

s22

**From:** s22  
**Sent:** Tuesday, 31 March 2020 5:18 PM  
**To:** Mulder, Joanne  
**Cc:** s22 ; s22 s22  
**Subject:** FW: FOR INPUT BY 4:30pm today - Updated List of Actions from MO Meeting - 30 March [DLM=~~For Official Use Only~~]  
**Attachments:** Activate the reserve.docx  
**Importance:** High

Hi Jo – Proposed content for the Glenys + Minister daily meeting reporting (on actions and their progress), for your clearance.

To note, s22 in Glenys' team gave some intel about the specific info the Minister is after re the last point about ventilators:

- Ensure focuses on what's in the pipeline – what's coming , when it's coming, what are we producing in Australia, when will we be producing if we aren't already.
- Need to go beyond 'lines of enquiry' and start making tangible steps.
- s22 and Will are happy to assist and review what we produce to check if it'll meet the Minister's needs.

Earlier today, Alan sent through his comments on a document s22 (MTAA) had drafted – attached. This could also be a good source to draw on?

Due back to s22 by 5:30 today.

Cheers  
s22

Action	Updates/Progress	Responsible
Find out how feasible it is to get GE ventilators to Shanghai for shipment by Mindaroo in the next week	<p>It is feasible. The vendor for the GE ventilators (ANSPEC) is in direct contact with Mindaroo and they have agreed that Mindaroo will collect the goods from GE ventilators once ANSPEC gives them the go ahead. Freight will be sorted from there.</p> <p>s22 is assisting with customs and TGA requirements in relation to importing, and there appears to be no issue at this stage.</p> <p>Fortescue is working on behalf of the Commonwealth to pick up and transport supplies from Shanghai to Perth. We are also liaising with DFAT post in China.</p>	Duncan McIntyre
Provide advice to Minister (via s22 on actions required to scale Resmed to produce more ventilators	ResMed and the department are in discussions about scaling and what is required to support them. They are mostly concerned about borders and freight. We are talking about the offers for assistance they are getting, and then what we can do.	Duncan McIntyre
Provide an update to the Minister on progress of the Thermo Fisher contract	N/A not for us – this is a test kit contract.	<del>Duncan McIntyre</del> Sam Chard

Revise update on ventilators to ensure there is a focus on what is in the pipeline (i.e. how many are we producing, when will we start producing) and outcomes achieved to date.	Ventilator information in the Ministerial Daily Update and High Level Table has been revised to focus on outcomes. As at 31 March, we have 52% of the ventilator target (4192 of 8000 invasive ventilators), with an additional 1000 coming in April (500 from ResMed, 500 from GE Healthcare).	Duncan McIntyre / s22
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s22

Executive Officer to Duncan McIntyre | Head, Ventilator Taskforce

p. s22

| ext. s22

e. s22

[@industry.gov.au](mailto:s22@industry.gov.au) ; [c19ventilators@industry.gov.au](mailto:c19ventilators@industry.gov.au)~~For Official Use Only~~

From: s22

Sent: Tuesday, 31 March 2020 3:24 PM

To: s22 ; s22

Cc: s22 ; s22

Subject: RE: FOR INPUT BY 4:30pm today - Updated List of Actions from MO Meeting - 30 March [DLM=For Official Use-Only]

Yep, s22 gave me the same feedback. I have sent the Ministers update on to Jo for clearance with edits trying to achieve those things.

Side note: "Need to go beyond 'lines of enquiry' and start making tangible steps" \*blood boil\*

s22

Assistant Manager

Ventilator Taskforce

Department of Industry, Science, Energy &amp; Resources

Phone s22

| Mobile: s22

Email: s22

[@industry.gov.au](mailto:s22@industry.gov.au)~~For Official Use Only~~

From: s22

Sent: Tuesday, 31 March 2020 3:21 PM

To: s22 &lt;s22@industry.gov.au&gt;; s22 &lt;s22@industry.gov.au&gt;

Cc: s22 &lt;s22@industry.gov.au&gt;; s22 &lt;s22@industry.gov.au&gt;

Subject: RE: FOR INPUT BY 4:30pm today - Updated List of Actions from MO Meeting - 30 March [DLM=For-Official-Use-Only]

Thanks s22 – was just on the phone to s22 in s22 team 😊

s22 also gave some intel about the specific info the Minister is after re the last point about ventilators:

- Ensure focuses on what's in the pipeline – what's coming , when it's coming, what are we producing in Australia, when will we be producing if we aren't already.
- Need to go beyond 'lines of enquiry' and start making tangible steps.
- s22 and s22 are happy to assist and review what we produce to check if it'll meet the Minister's needs.

Cheers

s22

s22

Executive Officer to Duncan McIntyre | Head, Ventilator Taskforce

p. s22 | ext. s22

e. s22 | [@industry.gov.au](mailto:s22@industry.gov.au) ; [c19ventilators@industry.gov.au](mailto:c19ventilators@industry.gov.au)

From: s22

Sent: Tuesday, 31 March 2020 3:05 PM

To: s22 &lt;s22@industry.gov.au&gt;

Cc: s22 &lt;s22@industry.gov.au&gt;; s22 &lt;s22@industry.gov.au&gt;; s22 &lt;s22@industry.gov.au&gt;

Subject: RE: FOR INPUT BY 4:30pm today - Updated List of Actions from MO Meeting - 30 March [DLM=For Official Use Only]

Hi s22

I spoke to s22 and the Thermo Fisher contract is to do with test Kits so he is giving that one to Sam Chards team. I have added to s22 updates, below. My text is blue.

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Find out how feasible it is to get GE ventilators to Shanghai for shipment by Mindaroo in the next week	<p>It is feasible. The vendor for the GE ventilators (ANSPEC) is in direct contact with Mindaroo and they have agreed that Mindaroo will collect the goods from GE ventilators once ANSPEC gives them the go ahead. Freight will be sorted from there.</p> <p>s22 is assisting with customs and TGA requirements in relation to importing, and there appears to be no issue at this stage.</p> <p>Fortescue is working on behalf of the Commonwealth to pick up and transport supplies from Shanghai to Perth.</p>	Duncan McIntyre
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s 22

Assistant Manager

Ventilator Taskforce

Department of Industry, Science, Energy &amp; Resources

Phone s 22

| Mobile: s 22

Email s 22

[@industry.gov.au](mailto:s22@industry.gov.au)

---

**From:** s22  
**Sent:** Tuesday, 31 March 2020 2:24 PM  
**To:** s22 <s22 @industry.gov.au>  
**Subject:** FW: FOR INPUT BY 4:30pm today - Updated List of Actions from MO Meeting - 30 March [DLM=For Official

s22  
 Manager  
 Ventilator Taskforce

s22 | s22 | s22 @industry.gov.au

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Department of Industry, Science, Energy and Resources | [www.industry.gov.au](http://www.industry.gov.au)

Supporting economic growth and job creation for all Australians

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**From:** s22  
**Sent:** Tuesday, 31 March 2020 9:55 AM  
**To:** s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>  
**Cc:** Mulder, Joanne <s22 @industry.gov.au>  
**Subject:** RE: FOR INPUT BY 4:30pm today - Updated List of Actions from MO Meeting - 30 March [DLM=For Official

No idea here...

~~For Official Use Only~~

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**From:** s22  
**Sent:** Tuesday, 31 March 2020 9:52 AM  
**To:** s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>  
**Cc:** Mulder, Joanne <s22 @industry.gov.au>  
**Subject:** RE: FOR INPUT BY 4:30pm today - Updated List of Actions from MO Meeting - 30 March [DLM=For Official

Does anyone know what the Thermo Fisher contract is?

s22  
 Manager  
 Ventilator Taskforce

s22 | s22 | s22 @industry.gov.au

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**From:** s22  
**Sent:** Tuesday, 31 March 2020 9:15 AM  
**To:** s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>  
**Cc:** Mulder, Joanne <s22 @industry.gov.au>

Cc: Mulder, Joanne <s22 @industry.gov.au>

Subject: FW: FOR INPUT BY 4:30pm today - Updated List of Actions from MO Meeting - 30 March [DLM=~~For Official Use Only~~]

Hi team – Daily Glenys update for completion by 4:30 pm to me please, with an updated list based on Glenys' chat with the Minister last night. I'll then collate and clear with Duncan.

I've included the draft text from yesterday for consideration.

Thanks!

Action	Updates/Progress	Responsible
Find out how feasible it is to get GE ventilators to Shanghai for shipment by Mindaroo in the next week	It is feasible. The vendor for the GE ventilators (ANSPEC) is in direct contact with Mindaroo and they have agreed that Mindaroo will collect the goods from GE ventilators once ANSPEC gives them the go ahead. Freight will be sorted from there.  s 22 is assisting with customs and TGA requirements in relation to importing, and there appears to be no issue at this stage.	Duncan McIntyre
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Provide an update to the Minister on progress of the Thermo Fisher contract		Duncan McIntyre
Revise update on ventilators to ensure there is a focus on what is in the pipeline (i.e. how many are we producing, when will we start producing) and outcomes achieved to date.		Duncan McIntyre / s22

s22

Executive Officer to Duncan McIntyre | Head, Ventilator Taskforce

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e. s22 @industry.gov.au ; c19ventilators@industry.gov.au

~~For Official Use Only~~

From: s22

Sent: Monday, 30 March 2020 8:04 PM

To: s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>; Chard, Sam <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>; McIntyre, Duncan <s22 @industry.gov.au>; Mulder, Joanne <s22 @industry.gov.au>; Graham, Michele <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>

Cc: Beauchamp, Glenys <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>

Subject: Updated List of Actions from MO Meeting - 30 March [DLM=~~For Official Use Only~~]

Good evening all,

Thank you for all those that provided input for this evenings Meeting with the MO.

Following Glenys' and s22 meeting with the Minister and s22 this evening, we have updated yesterday's action list. Some items have dropped off as these were finalised, others have been added (highlighted in yellow).

Where an action is to provide advice to the Minister, please provide to s22 and I so we can ensure that it is provided back to Minister through regular MO meetings.

Action	Updates/Progress	Responsible
Provide contact to Minister who works on the National stockpile to refer questions from GPs about mask shortages in WA	Question has been raised with Department of Health – awaiting response.	s22 / s22
Follow up with Ramsey Health on their large order of masks, and whether Commonwealth can leverage this to get additional masks	Spoke to Ramsey 30 March – they are determining capacity of their PPE suppliers in China and expect to advise in next 48 hrs. Likely will need to move quickly on order if meets our requirements.	s22
Provide advice to Minister about whether thermometers are likely to be an area of shortage and 'how concerned' we should be	Health are still working to determine demand and forecast data, but advise they are looking to procure some number of infrared, non-contact thermometers, with TGA approval. There are no Australian producers of these thermometers, and we have been working with Australian importers. We have provided Health three contracts for 45,500 total, and a quote for another 60,000 thermometers (per months for nine months). We are also in discussions with Mindaroo who are sourcing a range of PPE including thermometers. Other companies are being contacted to secure further supply.	s22 / s22
Provide advice to Minister on what barrier to producing waste bags and ties locally is		s22
Find out how feasible it is to get GE ventilators to Shanghai for shipment by Mindaroo in the next week		Duncan McIntyre
Provide advice to Minister on whether sterilisation can be used to reduce demand, e.g. gowns	s22 has contacted TGA	s22
Provide advice to Minister (via s22 on actions required to scale Resmed to produce more ventilators		Duncan McIntyre
Investigate mask availability from beauty therapists and nail technicians who are not able to operate during lockdown – Minister thought these would be similar to surgical masks	Currently being investigated along with suitability of using masks that don't currently meet the standard of 'surgical masks'.	s22
Investigate if 'secondary' non-surgical masks are still being made available to construction workers so that they are no using medical masks		s22
Follow up with AMG on face masks		s22 / s22

Follow up with s22 on progress with Smith Medical and when they expect to be able to deliver ventilators		s22 /s22
Provide advice to the Minister on the number of masks in stock and in the pipeline		s22
Provide an update to the Minister on progress of the Thermo Fisher contract		Duncan McIntyre
Is there a gap anticipated for neo-natal ventilators and should we be focusing on this more?		s22
Revise update on ventilators to ensure there is a focus on what is in the pipeline (i.e. how many are we producing, when will we start producing) and outcomes achieved to date.		Duncan McIntyre / s22
Provide a brief to the Minister on the four things Minister is pursuing and what we need from States and Territories		s22
Link the ACCI with MedCon to assist with bringing on line additional machines		s22
Provide advice to the Minister on how many MedCon masks have been produced in Victoria and where they have been distributed to		s22

Thanks,

s22

s22

Policy Officer

Health Industry Coordination Group

Department of Industry, Science, Energy and Resources

Industry House Level 12

10 Binara Street, Canberra City ACT 2601

GPO Box 2013, Canberra ACT 2601 Australia

Ph: s22 | Mob: s22

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ABN 74 599 608 295

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- 1) Activate the reserve
  - ANZICS survey submitted to MJA
  - 2378 baseline ICU beds in Australia in 191 ICUs = 9.4 beds per 100,000 population
  - Surge would add 4261 beds for a total of 6639 ICU beds.
  - 2184 ICU ventilators to start. Can surge to 4815 ICU ventilators (from transport ventilators, anaesthetic machines and upgraded non-invasive ventilators)
  - Veterinary clinics and universities not included (could add 300 plus 300)
  - Would need additional 4,125 senior doctors (277% increase over baseline)
  - Would need additional 65,758 registered ICU nurses (458% increase over baseline)
- 2) Purchase from overseas
  - 500 GE Healthcare Carescape R860 on order for delivery early April.
  - 240 Draeger for delivery progressively, first 100 by mid-May, in contract negotiation.
  - Investigating unknown quantity of MindRay from China, 300 AEONMED from China, 200 Medtronic, and.
- 3) Purchase existing domestic manufacturing
  - a. Resmed
    - 500 Astrals by end of April
    - Then XX Astrals per month in May, June and July, total XX, in negotiation
    - 5,000 Lumis by end of April (made in Singapore)
- 4) Activate new domestic manufacturing
  - a. Grey Innovation
    - Smiths Medical Parapac design.
    - Working with AMGC and others
    - 60 in July
    - 100 in first week of August
    - Ramping to 500 per week by end of August
  - b. Unknown third
    - Run a challenge based innovation process, like MRFF Frontiers. (Here is the performance based task.)
- 5) War games
  - a. Use scenario modelling to identify the unknown unknowns.
  - b. Scenario A: 6,000 occupied ICU beds for ten weeks. What works, what breaks?
  - c. Scenario B: 12,000 occupied ICU beds for ten weeks. What works, what breaks?
- 6) Everything else
  - Learn more about treatment protocols especially the role of CPAP, BiPAP and high-flow oxygen
  - Distribution methods
  - Dialysis units
  - Patient monitors
  - ECMO

- Non-invasive ventilators
- High flow oxygen
- Infusion pumps
- Disposables such as tubing, airflow masks, valves

- 

#### Modelling

- MJA preprint 30 March by s22, s22 and s22 predicts peak demand for ICU beds in NSW of 6,965 even with an intensive mitigation strategy. This would extrapolate to 23,000 ICU beds for the peak demand across Australia. This study assumes doubling every five days and social isolation currently implemented.

s22

**From:** s22  
**Sent:** Tuesday, 31 March 2020 4:03 PM  
**To:** s22 ; s22 s22  
**Cc:** Mulder, Joanne  
**Subject:** FW: The view of the ventilator world from South Yarra - DRAFT for comment  
 [DLM=For Official Use Only]  
**Attachments:** Activate the reserve.docx

Hi all – Document from Alan your review/consideration.

It's an overview from s22 (MTAA) about the ventilator and ICU situation/capacity. It's quite high level at this stage, but I'm happy to consolidate comments and respond on Duncan's behalf.

Cheers  
 s22

s22  
**Executive Officer to Duncan McIntyre** | Head, Ventilator Taskforce  
 p. s22 | ext. s22  
 e. s22 | [@industry.gov.au](mailto:s22@industry.gov.au) ; [c19ventilators@industry.gov.au](mailto:c19ventilators@industry.gov.au)

-----Original Message-----

**From:** Alan Finkel [mailto:s22 ]  
**Sent:** Tuesday, 31 March 2020 2:41 PM  
**To:** s22  
**Cc:** McIntyre, Duncan  
**Subject:** RE: The view of the ventilator world from South Yarra - DRAFT for comment

Both,

In case it helps, attached are my original notes in a Word document because all the formatting has been lost below.

Alan

-----Original Message-----

**From:** s22 s22 @me.com>  
**Sent:** Tuesday, 31 March 2020 2:36 PM  
**To:** Alan Finkel <s22 >  
**Cc:** Duncan McIntyre <s22 @industry.gov.au>  
**Subject:** Re: The view of the ventilator world from South Yarra - DRAFT for comment

It's one of s22 favourite charts - ask s22 !!

> On 31 Mar 2020, at 2:34 pm, Alan Finkel <s22 > wrote:

>  
 > In South Yarra, we only eat beef lasagne.  
 >  
 > Alan  
 >

> -----Original Message-----

> **From:** s22 s22 @me.com>  
 > **Sent:** Tuesday, 31 March 2020 2:33 PM

> To: Alan Finkel <s22 >; Duncan McIntyre <s22 @industry.gov.au>  
 > Subject: Re: The view of the ventilator world from South Yarra - DRAFT for comment  
 >  
 > Thanks Alan.  
 >  
 > Duncan, I'll prepare our lasagne chart along these pillars so that we're speaking the same language.  
 >  
 > s22  
 >  
 >> On 31 Mar 2020, at 2:28 pm, Alan Finkel <s22 > wrote:  
 >>  
 >> Adding Duncan...  
 >>  
 >>  
 >>  
 >> 1. Activate the reserve  
 >>  
 >> \* ANZICS survey submitted to MJA  
 >> \* 2378 baseline ICU beds in Australia in 191 ICUs = 9.4 beds per 100,000 population  
 >> \* Surge would add 4261 beds for a total of 6639 ICU beds.  
 >> \* 2184 ICU ventilators to start. Can surge to 4815 ICU ventilators (from transport ventilators, anaesthetic machines and upgraded non-invasive ventilators)  
 >> \* Veterinary clinics and universities not included (could add 300 plus 300)  
 >> \* Would need additional 4,125 senior doctors (277% increase over baseline)  
 >> \* Would need additional 65,758 registered ICU nurses (458% increase over baseline)  
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 >> 1. Purchase from overseas  
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 >> \* 500 GE Healthcare Carescape R860 on order for delivery early April.  
 >> \* 240 Draeger for delivery progressively, first 100 by mid-May, in contract negotiation.  
 >> \* Investigating unknown quantity of MindRay from China, 300 AEONMED from China, 200 Medtronic, and.  
 >>  
 >> 1. Purchase existing domestic manufacturing  
 >> \* Resmed  
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 >> \* 500 Astrals by end of April  
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 >> \* 5,000 Lumis by end of April (made in Singapore)  
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 >> 1. Activate new domestic manufacturing  
 >> \* Grey Innovation  
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 >> \* Smiths Medical Parapac design.  
 >> \* Working with AMGC and others  
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 >> \* Unknown third  
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 >> \* Run a challenge based innovation process, like MRFF Frontiers. (Here is the performance based task.)  
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 >> 1. War games  
 >> \* Use scenario modelling to identify the unknown unknowns.  
 >> \* Scenario A: 6,000 occupied ICU beds for ten weeks. What works, what breaks?  
 >> \* Scenario B: 12,000 occupied ICU beds for ten weeks. What works, what breaks?

>> 2. Everything else

- >>
- >> \* Learn more about treatment protocols especially the role of CPAP, BiPAP and high-flow oxygen
- >> \* Distribution methods
- >> \* Dialysis units
- >> \* Patient monitors
- >> \* ECMO
- >> \* Non-invasive ventilators
- >> \* High flow oxygen
- >> \* Infusion pumps
- >> \* Disposables such as tubing, airflow masks, valves
- >>
- >>
- >

~~For Official Use Only~~

**s22**

**From:** s22  
**Sent:** Wednesday, 1 April 2020 10:35 AM  
**To:** Mulder, Joanne  
**Subject:** FW: On ventilators and masks from one ICU specialist's perspective [DLM=~~For~~]

FYI – email from Glenys re developing a clear table for the Minister’s use in NSC.

**s22**

**Executive Officer to Duncan McIntyre** | Head, Ventilator Taskforce  
 p. s22 | ext. s22  
 e. s22 @industry.gov.au ; c19ventilators@industry.gov.au

~~For Official Use Only~~

**From:** Beauchamp, Glenys  
**Sent:** Wednesday, 1 April 2020 10:30 AM  
**To:** s22 ; McIntyre, Duncan  
**Subject:** FW: On ventilators and masks from one ICU specialist's perspective [DLM=~~For Official Use Only~~]

This might come up today in Cabinet – Min will need clear table on what is being delivered by when – combination of what states and territories have on order; C/W order; local manufacture; other contingences in place – clarity on numbers and plans (condensing AF’s, s22 and s22 summaries), thanks, gb

Glenys Beauchamp  
 Health Industry Coordination Group  
 s22

~~For Official Use Only~~

**From:** s22 [mailto:s22@health.gov.au]  
**Sent:** Wednesday, 1 April 2020 10:08 AM  
**To:** Alan Finkel <s22 t>; Beauchamp, Glenys <s22@industry.gov.au>  
**Cc:** McIntyre, Duncan <s22@industry.gov.au>; Coatsworth, Nick <s22@health.gov.au>  
**Subject:** RE: On ventilators and masks from one ICU specialist's perspective [SEC=~~OFFICIAL~~]

That’s good that someone is being careful.

I just note below that s22 email below suggests he is expecting them in April

Sent with BlackBerry Work  
 ([www.blackberry.com](http://www.blackberry.com))

**From:** s22 s22 net>  
**Date:** Wednesday, 01 Apr 2020, 9:52 am  
**To:** s22 <s22@health.gov.au>, Glenys Beauchamp <s22@industry.gov.au>  
**Cc:** Duncan McIntyre <s22@industry.gov.au>, Coatsworth, Nick <s22@health.gov.au>  
**Subject:** RE: On ventilators and masks from one ICU specialist's perspective [SEC=~~OFFICIAL~~]

We are working on it! Might be possible to bring this forward to commencing production delivery in mid-June. Grey Innovation is working the numbers, but they are cautious about over promising.

s22

**From:** s22 <s22@health.gov.au>  
**Sent:** Wednesday, 1 April 2020 9:44 AM  
**To:** Alan Finkel <s22>; Glenys Beauchamp <s22@industry.gov.au>  
**Cc:** Duncan McIntyre <s22@industry.gov.au>; Coatsworth, Nick <s22@health.gov.au>  
**Subject:** RE: On ventilators and masks from one ICU specialist's perspective [SEC=~~OFFICIAL~~]

Many thanks Alan – for those you send on and those you don't.

My concern is that the Smiths (NOTUS) are planned for July / August which is next to useless. Can we find a way to bring forward?

s22

Acting Secretary  
 Australian Government Department of Health  
 T: s22 | Location: Level 14, Scarborough House  
 PO Box 9848, Canberra ACT 2601, Australia

EA: s22 s22

**From:** Alan Finkel <s22>  
**Sent:** Wednesday, 1 April 2020 9:26 AM  
**To:** s22 <s22@health.gov.au>; Glenys Beauchamp <s22@industry.gov.au>  
**Cc:** Duncan McIntyre <s22@industry.gov.au>  
**Subject:** On ventilators and masks from one ICU specialist's perspective [SEC=No Protective Marking]

Dear s22 and Glenys,

Praise me, please, for the emails I do not forward, and damn me, if you will, for forwarding the one below. The reason I have forwarded it is that it conveys so much. s22

s22 makes three points.

1. With the Resmed Lumis and Astral ventilators, and the Smith ventilator (which we are calling NOTUS) from Grey Innovation (if approved) he thinks we are covered.
2. He is not keen on purchasing non-mainstream ventilators from Chinese manufacturers because of the anticipated quality and servicing issues.
3. His deep concern now is masks and PPE. On masks, he has separately told me that their need splits 50:50 for N95 and surgical.

Alan

-----Original Message-----

**From:** s22 <s22@austin.org.au>  
**Sent:** Wednesday, 1 April 2020 8:40 AM  
**To:** Alan Finkel <s22>  
**Subject:** RE: Superstar S110 and S1200 ventilators

All good enough.

However....we may never need them...the data after the restrictions looks like the spike is going to be much flatter.

If we get the Lumis and the Astral + the Smiths stuff at the end of April...we are pretty much covered.

I do not believe the Chinese will deliver the S110 and S1200 in late June (which - by the way would be the downward bit of the spike).

I think it is really naive to believe the Chinese. Full stop.

If they break because they are shoddy...we have no parts/assistance/help.

You have no idea of whether they are new or second hand form Wuhan.

I would never go to China for this stuff.

s22

s22

That is now more important than the ventilators. Please pass it up the chain.

s22

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From: Alan Finkel [s22 ]  
Sent: Wednesday, 1 April 2020 6:04 AM  
To: s22 ; s22 ; s22 (s22 @alfred.org.au)  
Cc: Duncan McIntyre; Joanne Mulder; Nick Coatsworth  
Subject: Superstar S110 and S1200 ventilators

Dear s22 s22 and s22

The Commonwealth is continuing to try to purchase invasive ventilators from international sources but consistent with your own and our fears, many of them are not materialising.

A new contender has been offered by Nanjing Superstar Medical Equipment. The S110 and S1200 models. See attached.

These are probably no higher or lower risk than the Aeonmed units that we have previously considered and are still hopeful of receiving by end of June.

Have you, perchance, heard of any of your colleagues using them in the UK or elsewhere?

From the brochures, do they look to be worth investigating?

On a more positive note, we are close to securing a second source of domestic supply, but more on that in a few days.

Regards,

Alan

---

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"Important: This transmission is intended only for the use of the addressee and may contain confidential or legally privileged information. If you are not the intended recipient, you are notified that any use or dissemination of this communication is strictly prohibited. If you receive this transmission in error please notify the author immediately and delete all copies of this transmission."

s22

**From:** s22  
**Sent:** Tuesday, 7 April 2020 4:08 PM  
**To:** s22  
**Subject:** FW: FYI - Ventilators - US DPA + Minderoo/FMG imports (with attachment)  
 [DLM=~~For Official Use Only~~]  
**Attachments:** FMG - Letter from Minister Hunt - Australian Government procurement of medical equipment.pdf

**Security Classification:**

~~For Official Use Only~~

FYI

s22

**Executive Officer to Duncan McIntyre** | Head, Ventilator Taskforce

p. s22 | ext. s22

e. s22 | [@industry.gov.au](mailto:@industry.gov.au) ; [c19ventilators@industry.gov.au](mailto:c19ventilators@industry.gov.au)

~~For Official Use Only~~

**From:** s22  
**Sent:** Tuesday, 7 April 2020 3:55 PM  
**To:** McIntyre, Duncan ; Mulder, Joanne  
**Cc:** s22  
**Subject:** Ventilators - US DPA + Minderoo/FMG imports (with attachment) [DLM=~~For Official Use Only~~]

Hi, Ventilator Taskforce. I just wanted to alert you to two things:

(Updated email now attaching Minister Hunt's letter.)

- **Ventilators and the USA's Defence Production Act** were raised in the Medical Equipment Taskforce catch up today.
  - In short, **RAAP claims its supply chain (for AEONMED ventilators for NSW) is being disrupted by the operation of the DPA.**
  - DFAT/Washington embassy will do their best to identify the parts in question.
  - Issues outlined in the text from the agenda, below.
  - Apologies if this is known to you already. I see there's a reference to Aeonmed in yesterday's sitrep.

### Item 3) Aeonmed and the US Defense Production Act

**Background:** RAAP Australia, a supplier of Aeonmed made ventilators to NSW Health, claims the US Defense Production Act (DPA) is affecting the supply of some parts used by Chinese manufacturers of ventilators to be sold to Australia. The supply of parts by companies, such as Honeywell and TSI, is said to be impacted, which means Aeonmed cannot guarantee ventilators can be manufactured. Aeonmed is contracted to supply 100 ventilators to NSW Health and suggested they have a contract to supply 4000 ventilators to Victoria. RAAP advised current orders

in place (4,500 units) are secure, however any new orders (eg. NSW) might be delayed due to these restrictions.

**Actions:** We [DFAT/Washington Embassy] are currently assessing how we might best advocate for access to the parts. Some domestic Australian manufacturers of ventilators view the DPA positively as freeing up supply of parts for them. The DPA only applies to US exporters if they have contracts or requests from the US Government or one of 6 US ventilator makers. Absent a contract or request (the DPA is not a standing order) they can still export. Washington Embassy happy to check what products are being blocked (and compare with the list of parts Aeonmed claim are being blocked).

- **Minderoo/FMG mentioned today - indirectly - that they are importing ventilators.**
  - Separately I have been approached by FMG Shanghai about a shipment of ventilators today.
  - The embassy and I can't get a handle on exactly what's intended for the shipment on Friday.
    - The original list is mostly in Chinese. Will keep pursuing.
  - **There is a live issue around their export out of China: The shipment has been suspended by the Chinese Government.**
  - Minderoo expected the letter from Minister Hunt to be a kind of hall pass, but that has proved ineffective against the new Chinese export rules. FMG and the Beijing Embassy are pursuing further; and I'm working with TGA to understand exactly what effect the Minister's letter is intended to have in relation to the existing arrangements for importing ventilators.
  - Copy of ministerial letter attached for good measure (dated 3 April)

Cheers. s22

---

s22

Department of Industry Science Energy and Resources

Mobile: s22 or +s22

Work: s22 or +s22

Email: s22 [@industry.gov.au](mailto:s22@industry.gov.au)

~~For Official Use Only~~

~~For Official Use Only~~

**s22**

**From:** s22  
**Sent:** Thursday, 9 April 2020 2:19 PM  
**To:** McIntyre, Duncan; Mulder, Joanne  
**Cc:** s22 s22 s22  
**Subject:** RE: Reconciliation about contracts [SEC=~~UNCLASSIFIED~~]  
**Attachments:** Ventilator Supply Forecast with contracts - 9 April.pdf

**Security Classification:**~~UNCLASSIFIED~~

Hi Duncan

See attached for the forecast with contract details and chart updated to reflect ResMed schedule.

**s22****Assistant Manager**

Ventilator Taskforce

**Department of Industry, Science, Energy & Resources**

Phone +s22

| Mobile: s22

Email: s22

[@industry.gov.au](mailto:s22@industry.gov.au)~~UNCLASSIFIED~~

**From:** McIntyre, Duncan  
**Sent:** Thursday, 9 April 2020 1:04 PM  
**To:** Mulder, Joanne  
**Cc:** s22 ; s22 ; s22  
**Subject:** Reconciliation about contracts [SEC=~~UNCLASSIFIED~~]

Hi team

On a call with Health right now with s22 , etc. She has a meeting with secretaries of S&T Health depts. later this afternoon and would like as granular a picture of what we have under contract, when it will be delivered, and what we know about other orders (ie S&T orders) . Do we have something sensible we can give her, by say 2:30 at latest? Certainly the latest Forecast, but something more granular to complement it would be good.

Happy to discuss (except that I'm on the phone).

Thanks

Duncan

**Duncan McIntyre**

Head, Ventilator Taskforce

[C19ventilators@industry.gov.au](mailto:C19ventilators@industry.gov.au)

Head of Division, AusIndustry – Industry Capability and Research

] s22

📧 s22

[@industry.gov.au](mailto:s22@industry.gov.au)

Executive Assistant: Jen Snow

] s22

📧 s22

[@industry.gov.au](mailto:s22@industry.gov.au)

**Department of Industry, Science, Energy and Resources**

Level 8, Industry House

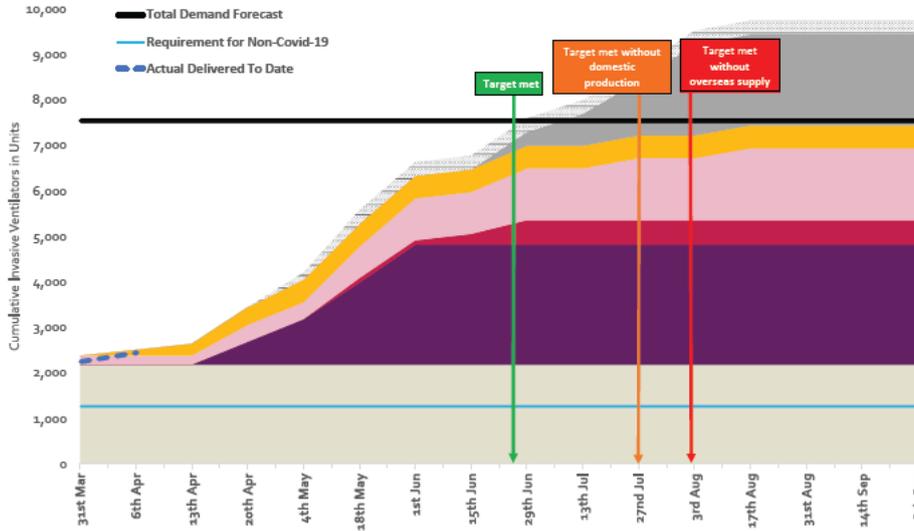
10 Binara Street, Canberra City, ACT 2601

Internet: [www.business.gov.au](http://www.business.gov.au)

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~~UNCLASSIFIED~~

**Invasive Ventilator Supply Forecast (as at 9 April)**



**New Arrivals of Invasive Ventilators (by Fortnight)**

	31st Mar	6th Apr	13th Apr	20th Apr	4th May	18th May	1st Jun	15th Jun	29th Jun	13th Jul	27nd Jul	3rd Aug	17th Aug	31st Aug	14th Sep	28th Sep
<b>Standard ICU Ventilators</b>	2,184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1a. Activate Reserves - ICU surge capacity*	0	0	0	500	500	800	831	0	0	0	0	0	0	0	0	0
2a. Purchase overseas by Commonwealth	0	0	0	0	0	100	0	140	300	0	0	0	0	0	0	0
2b. Purchase overseas by States & Territories	195	0	0	176	0	321	223	0	223	0	222	0	222	0	0	0
3a. Purchase Domestic by Commonwealth	0	130	130	130	110	0	0	0	0	0	0	0	0	0	0	0
4a. Activate New Domestic Production	0	0	0	0	0	0	0	0	300	400	500	800	0	0	0	0
5a. Additional Reserves - Veterinary clinics & universities	0	0	0	0	150	150	0	0	0	0	0	0	0	0	0	0

\*1a. ICU surge capacity are machines capable of invasive ventilation already in hospitals, to be brought online as required

**Cumulative Invasive Ventilator Production (by Fortnight)**

	31st Mar	6th Apr	13th Apr	20th Apr	4th May	18th May	1st Jun	15th Jun	29th Jun	13th Jul	27nd Jul	3rd Aug	17th Aug	31st Aug	14th Sep	28th Sep
<b>Standard ICU Ventilators</b>	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184
1a. Activate Reserves - ICU surge capacity	0	0	0	500	1,000	1,800	2,631	2,631	2,631	2,631	2,631	2,631	2,631	2,631	2,631	2,631
2a. Purchase overseas by Commonwealth	0	0	0	0	0	100	100	240	540	540	540	540	540	540	540	540
2b. Purchase overseas by States & Territories	195	195	195	371	371	691	915	915	1,138	1,138	1,360	1,360	1,582	1,582	1,581	1,581
3a. Purchase Domestic by Commonwealth	0	130	260	390	500	500	500	500	500	500	500	500	500	500	500	500
4a. Activate New Domestic Production	0	0	0	0	0	0	0	300	700	1,200	2,000	2,000	2,000	2,000	2,000	2,000
5a. Additional Reserves - Veterinary clinics & universities	0	0	0	0	150	300	300	300	300	300	300	300	300	300	300	300
<b>SUM</b>	<b>2,379</b>	<b>2,509</b>	<b>2,639</b>	<b>3,445</b>	<b>4,205</b>	<b>5,576</b>	<b>6,630</b>	<b>6,770</b>	<b>7,593</b>	<b>7,993</b>	<b>8,715</b>	<b>9,515</b>	<b>9,737</b>	<b>9,737</b>	<b>9,737</b>	<b>9,737</b>
<b>Total Demand Forecast</b>	<b>7,500</b>															
<b>Requirement for Non-Covid-19</b>	<b>1,200</b>															
<b>Actual Delivered To Date</b>	<b>2184</b>	<b>2379</b>														
<b>Forecast without overseas supply</b>	2,184	2,314		3,074	3,834	4,784	5,615	5,615	5,915	6,315	6,815	7,615	7,615	7,615	7,615	7,615
<b>Forecast without domestic production</b>	2,379	2,509		3,445	4,205	5,576	6,630	6,770	7,293	7,293	7,515	7,515	7,737	7,737	7,737	7,737

**Notes & Assumptions**  
**Total Demand Forecast:** Minister Hunt and Dr Coatsworth press conference, 31 March 2020  
**Requirement for Non-Covid-19 patients:** Advice from Alan Finkel, Chief Scientist  
**Actual delivered to date:** Ventilators in hand (2379 includes S&T orders delivered in March)  
**Standard ICU Ventilators -** Based on data from ANZICS survey of ICUs.  
**1a. ICU surge capacity -** Based on data from ANZICS survey of ICUs; Count includes 'other invasive ventilators' identified by doctors, 'anaesthetic machine's with ventilator', 'non-invasive machines capable of mechanical ventilation', and 'other' machines. Allocation/timing of surge is an estimate.  
**2a. Purchase overseas by Commonwealth -** Contracted orders. Allocation/timing according to agreed terms of contract/s.  
**2b. Purchase overseas by S&Ts -** Contracted orders as at 1/4. Allocation/timing according to agreed terms of contract/s (noting 890 expected June+ so number has been split from June onwards)  
**3a. Purchase domestic by Commonwealth -** Contracted orders. Allocation/timing according to agreed terms of contract/s.  
**4a. Activate new domestic production -** Other domestic supplies. Allocation/timing is an estimate.  
**5a. Additional reserves - Veterinary and universities -** Based on data from ANZICS survey of veterinary clinics; Count includes 179 vet ventilators. Estimate of 150 ventilators from Medical Schools provided by Alan Finkel (total number rounded to 300). Allocation/timing is an estimate.

**Commonwealth Contracts**  
**ResMed**  
 500 Astral invasive ventilators  
 - Ready - 130 units  
 - Week commencing 13 April - 130 units  
 - Week commencing 20 April - 130 units  
 - Week commencing 27 April - 110 units  
 5000 Lumis non-invasive ventilators  
 - Ready - 1300 units  
 - Week commencing 13 April - 1600 units  
 - Week commencing 20 April - 2100 units  
**Medical Technology Devices**  
 300 AeonMed Shangrila 510S invasive ventilators  
 - By 30 June - 300 units  
**Dräger:** Contractual issues have been resolved. Contract execution expected by close of business 9 April.  
 240 anaesthetic machines capable of invasive ventilation  
 - By 31 May - 100 units  
 - By 30 June - 140 units

**s22**

**From:** s22  
**Sent:** Tuesday, 14 April 2020 3:45 PM  
**To:** s22  
**Subject:** FW: Ventilators - USA - Draft cable on Defence Production Act (for comment) [DLM=~~For Official Use Only~~]  
**Attachments:** Draft cable US DPA in 3rd countries.doc; Explainer - US COVID trade measures including DPA - 14 April update (004).docx

**Security Classification:**~~For Official Use Only~~

Hi s22 – I've had a quick skim and it looks fine/sensible for me, aligns with what we've heard from Resmed. Happy for me to respond to that effect?

Cheers

s22

s22

Executive Officer to Duncan McIntyre | Head, Ventilator Taskforce  
 p. s22 | m. s22 | e. s22 | [@industry.gov.au](mailto:s22@industry.gov.au)

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**From:** s22  
**Sent:** Tuesday, 14 April 2020 3:05 PM  
**To:** McIntyre, Duncan ; Mulder, Joanne  
**Cc:** s22  
**Subject:** Ventilators - USA - Draft cable on Defence Production Act (for comment) [DLM=~~For Official Use Only~~]

Hi. I've just received this DFAT **draft cable for comment by 5.00 pm today**, which mentions ventilators.

- **I don't think you'll necessarily have any comments on this.**
- It's primarily a tasking cable asking overseas Posts to gather intel on the impacts of the DPA.
- However, I'm **flagging because it mentions parts for US ventilator companies** are being prioritised (para 1, page 1).
  - Also **mentions ResMed** welcomes use of DPA (para 6, page 2).
  - Refers to ResMed meeting with Washington Ambassador.

Cheers. s22

s22, DISR

s22

s22

~~For Official Use Only~~


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**From:** s22 | [\[mailto:s22@dfat.gov.au\]](mailto:s22@dfat.gov.au)  
**Sent:** Tuesday, 14 April 2020 2:54 PM

To: s22 <s22@industry.gov.au>

Subject: Draft cable US DPA in 3rd countries.doc [DLM=\_\_\_\_\_]

\_\_\_\_\_

Hi s22

I am tidying-up some loose ends from last week's frenetic activity and realise I may not have sent you the attached draft cable (on potential DPA effects in 3<sup>rd</sup> country markets).

The cable is designed to gather information of DPA effects elsewhere, but also to provide guidance to Posts on what the DPA is (and is not). DPA Explainer also attached.

If I don't hear otherwise, I will presume DISER has no concerns, and send the cable out at **5pm today** (please do flag with me if you think there will be any challenge with this timing).

Thanks!

s22

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## **Explainer: Impacts of US trade measures in response to COVID-19 outbreak v.2, 14 April 2020**

### **Topics covered**

- Use of the Defence Production Act
- Allegations Australia withheld swine flu vaccinations from the United States in 2009

### **Unclassified Talking Points for Australian audiences**

- We are in close discussions with the US Administration on ways we can collaborate to ensure adequate medical supplies in both our countries.
- The United States is facing a significant domestic health challenge from COVID-19
  - but it is a major source of medical supplies for Australia.
- President Trump has ordered some US companies to prioritise domestic supply of a number of goods required for the COVID-19 response using the Defense Production Act (DPA)
  - the DPA allows the White House to direct companies to prioritise US government orders and to establish nationwide distribution priorities.
- There are also new regulations to allow US authorities to temporarily detain and, in some cases, compulsorily purchase exports of N-95 and other respirators, surgical masks and gloves.
- We are aware of reports of companies claiming the DPA prevents them from filling Australian orders
  - our embassy in Washington is making representations on behalf of Australia where shipments are detained.
- We are working closely with all our trading partners, including through the G20, to advance our position that we want medical supply chains to continue to operate and that any restrictions on trade due to necessary health measures are proportionate, temporary and targeted.

### *If raised: Qantas flight consignment of ventilators and PPE stopped by the US Customs and Border Protection*

- The Department is aware that a shipment of medical supplies destined for Australia was detained by the United States Government on 7 April.
- The shipment was released on 9 April.

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s33

**Australian media, Senate or Parliamentary Questions on this Topic**

NIL

**Attachments**

NIL

**Prepared jointly by United States and Canada Branch and Washington Post:**

Name: s22 / s22 / s22 / s22 / s22

Edit Date: 14 April 2020

s22

**From:** McIntyre, Duncan  
**Sent:** Wednesday, 29 April 2020 10:51 AM  
**To:** s22 ; McIntyre, Duncan; s22  
**Cc:** s22 ; s22  
**Subject:** RE: PPE Taskforce Senior Officials Meeting [DLM= ]  
**Attachments:** 20200429\_ventilators\_gloves\_goggles\_reporting.docx

**Security Classification:** [Redacted]

Hi all – Here’s the referenced attachment, for reference

s22  
**Executive Officer to Duncan McIntyre** (Head, Ventilator Taskforce)  
 m. s22 | e. s22 @industry.gov.au

---

**From:** s22  
**Sent:** Wednesday, 29 April 2020 10:17 AM  
**To:** McIntyre, Duncan ; s22  
**Cc:** s22 ; s22  
**Subject:** RE: PPE Taskforce Senior Officials Meeting [DLM= ]

Hi Duncan

Couldn’t see an attachment, but I am assuming it is the S&T coordination report on ventilator orders.

Short answer is no.

Longer answer is –the numbers are S&Ts reporting do not match the numbers we received from MTAA. S&T also includes some manufacturers that we don’t have data on (MTAA data only covers GE, Draeger, Philips, Medtronic, Device Tech & Zoll)

s22  
**Assistant Manager**  
 Ventilator Taskforce  
**Department of Industry, Science, Energy & Resources**

Phone +s22 | Mobile: s22  
 Email: s22 @industry.gov.au

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**From:** McIntyre, Duncan  
**Sent:** Wednesday, 29 April 2020 10:13 AM  
**To:** s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>  
**Cc:** s22 <s22 @industry.gov.au>  
**Subject:** Fwd: PPE Taskforce Senior Officials Meeting [DLM= ]

~~For Official Use Only~~

Hi s22 s22



Good afternoon State & Territory Officials and invited guests

Attached is an agenda for the SOM proposed for next Wednesday, along with dial in details for the meeting for both video and teleconference (see below) and an updated copy of the coordination report on gloves, goggles and ventilators.

Kind regards

s22

Personal Protective Equipment COVID-19 Taskforce  
s22 | s22 @industry.gov.au

States & Territories PPE invites you to this meeting.

### **PPE Taskforce - Senior Officials Meeting [SEC= ██████████]**

Wednesday, April 29, 2020, 10:00 AM | 2 hr  
(UTC+10:00) Canberra, Melbourne, Sydney

Your meeting code is: s22

We recommend that staff who are remotely working connect using Jabber, open the app and dial s22

#### **Departmental staff can also:**

Join from a departmental meeting room or desk phone, dial: s22

Join using Skype on your departmentally-issued laptop click:

s22 @video.industry.gov.au and then click the video camera button in Skype.

---

#### **External Participants/ Non-departmental staff can:**

Join using voice only: Dial s22 then enter s22

Join using a web browser with the link below;

s22

\* Use Chrome, Firefox (Windows) or Safari (iPad, iPhone, Mac) browsers only, or internet browser on Samsung mobiles. Ensure your internet connection is not filtered or behind a firewall.

\* You can test joining via a web browser, by visiting

s22

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#### **Further information:**

\* For department staff: [Step-by-step instructions on how to use the videoconferencing system](#)

\* For external participant: [How to join a department-hosted videoconference from a web browser](#)

\* Proper etiquette is important when participating in a videoconference. Please refer to the [Videoconferencing Etiquette Guide](#).

\* Having issues? Contact the Service Desk on s 22



# Personal Protective Equipment – Coordination Report to State and Territory Ministers

Goggles/Face Shields					
State/ Territory	Overseas procurement	Domestic production and procurement	Origin not available (production and procurement)	Assistance provided to Manufacturers	Major discussions with manufacturers

s22

s22

Gloves					
State/ Territory	Overseas procurement	Domestic production and procurement	Origin not available (production and procurement)	Assistance provided to Manufacturers	Major discussions with manufacturers
<h1>s22</h1>					

s22

Ventilators				
State/ Territory	Overseas procurement	Domestic production and procurement	Major Contracts	Emerging Issues
Cwth	<ol style="list-style-type: none"> <li>1. Medical Device Technologies (AEONMED product) – purchase made (300 units)</li> <li>2. Draeger (240 units)</li> </ol>	<ol style="list-style-type: none"> <li>1. Grey Innovation: 2,000 invasive NOTUS ventilators.</li> <li>2. ResMed: 500 Astral 150 ICU-grade invasive units and 5,000 Lumis non-invasive units</li> <li>3. The Lumis ventilator has been tested and confirmed it can work as an invasive ventilator for less critical patients. ResMed has also provided data from other countries that shows the use of the Lumis non-invasively can play an important role in the treatment of less critically ill ICU patients.</li> </ol>	<ol style="list-style-type: none"> <li>1. Contract Medical Technology Devices for 300 units of AEONMED’s Shangrila 510S bedside units. Delivery expected end of June.</li> <li>2. Contract Draeger for 240 units capable of invasive ventilation. Delivery expected from mid-May through to mid-June.</li> <li>3. ResMed for 500 Astral 150s and 5,000 non-invasive ventilators (Lumis 150) that can be converted to be invasive – delivery complete on 24 April 2020. The Commonwealth is in discussion with ResMed for further delivery of 1,500 invasive units before end July.</li> <li>4. Grey Innovation to locally manufacture 2,000 NOTUS invasive ventilators – 300 in June and 1,700 from July onwards.</li> </ol>	<ul style="list-style-type: none"> <li>• Securing sufficient supply of ventilator consumables and ICU devices. Including working with Grey Innovation on the potential for domestic manufacture of necessary consumables.</li> </ul>

s22

s22

s22

s22

s22

**From:** s22  
**Sent:** Friday, 10 April 2020 2:52 PM  
**To:** Mulder, Joanne; s22 ; s22 ; s22 ; s22  
 s22  
**Cc:** McIntyre, Duncan  
**Subject:** FW: FYI - Critical medical supplies - COVID-19 [SEC=U  
**Attachments:** COVID response-Critical medical supplies-6Apr20.pdf

**Security Classification:**~~UNCLASSIFIED~~

Hi team – FYI

A partner from Boston Consulting Group sent Duncan the attached slide deck; I assume to potentially drum up business.

The slide deck is US-focused, but provides some interesting key info and stats around ventilators. Slides of particular interest are: 6-14, 24-30.

s22 – slide 14 describes the current state of key ventilator consumables in the US.

Please note the department has an existing arrangement to work with McKinsey on the Gov's response to COVID-19. I'm not sure whether the department or other government agencies have an arrangement with BCG.

Cheers

s22

s22

**Executive Officer to Duncan McIntyre** | Head, Ventilator Taskforce  
 p. s22 | ext. s22 | e. s22 | [@industry.gov.au](mailto:s22@industry.gov.au) ; [c19ventilators@industry.gov.au](mailto:c19ventilators@industry.gov.au)

---

**From:** s22 [mailto:s22@bcg.com]

**Sent:** Friday, 10 April 2020 1:43 PM

**To:** s22 ; McIntyre, Duncan

**Cc:** s22

**Subject:** Critical medical supplies - COVID-19

Hi s22 Duncan,

Hope you're both staying well.

We're aware you are both heavily involved in the Department's response to ensure there are sufficient critical medical supplies in place for the COVID-19 situation.

In case it helps, attached is a view of some of the work we've been doing with the US federal government and Dutch government to ensure sufficient critical medical supplies are in place. This includes:

- Baselineing supplies of key items and analysis of how this is likely to evolve over time against a moving demand picture
- Identifying the items in most short supply with continuous tracking and updates
- Looking into a range of alternative supplies and how they could be optimally used across the health system (including different usage scenarios)

- Working with potential suppliers and manufacturers to bring more supply on-line
- Setting up and running a single 'control tower' to bring all of the key functions needed to address this problem together including demand, supply, purchasing, production, and allocation and distribution

BTW on the last point, you'll be aware we have been supporting the Department on a small piece looking at sector impacts from COVID-19 across the economy. Around one third of the CEOs we spoke to (outside of the health sector) mentioned their concern over PPE allocation and distribution – so the issue is also being keenly felt in other industries.

I know you are thinking through a lot of this already, but should you want to talk to our colleagues globally or in Australia who are currently working on this issue, we can connect you. We also have analytics, procurement and operations experts who are available if support is needed.

Hope this isn't too heavy reading over the Easter weekend and that you get something of a break.

Cheers

s22 & s22

—

s22

Partner

M +s22

Canberra ACT, Australia

Assistant: s22

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T +s22



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Thank you.

**s22**

**From:** McIntyre, Duncan  
**Sent:** Tuesday, 14 April 2020 11:05 AM  
**To:** 's22 (Private)'  
**Cc:** Beauchamp, Glenys; s22 ; s22 ; s22 ; s22  
**Subject:** Ventilator forecast [SEC=~~UNCLASSIFIED~~]  
**Attachments:** Forecast and Charts.pdf; Ventilator strategy 14 April.pptx

**Security Classification:**~~UNCLASSIFIED~~

Dear Minister

Glenys has asked me to send you the latest version of our ventilator forecast (presented both as a bar chart and then a volume graph). Also attached please find a graphical representation of the work underway in the Taskforce to assist Health to ensure there are an adequate supply of invasive ventilators available through the National Stockpile.

In terms of the companies on the call at the MTAA meeting at noon:

- Many of the firms represented are supplying ICU grade invasive ventilators directly to State and Territory hospitals (the State and Territory line in the attached graphs).
- ResMed and AeonMed are providing invasive ventilators to the National Stockpile under contract. There are still some purchase opportunities with others we are negotiating.

Happy to discuss

Duncan

**Duncan McIntyre**

Head, Ventilator Taskforce  
[C19ventilators@industry.gov.au](mailto:C19ventilators@industry.gov.au)

Head of Division, AusIndustry – Industry Capability and Research  
 ) <sup>s2</sup> s22 @industry.gov.au

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**s22**

---

**From:** s22  
**Sent:** Thursday, 23 April 2020 3:20 PM  
**To:** McIntyre, Duncan; Mulder, Joanne  
**Cc:** s22 ; s22 ; s22  
**Subject:** SOM meeting - Ventilators [SEC=~~UNCLASSIFIED~~]  
**Attachments:** 20200429\_ventilators\_gloves\_goggles\_reporting.docx

**Security Classification:**~~UNCLASSIFIED~~

Hi Duncan and Jo,

I just wanted to follow up with some context on the invite you would have received for the SOM meeting next week. We have started doing deep dives on specific PPE areas - we did gowns and masks on Monday – and ventilators are the next cab off the rank. Glenys thought things we're mostly ok, so I've only allocated 15 minutes.

Typically, Glenys does a quick intro and then hands to the DISER rep for a Commonwealth update then goes around the table, or goes around the table and then gets DISER rep to respond.

There is a coordination report that we circulate for the purposes of the discussion that has input from all the jurisdictions (attached). s22 is going to do an update of the Cwth content from the daily report but will then send through to you for a look.

We will also be pulling together an annotated agenda for Glenys, so would appreciate a few high level dot points by Tuesday lunchtime if possible.

Happy to discuss.

Thanks

**s22**

General Manager  
Health Industry Coordination Group

---

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# Personal Protective Equipment – Coordination Report to State and Territory Ministers

Goggles/Face Shields

s22

Gloves					
State/ Territory	Overseas procurement	Domestic production and procurement	Origin not available (production and procurement)	Assistance provided to Manufacturers	Major discussions with manufacturers
<h1>s22</h1>					

s22

Ventilators				
State/ Territory	Overseas procurement	Domestic production and procurement	Major Contracts	Emerging Issues
Cwth	<ol style="list-style-type: none"> <li>1. Medical Device Technologies (AEONMED product) – purchase made (300)</li> <li>2. Draeger – pending contract execution</li> </ol>	<ol style="list-style-type: none"> <li>1. Contracted Grey Innovation to locally manufacture 2,000 Smith Medical ventilators by end of July.</li> <li>2. ResMed: 500 Astral 150 ICU-grade invasive units and 5,000 Lumis non-invasive units to be delivered in April (the first 240 invasive and 2700 non-invasive units are on time for delivery in week commencing 13 April). The Lumis ventilator has been tested and confirmed it can work as an invasive ventilator for less critical patients. ResMed has also provided data from other countries that shows the use of the Lumis non-invasively can play an important role in the treatment of less critically ill ICU patients.</li> <li>3. Engagements with Defence Science and Technology continue. They are seeking to identify opportunities to improve the operation of non-invasive ventilators when used invasively.</li> </ol>	<ol style="list-style-type: none"> <li>1. Contract Medical Technology Devices for 300 units of AEONMED’s Shangrila 510S bedside units. Delivery expected end of June.</li> <li>2. ResMed for 500 Astral 150s, to be delivered in April. ResMed will also provide 5,000 non-invasive ventilators (Lumis 150) that can be converted to be invasive.</li> <li>3. Grey Innovation to locally manufacture 2,000 Smith Medical invasive ventilators by August.</li> </ol>	<ul style="list-style-type: none"> <li>• The US has invoked the DPA for six ventilator companies, including ResMed, Medtronic, and Phillips. ResMed and other manufacturers are supplying substantial volumes of ventilators to the US and this is constraining international supply. ResMed are assessing whether they are able to contract to sell further Astral 150 invasive ventilators to us.</li> <li>• Securing sufficient supply of ventilator consumables and ICU devices – which may also be impacted by US DPA.</li> </ul>

s22

s22

s22

s22

**s22**

---

**From:** McIntyre, Duncan  
**Sent:** Friday, 24 April 2020 9:32 AM  
**To:** Beauchamp, Glenys; **s22**  
**Cc:** Mulder, Joanne; **s22** ; **s22** ; **s22** ; **s22**  
**Subject:** RE: Ventilator talking points [SEC=~~UNCLASSIFIED~~]  
**Attachments:** Ventilator Supply Forecast - 23 April.pdf; Ventilator Talking Points 1.1 - 24 April 2020.docx

**Security Classification:**~~UNCLASSIFIED~~

Hi Glenys

I am advised that the Draegar contract has now been executed. I have updated it in the table attached to the talking points.

Cheers

Duncan

~~UNCLASSIFIED~~

---

**From:** McIntyre, Duncan  
**Sent:** Thursday, 23 April 2020 8:26 PM  
**To:** Beauchamp, Glenys  
**Cc:** **s22** ; **s22** ; Mulder, Joanne ; **s22**  
**Subject:** Ventilator talking points [SEC=~~UNCLASSIFIED~~]

Hi Glenys – please find a table and TPs attached, as requested by the Minister. You may also want to give her the Sit Rep and forecast, which round out this information (attached and at the bottom of the chain).

Happy to discuss

Duncan

---

**From:** **s22**  
**Sent:** Thursday, 23 April 2020 6:58 PM  
**To:** McIntyre, Duncan <**s22** @industry.gov.au>; Mulder, Joanne <**s22** @industry.gov.au>  
**Cc:** Beauchamp, Glenys <**s22** @industry.gov.au>  
**Subject:** RE: Request for info - Ventilator Taskforce Sitrep - 23 April 2020 [SEC=~~UNCLASSIFIED~~]

Thanks mate. Just remember, there's no need for a detailed brief - keep it simple. She prefers presentation of numbers with brief associated TPs if necessary. Just the situation as it stands tomorrow:

- On hand in ICU system
- Available to be redirected
- New vents delivered (you can break this up by type and supplier if you'd like)
- Ordered and yet to be delivered
- Any other relevant category

Cheers,

s22  
Health Industry Coordination Group  
s22  
s22 @industry.gov.au

~~UNCLASSIFIED~~

**From:** McIntyre, Duncan  
**Sent:** Thursday, 23 April 2020 6:48 PM  
**To:** s22 <s22 @industry.gov.au>; Mulder, Joanne <s22 @industry.gov.au>  
**Cc:** Beauchamp, Glenys <s22 @industry.gov.au>  
**Subject:** RE: Request for info - Ventilator Taskforce Sitrep - 23 April 2020 [SEC=~~UNCLASSIFIED~~]

Thanks Darren – we'll pull you together some appropriate talking points.

DM

~~UNCLASSIFIED~~

**From:** s22  
**Sent:** Thursday, 23 April 2020 6:27 PM  
**To:** McIntyre, Duncan <s22 @industry.gov.au>; Mulder, Joanne <s22 @industry.gov.au>  
**Cc:** Beauchamp, Glenys <s22 @industry.gov.au>  
**Subject:** RE: Request for info - Ventilator Taskforce Sitrep - 23 April 2020 [SEC=~~UNCLASSIFIED~~]

Thanks Duncan. Very comforting report.

The Minister was very pleased with the situation when we discussed this evening. She has a radio interview first up tomorrow morning, and has requested a summary of the number of ventilators we actually have our hands on now (ie. those in the system, those to be redirected from vets, unis etc, and those new ones actually delivered) - perhaps figures as of tomorrow to ensure we can include the latest Resmed delivery?

If you could please provide to me this evening, I'll pass it on.

Thanks,

s22  
Health Industry Coordination Group  
s22  
s22 @industry.gov.au

~~UNCLASSIFIED~~

**From:** McIntyre, Duncan  
**Sent:** Thursday, 23 April 2020 5:54 PM  
**To:** s22 s22 @industry.gov.au>; Beauchamp, Glenys <s22 @industry.gov.au>;  
s22 @health.gov.au'; Alan Finkel <s22 >  
**Cc:** s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>;  
s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>; s22  
<s22 @industry.gov.au>; s22 <s22 @industry.gov.au>; s22  
<s22 @industry.gov.au>; Graham, Michele <s22 @industry.gov.au>; s22  
<s22 @industry.gov.au>; s22 <s22 @industry.gov.au>; s22 @health.gov.au';  
s22 @health.gov.au'; s22 @protected.Health.gov.au'; 's22 @protected.Health.gov.au';  
s22 @dfat.gov.au'; 's22 @dfat.gov.au'; s22 @dfat.gov.au'; s22  
@dfat.gov.au'; s22 @defence.gov.au'; s22 @dst.defence.gov.au'; s22  
<s22 @greyinnovation.com>; s22 @amgc.org.au'; s22 ' <s22  
@stryker.com>; s22 ' <s22 @stryker.com>; s22

&lt;s22 @industry.gov.au&gt;

**Subject:** Ventilator Taskforce Sitrep - 23 April 2020 [SEC=~~UNCLASSIFIED~~]

Hi all

Please find progress since yesterday, **in red**. Attached:

- The Ventilator Supply Forecast
- Update from Defence Science and Technology.

**Activate existing invasive ventilator reserves** – There are approximately 5115 invasive ventilators accessible to Australian public hospitals for surge – including anaesthetic machines, transport, veterinary and medical school ventilators.

**Purchase ventilators domestically and internationally** – We have 300 AeonMed invasive ventilators on order, and two other contracts currently in negotiations for a further 2240 units. States and Territories have received 196 ventilators on schedule and have a further 1596 units on order. **ResMed confirmed this morning that all 500 ICU-grade Astral invasive ventilators and 5000 Lumis non-invasive ventilators will be delivered tomorrow which is a week earlier than expected.** To date, 260 Astral units and 5000 Lumis units have been delivered. **ResMed has indicated it can deliver additional invasive ventilators to us by the end of July. We are working towards finalising the order of additional ventilators with Health by the end of this week. This is not yet settled though and should not yet be discussed broadly.**

**Manufacture ventilators domestically** – Grey Innovation's consortium of Australian manufacturers is on track to deliver 2000 ventilators by the end of July. **The department is working with Grey Innovation to develop case studies with some consortium partners. These case studies will highlight the strengths of the businesses, and the benefits gained from participating in the consortium.** The Taskforce is working with Grey Innovation regarding the supply of consumables and are progressing procurement of these items with the Department of Health. An invasive ventilator specification for which the TGA have provided a limited exemption can be accessed at <https://www.industry.gov.au/news-media/covid-19-news/notice-for-australian-manufacturers-of-new-ventilators>.

**Non-invasive ventilators** – We are working with ResMed to provide and distribute training materials on the use of the Lumis in both invasive and non-invasive applications within the hospital system. ResMed has provided advice about ways the Lumis might be used to best effect based on emerging evidence from use of invasive and non-invasive ventilation with COVID patients in other countries. **DST are close to finalising their improvements to oxygen injection for use of non-invasive ventilators invasively.**

**Source ventilator consumables and other ICU equipment** – ResMed has provided a full list of ventilator consumables for the Lumis when used invasively and for the Astral. ResMed is working to diversify their sourcing for a number of consumables although supply chains appear to be improving. **The taskforce provided ventilator consumables and ICU devices costing estimates to the Department of Health today following feedback received on estimates provided yesterday.**

**Deploy ventilators** – ResMed continue to receive requests from hospitals for Astral and Lumis ventilators. These requests are being recorded and provided to the taskforce to track. As the supply of ventilators and related consumables is secured, these will be provided to the National Medical Stockpile. We are beginning to receive requests for assistance to source ventilators from the governments of other nations **and DFAT will handle these – we are meeting on 27 April to settle the approach.**

Thanks

Duncan

**Duncan McIntyre**

Head, Ventilator Taskforce  
[C19ventilators@industry.gov.au](mailto:C19ventilators@industry.gov.au)

Head of Division, AusIndustry – Industry Capability and Research  
]s22      📧s22      [@industry.gov.au](mailto:s22@industry.gov.au)

Executive Assistant: s22  
]s22      📧s22      [@industry.gov.au](mailto:s22@industry.gov.au)

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## Current Ventilator Snapshot as at 23 April 2020

	Number of Units
Number of Ventilators currently available in ICUs	2,184
Additional Ventilators that can be activated in surge capacity in ICUs	2,631
Approximate ventilators that could be sourced from vets and universities	300
Units delivered to States and Territories	196
<b>Ventilators available in the National Medical Stockpile</b>	
ResMed Astral invasive units	500
ResMed Lumis non-invasive units	5,000
<b>International ventilators ordered and to be delivered</b>	
AeonMed invasive units (to be delivered by end June to National Stockpile)	300
Draegar invasive units (to be delivered by mid June to National Stockpile)	240
On order to States and Territories (to be delivered by end August)	1,596
<b>Ventilators to be manufactured in Australia *</b>	
Greys Innovation NOTUS units (to be delivered by end July)	2,000

\* There are also a further 1,500 ResMed Astral units expected to be under contract in the next few days but the contract is not yet executed.

### Talking Points (current for 24 April)

- Today the Government adds a further 5,500 ventilators to the National Medical Stockpile to continue to prepare Australia's frontline medical services for COVID-19 patients.
- These ventilators are from ResMed, the global producer of ventilators based right here in Australia. They were made in Sydney and are ready today, a week ahead of schedule.
- While we are seeing some promising results with the flattening of the curve, I want to assure all Australians that the Government is working hard to get the vital equipment needed to save lives.
- The Government is pursuing every possible avenue to ensure Australia has the ventilators we need. We are activating reserves in hospitals, purchasing ventilators internationally and manufacturing more ventilators here in Australia.
- We are already well prepared, with more than 5,000 invasive and 5,000 non-invasive ventilators on hand today, and many more on the way.

**s22**

**From:** s22  
**Sent:** Tuesday, 28 April 2020 4:07 PM  
**To:** Mulder, Joanne  
**Cc:** s22 ; s22  
**Subject:** RE: SOM meeting - Ventilators [SEC=~~UNCLASSIFIED~~]

**Security Classification:**  
~~UNCLASSIFIED~~

Hi Jo,

Yes that's right:

- 5,000 Lumis
- 500 Astral
- 2,000 Greys Innovation NOTUS
- 300 AeonMed
- 240 Draegar

Totals 8,040 (Additional ResMed have not been included as no contract in place as yet).

Thanks,  
s22

s22  
**Manager**  
Ventilator Taskforce

s22 | s22 | s22 @industry.gov.au

---

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**From:** Mulder, Joanne  
**Sent:** Tuesday, 28 April 2020 4:03 PM  
**To:** s22  
**Cc:** s22 ; s22  
**Subject:** FW: SOM meeting - Ventilators [SEC=UNCLASSIFIED]

Hi s22 – could you please confirm the highlighted sentence?

Thanks  
Jo

~~UNCLASSIFIED~~

---

**From:** s22  
**Sent:** Tuesday, 28 April 2020 4:01 PM  
**To:** s22 <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>  
**Cc:** Mulder, Joanne <s22 @industry.gov.au>; s22 <s22 @industry.gov.au>  
**Subject:** RE: SOM meeting - Ventilators [SEC=UNCLASSIFIED]

Hi s22

We've added in some extra points and wanted to check with you the accuracy of the numbers in yellow below that I drew from the daily Min updates table. Grateful for your advice as soon as possible this afternoon. Thank you.

- It is important that we understand jurisdictions' activities on ventilators, including local manufacturing plans and sustainability strategies.
- The Commonwealth has made good progress with securing invasive ventilator supplies for the National Medical Stockpile.
- We have a total of 8040 ventilators on order (5000 non-invasive and 500 invasive ventilators for April have already arrived with more coming each month until July).
- We are also working with the Department of Health to procure the ventilator and ICU consumables needed to support the National Medical Stockpile.
  - Suggested action: We would be grateful for an update from States and Territories about any new or planned contracts to purchase invasive ventilators, and when this stock is due for delivery.

I'll ask Duncan McIntyre to give more details on the work the Commonwealth is doing on ventilators.

~~UNCLASSIFIED~~

**From:** s22

**Sent:** Tuesday, 28 April 2020 1:13 PM

**To:** s22 <s22@industry.gov.au>

**Cc:** s22 <s22@industry.gov.au>; Mulder, Joanne <s22@industry.gov.au>;

s22 <s22@industry.gov.au>

**Subject:** RE: SOM meeting - Ventilators [SEC=~~UNCLASSIFIED~~]

Hi s22

Please see below for points on ventilators for Glenys' annotated agenda:

- The Commonwealth has made good progress with securing invasive ventilator supplies for the National Medical Stockpile.
- Further details about the Commonwealth and States and Territories' procurement of ventilators is available in the Coordination Report.
  - Action: Noting the commitments already made, we would be grateful for an update from States and Territories about any new or planned contracts to purchase invasive ventilators, and when this stock is due for delivery.
- We are also working with the Department of Health to procure the ventilator and ICU consumables needed to support the National Medical Stockpile.

If there's scope, it'd be great to include the 'Action' above for Glenys; it will help us better understand demand from State and Territories and when any new stock might be delivered.

Cheers

s22

s22

Executive Officer to Duncan McIntyre (Head, Ventilator Taskforce)

m. s22 | e. s22 @industry.gov.au

---

**From:** s22**Sent:** Tuesday, 28 April 2020 12:39 PM**To:** s22 <s22 @industry.gov.au>**Cc:** s22 <s22 @industry.gov.au>**Subject:** FW: SOM meeting - Ventilators [SEC=~~UNCLASSIFIED~~]

Hi s22

I just wanted to follow up of this one and see when you are likely to be able to get us any input for Glenys' annotated agenda.

Thanks

s22

---

~~UNCLASSIFIED~~**From:** s22**Sent:** Thursday, 23 April 2020 3:20 PM**To:** McIntyre, Duncan <s22 @industry.gov.au>; Mulder, Joanne <s22 @industry.gov.au>**Cc:** s22 <s22 @industry.gov.au>; s22

&lt;s22 @industry.gov.au&gt;; s22 &lt;s22 @industry.gov.au&gt;

**Subject:** SOM meeting - Ventilators [SEC=~~UNCLASSIFIED~~]

Hi Duncan and Jo,

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We will also be pulling together an annotated agenda for Glenys, so would appreciate a few high level dot points by Tuesday lunchtime if possible.

Happy to discuss.

Thanks

s22

General Manager

Health Industry Coordination Group

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Mob: s22

Email: s22 @industry.gov.au

~~UNCLASSIFIED~~

**s22**

**From:** McIntyre, Duncan  
**Sent:** Friday, 27 March 2020 7:40 PM  
**To:** s22 ; Beauchamp, Glenys; Finkel, Alan  
**Cc:** s22 ; s22 ; s22 ; s22 ; s22 ;  
 Mulder, Joanne; s22 ; s22 ; s22 ; s22 ;  
 s22 ; s22 ; s22 ; s22 ; s22 ;  
 ; s22 ; C19Ventilators@industry.gov.au;  
 's22 @amgc.org.au'; s22 @health.gov.au';  
 s22 @health.gov.au'  
**Subject:** FW: Sitrep [DLM=~~For Official Use Only~~]  
**Attachments:** Ventilator Summary Table.docx; Ventilator Taskforce structure and overview.pptm

**Security Classification:**

Hi all – Today's sitrep for your information. Please advise if you have any corrections or suggested content. Also attached are data report and taskforce structure for information.

**Key points**

- The taskforce has been engaging with suppliers and moving them through the pipeline with Draegar (up to 240 units) and AEONMED (up to 300 units) **in particular**. Contracts and details on delivery timeframes are being worked through and finalised.
- The Taskforce continues to engage with companies which have offered assistance with ventilator and components supply. We are triaging this information to get a better understanding of the capability and capacity of ventilator manufacturing and possible options for government consideration. Over 60 companies have made offers of assistance.
- ResMed has identified they are short in supply of cleaning cloths. The Taskforce has explored the availability of Chux clothes and wipes with The Clorox Company's Head of Emerging Channels – Australia and New Zealand. They are reaching out to their suppliers to quickly source products suitable for ResMed's needs.
- We have broadened our scope to consider the supply of equipment and materials required when administering ventilators to patients. For example, ventilator masks and tubing.

**Today's key meetings and discussions**

- 12:00 pm – Meeting with Stryker, a medical technology organisation assisting with the government's coordination efforts on ventilators.
  - Discussed the government's orders of Medtronic and Draegar units, the need for a coordinated allocation of units amongst jurisdictions, and sourcing ventilators from the transport sector.
- 3:00 pm – Meeting with Victorian Department of Jobs, Precincts and Regions (DJPR) to share information on efforts in the ventilator space.
  - Provided a high level update to representatives of DJPR on the focus of the Ventilator Taskforce and our areas of investigation into invasive ventilators and alternate options such as, anaesthetic machines and vet sector options. DJPR representative were keen to understand if the federal government will work with TGA on providing guidance to states on alternate ventilator use that is deemed appropriate in these circumstances.

**Key upcoming meetings and discussions**

- Intention to have meeting/workshop with ResMed to understand the barriers they have to ramping up production and how the taskforce could assist in overcoming those.

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## Data on Ventilator Availability

HEADLINE FIGURES	
Target number of ICU-grade invasive ventilators	8000
Number of ICU-grade invasive ventilators <b>on hand as at 30 March</b>	4173
<b>Gap in supply as at 30 March</b>	<b>3821</b>

PIPELINE TO BRIDGE THE GAP		
Total number of ICU-grade invasive ventilators that will be available <b>by 30 April</b>	5173 <sup>1</sup>	<i>Gap remaining: 2827</i>
Total number of ICU-grade invasive ventilators that will be available <b>by 31 May</b>	5273 <sup>2</sup>	<i>Gap remaining: 2727</i>
Total number of ICU-grade invasive ventilators that will be available <b>by 30 June</b>	5713 <sup>3</sup>	<i>Gap remaining: 2287</i>

---

<sup>1</sup> Resmed 500, GE Anspec 500

<sup>2</sup> Draeger 100

<sup>3</sup> Draeger 140, AEONMed 300

## Data Breakdown

Current estimates are that 6% of patients who contract COVID-19 require ventilation, with half requiring treatment using invasive ventilators. All COVID-19 patients requiring invasive ventilation must be treated in an intensive care unit (ICU).<sup>4</sup> The number of ICU beds available at maximal surge capacity is 6454.<sup>5</sup> ICU-grade invasive ventilators are the most appropriate ventilator to treat COVID-19 patients.

ICU-grade invasive ventilator target	
Estimated target number of ICU-grade invasive ventilators Australia wide	8,000

Current ICU-grade invasive ventilator availability <sup>6</sup>	
Number of standard ICU ventilators available	2180
Number of other invasive ventilation machines available in ICUs	+1993
	<b>TOTAL: 4173</b>
Number of ICU-grade invasive ventilators required to treat critically ill <u>non</u> -COVID-19 patients	-1,200
Number of ICU-grade invasive ventilators available to treat COVID-19 patients	2,973

<sup>4</sup> Alan Finkel briefing note 'Ventilators for treating critically-ill COVID19 patients' 22/3/20

<sup>5</sup> ANZICS Summary of ICU Surge Data via [s22](#)

<sup>6</sup> ANZICS survey via Alan Finkel briefing note 'Ventilators for treating critically-ill COVID19 patients' 22/3/20

<b>Ventilators available in ICU's - by Jurisdiction<sup>7</sup> (Data based on 173 out of 191 ICUs in Australia)</b>						
<b>Jurisdiction</b>	<b>Standard ICU invasive ventilators</b>	<b>Other ventilators (ventilators that ICU doctors believe are invasive)</b>	<b>Anaesthetic machine ventilators (machine contains invasive ventilator with no need for conversion)</b>	<b>Non-invasive ventilators capable of providing MV<sup>8</sup> (non-invasive ventilator capable of working invasively)</b>	<b>Others</b>	<b>Total</b>
ACT	47	9	34	9	0	99
NSW	726	188	531	162	86	1693
NT	27	8	4	0	2	41
QLD	451	89	192	119	0	851
SA	204	20	140	36	35	435
TAS	49	18	35	3	3	108
VIC	525	146	369	108	14	1162
WA	151	53	157	33	9	403
<b>All Australia</b>	<b>2180</b>	<b>531</b>	<b>1462</b>	<b>470</b>	<b>149</b>	<b>4792</b>
		<b>1993 other ICU-grade invasive ventilators<sup>9</sup></b>				

<sup>7</sup> ANZICS Summary of ICU Surge Data via [s22](#)

<sup>8</sup> Mechanical Ventilation (or assisted ventilation)

<sup>9</sup> This does not include the number of invasive ventilators that could potentially be sourced from veterinary, defense, and transport, or 'modified'/'adapted ventilators.

## Pipeline for invasive ventilator procurement

Company	Model Details	Number of units	Status	Timeframe	Country	Confidence in supply
<b>s22</b>						
AEONMED	Shangrila 5610S bedside ICU units	300	No contract in place but confident of ability to deliver.  Issue is timing – with a potential June delivery. Decision to be made by the Department/Department of Health on accepting that timeframe.	Late June	China	Medium (40%)  No contract in place – with timing of deliver to be agreed to by Departments of Industry and Health.

Company	Model Details	Number of units	Status	Timeframe	Country	Confidence in supply
<h1>s22</h1>						

### Pipeline for non-invasive ventilator procurement

Company	Model Details	Number of units	Status	Timeframe	Country	Confidence in supply
						

<sup>10</sup> To be confirmed: capability to be adapted to invasive ventilator machine, and effectiveness in treating COVID-19

# s22

## Ventilators on order month by month by States & Territories

	March	April	May	11-16 weeks	Beyond
Invasive ventilator machines on order and expected nationwide <sup>11</sup>	164	31	64	662	317
Non-invasive ventilator machines on order nationwide <sup>12</sup>	88	n/a	n/a	n/a	n/a

## Additional Ventilator Sources

Transport ventilators (e.g. within ambulances, patient transport vehicles, flying doctor services)	xx
Ventilators from other private clinics/surgeries	xx

## Alternative Ventilator Supplies

Veterinary ventilators (human ventilators adapted for animals, cleaned)	149 <sup>13</sup>
---	-------------------

<sup>11</sup> Stryker/MTAA 27/3/20 – Does not include numbers from ResMed (supply separately to Commonwealth)

<sup>12</sup> Stryker/MTAA 23/3/20 – Does not include numbers from Philips and Draeger

<sup>13</sup> s22 - ANZICS surveying of machines in functioning condition, cleanable for human use

## Bridging the Gap in Ventilator Machines

- ResMed will provide 500 Astral 150 invasive ventilator machines by 30 April.
- 240 anaesthetic machines from Draeger will be provided in May/June – these machines are capable of being used as invasive ventilators. The contract has been executed with the Department of Health and timeframes for delivery are 100 units in May and 140 units in June.
- The Ventilator Taskforce has received, and is currently analysing, upwards of 60 offers of assistance from manufacturers that may have potential to manufacture ventilators and/or ventilator components.
- The Advanced Manufacturing Growth Centre (AMGC) has offered to triage expressions of interest from its COVID-19 assistance manufacturers register and provide contacts to the Commonwealth. The Taskforce is directing manufacturers that have offered to assist to register their interest on the AMGC website.
- The AMGC is working with Grey Innovations to produce a Smiths Medical ventilator using innovative Australian companies. To date, the AMGC has planned production and expects to produce volume units in August.

## Developing Capability

- The Department of Defence has offered their capability to assist in the production of ventilators or parts, including rapid prototyping, the use of 3D printers and advanced manufacturing capability.
- CSIRO has offered assistance if specific problems are identified e.g. difficulty in making a certain part of a ventilator, and utilising 3D printers within CSIRO, universities, and industry to create certain parts.

## Challenges

- ResMed requires PPE to ensure they can monitor and maintain staff health throughout the ongoing manufacturing of ventilators. The Commonwealth Ventilator Taskforce is assisting in sourcing the PPE required, and is dispatching some PPE sourced from Questacon in the week commencing 30 March
- Ventilator suppliers are challenged in managing orders received directly from States and Territories. The James Doyle from the MTAA is assisting to identify orders that States have placed directly with suppliers.
- Ventilator suppliers are receiving enquiries from States and Territories on stock-on-hand, without orders being made. Companies can only supply on order, to prevent hoarding. Delays in orders being placed pushes Australian orders down the list versus orders from other countries.
- Consumables required for ventilators will need to be sourced. Oxygen is a priority. The Taskforce is identifying current availability onshore.
- Current restrictions on the movement of people (e.g. across State borders) will impact availability of staff to operate ventilators. Exemptions will need to be considered to allow specified staff to move to where required. Invasive ventilation respiratory assistance requires not only the

ventilators, but also the physicians to perform intubation and administer paralyzing agents, sedation and other drugs, trained nursing staff, and additional staff to clean equipment.

<b>SUMMARY</b>	
Target number of standard ICU invasive ventilators	8,000 (approximate)
Number of ICU-grade ventilators on hand as at <b>30 March</b>	4173
Gap in supply as at <b>30 March</b>	<b>3821</b>
Key Issues	<ul style="list-style-type: none"> <li>▪ Ventilator supply issues</li> <li>▪ Execution of ResMed contract / ensuring sufficient PPE</li> <li>▪ Identifying and sourcing ventilator consumables</li> </ul>
Recommendations to the Minister	<ul style="list-style-type: none"> <li>▪ Seek cooperation from States and Territories</li> <li>▪ Seek exemptions for key persons to move across State borders e.g. physicians, nurses</li> </ul>

**s22**

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**From:** s22  
**Sent:** Thursday, 2 April 2020 8:28 PM  
**To:** s22 ; s22 s22 s22  
**Subject:** FW: 2 April, Daily Report COVID19 Medical Supplies/PPE Coordination Group [SEC=PROTECTED]  
**Attachments:** Daily Update - High Level Table.pptx; Daily Ministerial Update - COVID-19 Medical Supplies.docx

Hi all – FYI, Daily Ministerial Update.

Cheers  
s22

s22  
**Executive Officer to Duncan McIntyre** | Head, Ventilator Taskforce  
p. s22 | ext. s22  
e. s22 | [@industry.gov.au](mailto:@industry.gov.au) ; [c19ventilators@industry.gov.au](mailto:c19ventilators@industry.gov.au)

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**From:** s22  
**Sent:** Thursday, 2 April 2020 7:16 PM  
**To:** Beauchamp, Glenys ; s22 - Health ; s22 ; s22 ; s22 ; s22  
**Cc:** COVID19-Daily-Update\_CCList ; s22 ; s22 ; s22  
**Subject:** 2 April, Daily Report COVID19 Medical Supplies/PPE Coordination Group [SEC=PROTECTED]

Hi all,

Please find attached today's daily reports for PPE and Medical Supplies

Thanks,

s22

s22  
**Executive Officer**  
**Health Industry Coordination Group**  
**Department of Industry, Science, Energy and Resources**

P: +s22  
M: +s22  
E: s22 | [@industry.gov.au](mailto:@industry.gov.au)

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DAILY UPDATE ON COVID-19 MEDICAL SUPPLIES

Current as at: 6/12/2024 6:03 PM

TASKS	CUMULATIVE PROGRESS	KEY ACHIEVEMENTS PAST 7 DAYS	UPCOMING PRIORITIES AND KPIs	KEY STAKEHOLDERS	COMMENTS/EMERGING ISSUES
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TASKS	CUMULATIVE PROGRESS	KEY ACHIEVEMENTS PAST 7 DAYS	UPCOMING PRIORITIES AND KPIs	KEY STAKEHOLDERS	COMMENTS/EMERGING ISSUES
Ventilators	<u>Dpt of Health and Industry</u> s22	s22			

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- o contracted AEONMED for 300 ICU-grade invasive ventilators, to be delivered by the end of June

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TASKS	CUMULATIVE PROGRESS	KEY ACHIEVEMENTS PAST 7 DAYS	UPCOMING PRIORITIES AND KPIs	KEY STAKEHOLDERS	COMMENTS/EMERGING ISSUES
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TASKS	CUMULATIVE PROGRESS	KEY ACHIEVEMENTS PAST 7 DAYS	UPCOMING PRIORITIES AND KPIs	KEY STAKEHOLDERS	COMMENTS/EMERGING ISSUES
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**ICU equipment and associated consumables**

TASKS	CUMULATIVE PROGRESS	KEY ACHIEVEMENTS PAST 7 DAYS	UPCOMING PRIORITIES AND KPIs	KEY STAKEHOLDERS	COMMENTS/EMERGING ISSUES
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