective by determining whether:

- policies or guidelines for the allocation of PPE were effective
- there was timely and relevant information to aid allocation decisions
- distribution was appropriate and effective.

Chapter summary

The lack of guidelines for the allocation of PPE improved as the pandemic progressed. DoH implemented plans developed before the pandemic to ensure hospitals were prioritised for receipt of PPE and also implemented a case-by-case assessment process for all other requests. Access to the State Stockpile was severely limited for non-health agencies during the first few months of the pandemic because demand for PPE was high and supply from the stockpile limited.

Agencies used appropriate stock control measures to ensure PPE was allocated effectively, based on the level of need. High-need agencies used more sophisticated means than low-need agencies. All agencies adopted a considered approach to when PPE was allocated, and to whom, which took into account delays in supply. Non-health agencies used different approaches that were flexible and appropriate to meet their needs, ensuring frontline staff were prioritised; although we received feedback some frontline workers had difficulty in obtaining appropriate PPE. DPFEM used its command structure to initially allocate PPE based on staff numbers. Low-need agencies used a less centralised process to allocate PPE to where it was needed.

The variable approaches to the distribution of PPE generally met the needs of the agencies and the users of PPE, with no reports of any significant stock losses occurring.

Lack of guidelines for the allocation of PPE improved as the pandemic progressed

4.1 While this report does not examine guidance or decisions on the use of PPE in clinical and non-clinical settings, we accept sometimes the allocation and distribution of PPE needed to be weighed up against the defined clinical need versus the perceived need. Agencies generally adopted a cautious approach of allowing staff to use PPE if requested. As the pandemic progressed the Australian Government's SoNGS became clearer on the use of PPE.

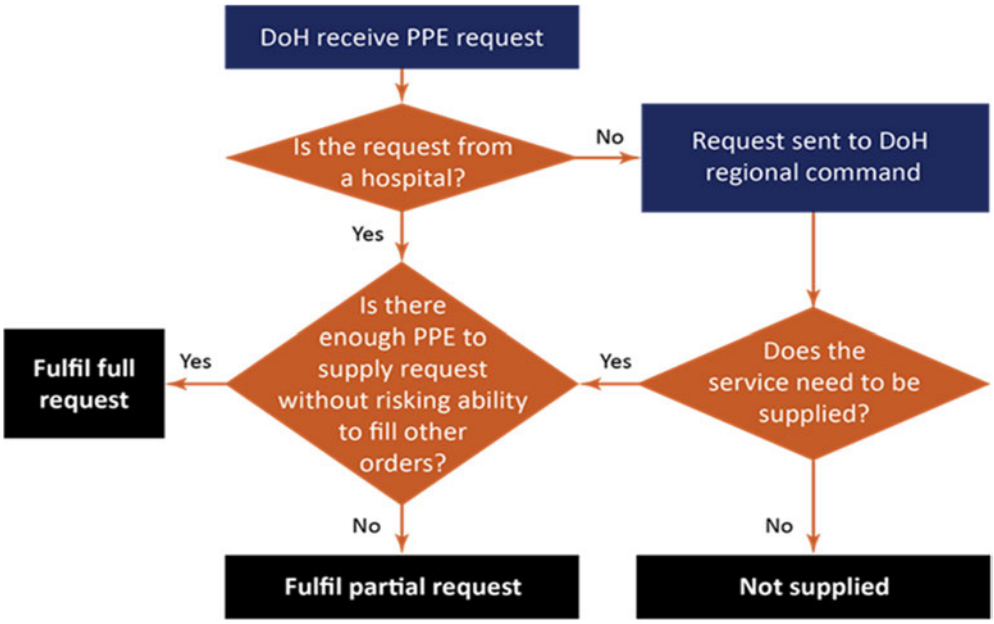
4.2 THAPPI, as the whole-of-government guidelines on the allocation of PPE, used a three-tier prioritisation ranking system to determine access to the State Stockpile in order to meet a gap or address delays in usual supply.

4.3 The three-tier priority system for the State Stockpile, was as follows:

- **Priority 1**: Health professionals working for the Tasmanian Government (or who were supporting the DoH-coordinated pandemic response in Tasmania) and in direct contact with patients with suspected, probable or confirmed pandemic influenza.
- **Priority 2:**
  - Those working in government health and human services who have operational roles providing support to people with suspected, probable or confirmed pandemic influenza.
  - Essential service providers including police, emergency services and support personnel (including volunteers), whose roles place them at increased risk of infection.
- **Priority 3**: Those considered by a health professional to be at higher risk of severe disease from influenza than the general population and likely to be protected to some extent through the use of PPE.

4.4 DoH was guided in its allocation decision-making by the three-tier prioritisation process outlined in THAPPI above. This prioritised the PPE requirements of hospitals, with all other requests considered on a case-by-case basis by each region's Executive Director of Medical Services, positioned within DoH's three Regional Health Emergency Management Teams. Restricting access to the State Stockpile was necessary due to high demand and the initial limited availability of PPE. DoH's PPE allocation decision framework is shown in Figure 3.

Figure 3: DoH's PPE allocation decision framework



Source: DoH, TAO

4.5 As the pandemic progressed, DoH developed policies and procedures to assist managing access to the State Stockpile. By October 2020, an operating procedure was developed, whereby requests to DoH by other agencies to access the State Stockpile were considered on a case-by-case basis by the Secretary.

4.6 A number of individuals and other entities applied for access to the State Stockpile but these requests were generally denied as they were not considered a priority. DoH advised access to the State Stockpile was only granted if multiple attempts to obtain PPE from other sources had been unsuccessful, the intended use was COVID-19 related, and the allocation was in accordance with THAPPI's levels of prioritisation.

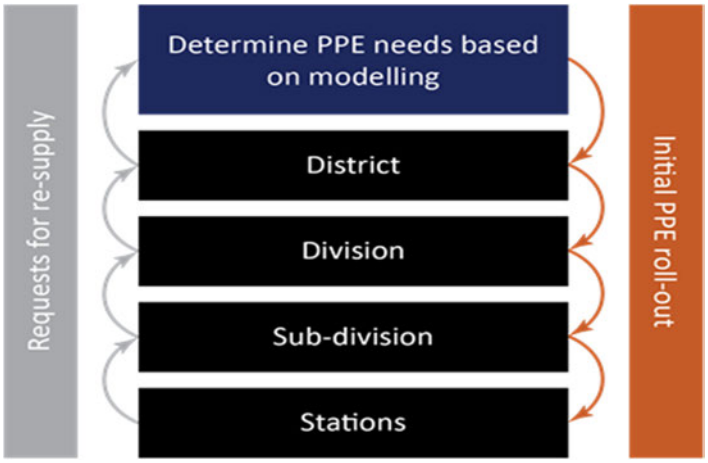
4.7 While hospitals had priority access to the State Stockpile, access was also given to:

- AT
- other government agencies[8]
- aged care facilities
- disability organisations
- pharmacies and allied health providers.

4.8 While the Commonwealth Government had primary responsibility for supplying aged care facilities and disability organisations, DoH helped out wherever possible and within its capacity.

4.9 DPFEM allocated PPE using a centralised approach, based on its March 2020 modelling. This enabled DPFEM to allocate PPE necessary for Tasmania Police and Tasmania Fire Service to keep staff safe from infection while performing their duties. DPFEM relied on its command structure to ensure PPE requests moved through its operating structure. This process is illustrated in Figure 4.

Figure 4: DPFEM allocation process



Source: TAO

[8] Biosecurity Tasmania (DPIPWE) received 93 500 surgical masks from the State Stockpile in May 2020 for use in its border security responsibilities.

4.10 The allocation process used by DPFEM was effective in ensuring PPE was pushed to where needed and assisted frontline staff secure PPE while not overwhelming the central store. By the end of May 2020, this process was relaxed as demand on the central store eased with stations and divisions able to directly place PPE orders with the central store.

4.11 Low-need agencies relied on individual sections to determine the allocation of PPE. This was appropriate due to the low level of need for PPE and the less centralised approach to allocating PPE in low-need agencies. We received feedback regarding issues in obtaining appropriate levels of PPE from some essential workers, including those working in non-government organisations providing care for people with disabilities and dealing with accommodation for people who were homeless.

Agencies mostly had appropriate stock control measures in place to ensure PPE was allocated effectively

4.12 The sophistication of stock control measures implemented by agencies was commensurate with their quantity and value of PPE stocks.

4.13 We found DoH's forecasting of PPE demand based on a usage model to be effective. DoH was able to track how much PPE it was using, allowing effective allocation and resupply decisions. It used PPE usage data to project how long before a particular item of PPE would last before it needed to be replenished. Forecast spreadsheets were used to summarise PPE usage information from operational areas including daily PPE deliveries, usage and stock on hand. This allowed DoH to track the amount of PPE stock being consumed and prevent depletion or oversupply.

4.14 DPFEM used appropriate measures, though less sophisticated than DoH, to ensure enough PPE stock to supply its state-wide operations. DPFEM used a dedicated inventory management system to run reports on stock values, outstanding purchase orders and transaction reports. The system relied on personnel allocating PPE stock from the central store when requests were received from operational areas via an online system. As mentioned in Chapter 3, there was limited visibility of PPE stock holdings outside of the central store. There was no allocation criteria, with PPE solely allocated based on need and availability.

4.15 Low-need agencies largely developed measures to meet their needs, which included individual sections maintaining basic spreadsheets recording PPE stocks. However, the allocation of PPE was largely ad-hoc and handled by individual sections within an agency, which could leave them vulnerable to pro-longed PPE shortages if cases of COVID-19 escalated and supply-chain disruptions emerged.

Agencies effectively distributed PPE to meet local needs

4.16 Agencies effectively distributed PPE to meet local needs. PPE was able to get to where it was needed within a reasonable timeframe and in a suitable condition. PPE was mainly moved by commercial couriers, internal transport fleets or by direct delivery from supplier. We did receive limited feedback from frontline workers who had difficulty in obtaining appropriate PPE but this mainly related to local arrangements to access PPE out-of-hours.

4.17 DoH was able to effectively move PPE around Tasmania during the pandemic. DoH had a number of storage points around the State, as noted in Chapter 3. These were used to store PPE close to where it was needed. When DoH sent PPE via commercial couriers they tended to use the same commercial couriers and same drivers to decrease the risk of theft or loss. While guidance was provided by DoH concerning the logistics of access to the State Stockpile, it did not cover the actual distribution of PPE.

4.18 DPFEM and AT largely used their own vehicle fleet to distribute PPE, although AT also used commercial couriers on occasion. The constant movement of vehicles around the State by DPFEM and AT allowed them to minimise the need for commercial couriers while still allowing PPE to go where needed within acceptable timeframes.

4.19 Low-need agencies tended to use direct delivery from suppliers as PPE was not centrally co-ordinated, though DPIPWE and Communities Tasmania internally distributed some centrally ordered PPE. There was recognition within sections of low-need agencies that distribution could have been improved through better coordination, especially early in the pandemic, where a lack of distribution coordination resulted in individual sections independently acting to secure PPE supplies.

4.20 There was limited information captured on the condition of stock that arrived at its destination. DoH's records allowed for the condition on receipt of stock to be recorded but often this was not done. Other agencies indicated stock was received in usable condition but again documentation was lacking. Therefore, while anecdotally PPE stock was not damaged in transit, there was a lack of documentation to confirm this.

5. Was the replenishment of PPE during the pandemic managed effectively?

In this chapter, we assess whether the replenishment of PPE during the pandemic was managed effectively by determining whether:

- there was an understanding of when replenishment needed to occur
- procurement processes were efficient and effective
- stock quantities were updated for replenishments.

Chapter summary

By late January 2020, the supply of PPE was seriously disrupted by the pandemic. Traditional supply chains were overwhelmed and extreme and rapid price increases for PPE were occurring. Initially, all agencies experienced difficulties in procuring sufficient PPE.

Amid this new and uncertain environment, revised procurement processes produced by the Department of Treasury and Finance were implemented to assist agencies replenish their PPE stocks. DoH's State Stockpile was not sufficient for the demands placed on it during the early stages of the pandemic, but access to the NMS assisted DoH to fulfil its PPE priorities until commercial supplies were obtained. DoH and DPFEM were able to develop modelling to assist in determining their PPE requirements. Low-need agencies did not need to develop modelling but still satisfied their PPE needs.

As the pandemic progressed, both DoH and DPFEM built up substantial stocks of PPE and Biosecurity Tasmania was able to obtain enough masks for its border security requirements. Further steps have been taken by the Tasmanian Government to assist non-health agencies access to PPE over the next 10 years.

Procurement processes assisted agencies secure sufficient PPE

5.1 No agency could have foreseen, and therefore planned for, the supply chain disruption for PPE that occurred in early 2020. Most PPE manufacturers were situated either in China, which was unable to keep up with demand because the pandemic directly slowed production, or from the United States of America, which had stopped exporting PPE.

5.2 Agencies started to observe a tightening of access to PPE from late January into early February 2020. Prices for PPE started to increase as demand dramatically outstripped supply. New suppliers came onto the market to take advantage of the high demand. As a result agencies, initially struggled to get the quantity, type and standard of PPE needed.

5.3 TPHEMP states that DoH has resource sharing arrangements with emergency service agencies during emergencies to assist addressing shortfalls, such as specific items of

PPE. The acquisition of resources was to be coordinated through existing arrangements or through the incident command structure as required. With limited supply available from the State Stockpile, DoH was not positioned to support other agencies as planning arrangements intended. To mitigate this, SCC directed State Growth to assist other agencies gain access to PPE.

5.4 The introduction of a new Treasurer's Instruction assisted agencies to use a more-streamlined approach to acquire PPE in a difficult market, as well as other measures to stimulate the economy and support businesses. In March 2020, the Department of Treasury and Finance introduced Treasurer's Instruction PF-7 *Procurement Framework – COVID-19 Emergency Procurement Measures* (TI PF-7). It allowed agencies to circumvent the usual procurement process if the procurement was urgent and directly in response to COVID-19. This included removing the requirement to obtain three quotes or going to tender. Agencies still had to ensure value for money, undertake normal procurement checks and maximise opportunities for local businesses where practicable. A number of agencies, including DoH and DPFEM, used TI PF-7, to acquire PPE. In November 2020, TI PF-7 was narrowed in scope to only cover urgent procurements of goods and services directly related to the implementation of Government measures in connection with the pandemic. Therefore, agencies can still use TI PF-7 to acquire PPE quickly if needed.

5.5 Initial access to the NMS allowed the State Stockpile to maintain essential supplies of PPE until commercial supply was re-established. DoH accessed the NMS in the early stages of the pandemic, receiving over 300 000 masks by 20 April 2020. DoH placed commercial orders worth $30.0 million in early April 2020. From late April 2020, DoH started receiving PPE supplies from commercial contractors with NMS stock still arriving until early June 2020. From June 2020, all PPE stock was sourced from commercial suppliers.

5.6 DPFEM used a centralised approach to acquire PPE and acted early to avoid some of the extreme price changes that occurred during the pandemic. Discussions around acquiring PPE took place in late January 2020 as DPFEM staff became aware of the growing threat to accessing PPE posed by the virus. There was an awareness of what PPE stocks DPFEM should hold and the responsibilities it had, as contained in DPFEM's emergency planning documents. Being unable to order through its usual suppliers, DPFEM sourced PPE stock from new suppliers for up to 120 000 face masks, which were essential for its needs. It ordered 11 000 reusable half silicon masks, with breathing canisters attached, allowing them to be used in the event of other emergencies, such as bushfires, and making DPFEM less reliant on acquiring re-usable masks which could again become difficult to acquire.

5.7 Biosecurity Tasmania (DPIPWE) required large numbers of face masks due to its border security responsibilities and was able to acquire surgical masks from the State Stockpile. DPIPWE started manufacturing its own hand sanitiser to address the shortage, using its laboratories in Hobart. Other agencies reduced operations to implement COVID safety measures and, as a result, their need for PPE was reduced. These agencies adopted a more fragmented approach to the replenishment of PPE,

with most agencies leaving individual sections to acquire PPE. This proved problematic in the early days of the pandemic as ordering PPE under business as usual conditions was not possible. Instead, PPE was purchased from pharmacies, supermarkets and hardware stores. Later procurements were sourced from PPE suppliers listed on a website established by State Growth.

Procedures ensured quality control for PPE but they were not always effective

5.8 DoH had procedures to ensure quality control for PPE procured but they were not always effective. Initially, DoH's Tasmanian Infection Prevention and Control Unit (TIPCU) assessed PPE suppliers' certification and would either approve or fail PPE for use in hospitals. However, as demand for TIPCU assessment and advice increased, a panel of hospital-based infection prevention and control experts was established on 2 April 2020 to consider all new products proposed for use in the hospital-setting. This alleviated demand on TIPCU and gave hospitals ownership of quality assurance decisions. AT commented to us non-compliant PPE was purchased at the beginning of the pandemic but after the PPE assessment was centralised, all new PPE products were checked and cleared by TIPCU. If PPE was not properly checked, non-compliant PPE may be acquired, distributed for use and potentially expose users to infection.

5.9 Despite DoH efforts to validate the credentials of new PPE suppliers and the products they were offering during our review, we were made aware of a breakdown in procurement controls that undermined the effectiveness of DoH's stock replenishment. In April 2020, DoH placed an order for Level 3[9] masks worth $6.0 million (excluding GST), with a deposit of almost $2.0 million paid on 23 April 2020. However, concerns were raised about the authenticity of certification and quality of the masks which, in this case, had not been assessed by either TIPCU or the hospital-based infection prevention and control panel. At the time of writing this report, DoH was considering legal options concerning the purchase. DoH potentially incurred a substantial financial loss and the masks remain in storage.

Understanding of when replenishment of PPE needed to occur improved during the pandemic

5.10 High-need agencies developed modelling as the pandemic progressed. DoH's and DPFEM's need for PPE differed, with their approaches reflecting this. By 15 March 2020, DoH was monitoring stock levels and modelling PPE need, taking into consideration the higher levels of use as infections increased to update estimates. By 31 March 2020, DoH was getting daily reports across THS and AT on PPE stock levels,

[9] In accordance with Australian Standard 4381:2015, a Level 3 surgical mask is suitable for all surgical procedures, major trauma first aid or in any area where the health care worker is at risk of blood or body fluid splash (e.g. orthopaedic, cardiovascular procedures) and is more resistant than Levels 1 and 2. The standard is silent on protection against vapours.

and used actual usage numbers from the North West Coast outbreak to model future use from mid-April 2020.

5.11 DPFEM moved quickly to understand PPE needed to continue operations, and by 24 March 2020 it had developed a model to determine its PPE requirements.

5.12 Low-need agencies did not use modelling but developed appropriate approaches to determine PPE need. They based orders for PPE on reasonable estimates. Although this approach was mostly fit-for-purpose, there was no assurance these stocks would be enough in the event of an escalation in COVID-19 infections.

5.13 State Growth developed a web-based register, which was launched in May 2020, to assist broader access to PPE. This allowed access to a list of PPE suppliers, detailing what they could supply and their contact details. The State Government's COVID-19 website contained links to the Commonwealth Government's Health Department, the NDIS and non-government disability services websites. This mitigated a lack of community service needs assessments by allowing a range of organisations to actively search for their own PPE supplies.

Replenishment of PPE stock was broadly effective

5.14 DoH recognised its level of preparedness for a pandemic, in regards to PPE, was limited. A revised PPE stock level requirement was determined, replacing the previous six weeks of normal supply recommendation documented in THAPPI, and included:

- six-months supply of PPE, based on peak usage during the April 2020 North West Coast COVID-19 outbreak
- consideration for a similar outbreak in the South or in multiple areas
- working with suppliers to keep a three-month supply of PPE in Tasmania in case of future disruptions to the supply chain.

5.15 A comparison of DoH's PPE stockholding at 1 April 2020 and 17 August 2020, summarised in Table 2, shows stockholdings of PPE increased significantly between those dates.

Table 2: PPE in the State Stockpile as at 1 April 2020 and 17 August 2020

PPE Type	1 April 2020	17 August 2020	% Change
N95/P2 masks	114 374	217 171	90%
Surgical masks	104 898	11 168 810	10 547%
Alcohol based hand rub (litres)	251	20 209	7 965%
Gowns	118 705	626 419	428%
Gloves	1 823 000	8 281 988	354%
Goggles	13 400	1 139 950	8 407%

PPE Type	1 April 2020	17 August 2020	% Change
Face shields		169 509	N/A
Eye protection		88 252	N/A
Surgical caps		3 518 840	N/A
Shoe covers		27 838	N/A
Coveralls		16 424	N/A

Source: DoH and TAO. Note: Unless otherwise indicated quantity is in individual units.

5.16 A comparison of DPFEM's PPE stockholding in its central store at the commencement of the pandemic, and at the end of August 2020 is shown in Table 3.

Table 3: PPE stock in DPFEM's central store as at 2 April 2020 and 31 August 2020

PPE Type	Unit of measure	2 April 2020	31 August 2020	Change %
Sanitiser	Litres	150	1 781	1 087
Surface sanitiser	Litres	1 440	630	(56)
Hand sanitiser	Litres	71	1 009	1 321
Hand wash	Litres	0	220	N/A
Surface wipes	Canisters	98	266	171
Surface wipes	10 packs	0	10 527	N/A
Gloves	Boxes	1 679	3 409	103
Disposable masks KN95	Each	0	102 775	N/A
Face Masks[1]	Boxes	159	474	198
Safety glasses	Each	2 029	3 245	60
Coveralls	Each	375	5 054	1 248
Mask kits	Each	850	660	(22)
Honeywell masks	Each	34	33	(3)

1. DPFEM issued 5 280 face masks to Districts on 25 and 26 March 2020 from DPFEM's central store.

Source: DPFEM

5.17 Table 3 shows by the end of August 2020, DPFEM had significantly built up its stock holding of PPE compared to what it held in early April 2020. DPFEM estimates by September 2020 it had approximately $650 000 of PPE stock on hand.

Creation of a non-health essential service PPE stockpile further improves access to PPE

5.18 As noted in Chapter 2, it was difficult for non-health agencies to access the State Stockpile for PPE. State Growth in conjunction with the SCC gained Tasmanian Government support for a new PPE stockpile to supply non-health essential services. The value of the non-health PPE stockpile as at March 2021 was $8.4 million.

5.19 The Tasmanian Government Stockpile contract, worth $9.36 million over 10 years, was signed in 2020 with an international PPE supplier. The contract stipulates 35% of the stockpile is to be stored in Tasmania, with 25% to be made available within five to 10 days at point of need, and the remaining 40% to be available within 11 to 14 days. Therefore, 65% of the stockpile will most likely be stored interstate, allowing it to be better rotated and refreshed than if it was entirely located in Tasmania. The contract potentially gives an increased degree of assurance to non-health essential services that an emergency supply of PPE will be available in the future if needed.

Acronyms and abbreviations

AT	Ambulance Tasmania
Communities Tasmania	Department of Communities Tasmania
COVID-19	2019 novel coronavirus or 2019-nCoV
DoH	Department of Health
ECC	Emergency Coordination Centre
EMA	*Emergency Management Act 2006*
DPFEM	Department of Police, Fire and Emergency Management
DPIPWE	Department of Primary Industries, Parks, Water and Environment
NMS	National Medical Stockpile
PAC Pandemic Inquiry	Parliamentary Standing Committee of Public Accounts Inquiry into the Tasmanian Government's response to the COVID-19 pandemic
Pandemic	COVID-19 pandemic
PHS	Public Health Service
PPE	Personal Protective Equipment
SCC	State Control Centre
SEMC	State Emergency Management Committee
SoNGS	Series of National Guidelines
SSEMP	State Special Emergency Management Plans
State Growth	Department of State Growth
State Stockpile	State Emergency Medical Stockpile
THAPPI	Tasmanian Health Action Plan for Pandemic Influenza 2016
THS	Tasmanian Health Service
TIPCU	Tasmanian Infection Prevention and Control Unit

TI PF-7	Treasurer's Instruction PF-7 *Procurement Framework – COVID-19 Emergency Procurement Measures*
TPHEMP	Tasmanian Public Health Emergencies Management Plan

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Audit Mandate and Standards Applied

Mandate

Section 23 of the *Audit Act 2008* states that:

(1) The Auditor-General may at any time carry out an examination or investigation for one or more of the following purposes:

- (a) examining the accounting and financial management information systems of the Treasurer, a State entity or a subsidiary of a State entity to determine their effectiveness in achieving or monitoring program results;
- (b) investigating any mater relating to the accounts of the Treasurer, a State entity or a subsidiary of a State entity;
- (c) investigating any mater relating to public money or other money, or to public property or other property;
- (d) examining the compliance of a State entity or a subsidiary of a State entity with written laws or its own internal policies;
- (e) examining the efficiency, effectiveness and economy of a State entity, a number of State entities, a part of a State entity or a subsidiary of a State entity;
- (f) examining the efficiency, effectiveness and economy with which a related entity of a State entity performs functions –
  - (i) on behalf of the State entity; or
  - (ii) in partnership or jointly with the State entity; or
  - (iii) as the delegate or agent of the State entity;
- (g) examining the performance and exercise of the Employer's functions and powers under the *State Service Act 2000*.

(2) Any examination or investigation carried out by the Auditor-General under subsection (1) is to be carried out in accordance with the powers of this Act

Standards Applied

Section 31 specifies that:

> 'The Auditor-General is to perform the audits required by this or any other Act in such a manner as the Auditor-General thinks fit having regard to -
>
> (a) the character and effectiveness of the internal control and internal audit of the relevant State entity or audited subsidiary of a State entity; and
>
> (b) the Australian Auditing and Assurance Standards.'

The auditing standards referred to are Australian Auditing Standards as issued by the Australian Auditing and Assurance Standards Board.

Phone (03) 6173 0900
Fax (03) 6173 0999
Email admin@audit.tas.gov.au

Address Level 8, 144 Macquarie Street
Hobart, 7000
Postal GPO Box 851, Hobart 7001

Launceston Office

Phone (03) 6173 0971
Web www.audit.tas.gov.au

Address 4th Floor, Henty House
1 Civic Square, Launceston