BOARD OF INQUIRY INTO THE COVID-19 HOTEL QUARANTINE PROGRAM

WITNESS STATEMENT OF DR SIMON CROUCH

ROLES AND RESPONSIBILITIES

1. What is your role within the Department of Health and Human Services (the Department) and what are your key accountabilities?

1. I make this statement in response to a notice to produce from the Board of Inquiry into the COVID-19 Hotel Quarantine Program dated 12 August 2020.

2. I am a public health physician employed by the Department of Health and Human Services (the **Department**) as a Senior Medical Advisor in the Communicable Diseases Section of the Health Protection Branch.

3. Prior to the COVID-19 Pandemic, I worked on both emerging communicable disease issues and vaccine preventable diseases in the Public Health Medicine Unit, which is part of the Communicable Diseases Section. Since early 2019, I have job shared with Dr Clare Looker due to parenting commitments.

4. From late January to around 8 April 2020, I was the Deputy Public Health Commander (**DPHC**) of Operations within the Public Health Incident Management team (**PH-IMT**). That portfolio included a number of responsibilities including overseeing laboratories, border issues and human biosecurity. The primary focus was on case, contact and outbreak management.

5. On or about 8 April 2020, the PH-IMT revised its structure to better respond to the COVID-19 pandemic. Due to the enormity of the work involved in case, contact and outbreak management some of the other operational roles were transitioned to other parts of the PH-IMT. REDACTE and I became DPHC Case, Contact and Outbreak Management (**CCOM**).

6. The PH-IMT ceased to exist in about June 2020 and was replaced by a dedicated COVID-19 Division. I am seconded to that division and continue to act as DPHC – CCOM, with RE REDACTE

7. As DPHC – CCOM, my key accountabilities are to:

   (a) manage the CCOM team, which includes case identification, contact tracing, and case and close contact management;

   (b) oversee the management and control efforts relating to COVID-19 outbreaks under the Department's Outbreak Management Plan (**OMP**)[1] and occasionally lead individual Outbreak Management Teams (**OMT**). Primarily, engagement with outbreaks is via the daily Outbreak Incident Management Team meeting at noon, which I lead, where prevailing issues relating to current outbreaks are discussed and issues resolved as a team;

   (c) provide my superiors within the Department, including the Public Health Commander (**PHC**) and Chief Health Officer (**CHO**), with information about current outbreaks;

   (d) work with the other DPHCs, the PHC and CHO as part of the senior leadership team to discuss and decide actions in relation to strategic directions affecting public health; and

   (e) work with other DPHC cells within the COVID-19 Division, especially those in the Intelligence team, to respond to outbreaks.

8. As mentioned in paragraph 7(d) above, as a DPHC I am a member of the senior leadership team. This involves participating in the formation of public health advice and making contributions to the broader strategic decisions of the public health team. Informally, my colleagues and I have many conversations on public health issues, including relating to COVID-19. Formally, I also contribute to weekly meetings involving other DPHCs and other relevant staff, along with the PHC and, where his schedule permits, the CHO. For the past few months at least, these are scheduled three times a week, barring the need for the meeting to be cancelled due to urgent operational matters, with the public health command strategic leadership, chaired by the PHC. Each day has a focus on a different command area. The format allowed for a team member from the relevant section, often the DPHC, to raise relevant issues for discussion as a broader public health team.

2. To whom do you report?

9. The person to whom I formally report has changed over 2020 as the Department structure has changed. In my role as DPHC – CCOM, I report to the PHC, through to the CHO.

10. From about mid-June 2020 until about late-July, I had a dual reporting line. On operational or day-to-day matters, I reported to the Deputy Secretary of the COVID-19 Public Health

[1] Outbreak Management Plan version 1, 5 June 2020, pg 16, DHS.0001.0003.0046.

Division, Jacinda de Witts. On public health matters, I continued to report to the PHC, through to the CHO.

11. More recently, with the creation of a Deputy Secretary CCOM (a position jointly held by Professor Euan Wallace and REDACTED [2] I continue to have a dual reporting line but now reporting to the Deputy Secretary CCOM on day-to-day business and to the PHC and CHO for matters relating to public health and outbreaks.

12. Under the Department's OMP,[3] I also have reporting responsibility to brief a number of people on outbreaks. I do this by sending a daily summary outbreak report to the DHHS Agency Commander, Public Health Commander, CHO, Deputy Secretary Public Health Operations and Coordination (or Assistant Deputy Secretary), State Controller-Health, Office of the Secretary to the Department, Office of the Minister for Health and OMT members.

3. Please describe your relevant professional experience and qualifications.

13. I hold the following qualifications:

    (a) 2016 – Fellow of the Australasian Faculty of Public Health Medicine;

    (b) 2014 – The University of Melbourne, Doctor of Philosophy, Population Health;

    (c) 2010 – La Trobe University, Master of Public Health;

    (d) 2005 – Corpus Christi College, the University of Cambridge, Master of Arts;

    (e) 2005 – King's College, the University of London, Bachelor of Medicine, Bachelor of Surgery; and

    (f) 2001 – Corpus Christi College, the University of Cambridge, Bachelor of Arts - Medical Sciences.

14. I have also undertaken Public Health Emergency Management Fellowship training with the Centers for Disease Control and Prevention in Atlanta (2018) and received training in the Australian Interservice Incident Management System from Emergency Management Victoria (2016).

15. I have been employed by the DHHS as a Public Health Physician since June 2016. Prior to this, between February 2015 and May 2016, I was employed as a Public Health Medical Officer, working with the Communicable Disease Prevention and Control team on emerging communicable disease issues and vaccine preventable diseases.

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[2] Which I understand, was formalised on 14 August 2020.

[3] Above, footnote 1.

16. From February 2014 to January 2015, I worked at VicHealth, the Victorian Health Promotion Foundation, and the National Heart Foundation of Australia as a Public Health Medicine Registrar. My earlier professional roles include as Chief Investigator – the Australian study of Child Health in Same-Sex families at the University of Melbourne (2011-2014); Medical Officer at the Department of Health and Ageing (February 2009-December 2010); a Hospital Medical Officer (February 2007-January 2009); as well as earlier career clinical, research and educational roles since 1997.

17. I regularly publish and present at medical conferences in my areas of expertise and have authored and contributed to 13 peer review papers, four reports and reviews, five books/book chapters and published abstracts.

HOTEL QUARANTINE PROGRAM

4. Have you undertaken any additional or specific role in respect of the Hotel Quarantine Program? If so, please provide details, including information about dates and reporting lines.

18. As DPHC – CCOM, I have been involved in the Hotel Quarantine Program as part of the outbreak response at two quarantine hotels; the Rydges Hotel, Swanston Street, Carlton (**Rydges**) and the Stamford Plaza Hotel (**Stamford**).

19. My involvement with both of those outbreak responses was initially as Outbreak Lead, for a limited period of time and then as DPHC – CCOM where I was the direct report from the Outbreak Lead through to the PHC and the CHO.

20. Occasionally, I performed the role of PHC, to fill the absence of those usually in the role. This was normally for a day or two. On those occasions and in the capacity as acting PHC, I had some limited interactions with those responsible for running the Hotel Quarantine Program. Those interactions have been brief and have not required me to participate in any substantive decision-making.[4]

21. I have not otherwise undertaken any additional or specific role in respect of the Hotel Quarantine Program.

[4] I had one limited interaction with Operation Soteria command, involving me seeking a copy of the then draft Operation Soteria Plan in or about early April 2020 for the DCHO. However, the DCHO returned from leave and I did not have any more involvement in the Plan or the decision making in relation to it.

5. What is an "Outbreak Squad" and what is its function within the Department?

22. An Outbreak Squad performs a function under the Outbreak Management Plan.

23. Around early May, the DCHO Communicable Disease, in her capacity as PHC, worked on drafting the Outbreak Management Plan to articulate a documented framework to manage COVID-19 outbreaks.[5] I contributed to the development of this Plan. As at 14 May 2020, the OMP existed as a draft document and was used by the CCOM team from that date. The CHO approved the Plan on 5 June 2020.[6]

24. The OMP outlines the key components of the Department's management of COVID-19 outbreaks in Victoria and articulates when a response to an outbreak should be escalated and how decisions in relation to outbreak management are to be made. The OMP includes lists of actions to be taken, descriptions of how key decisions will be made and by whom and prompts additional actions. It defines public health and emergency management roles and responsibilities and articulates concise and clear actions to ensure rapid and effective COVID-19 outbreak management in Victoria.

25. The first step in the process is for a Problem Assessment Group (**PAG**) to be formed to determine whether an Outbreak Management Team (**OMT**) is required, and its composition. The OMT is made up of PH-IMT and other representatives and has the function of making decisions about how outbreaks are controlled. Each OMT is led by an Outbreak Lead who has overall responsibility for overseeing the outbreak response and reports to me and REDACTED as DPHC - CCOM.

26. An Outbreak Squad is a squad of two or more relevant professionals who are deployed to respond to COVID-19 outbreaks and undertake site visits as part of outbreak response. They do this in accordance with directions provided by the OMT, communicated through the Outbreak Squad Coordinator.

27. The Outbreak Squad members are made up of Department staff, who are not members of the CCOM team. The Outbreak Squad team members are usually Department employees, employed to function as squad members, who report to REDACTED as Outbreak Squad and Operations Director and, until recently, Jacinda de Witt as Deputy Secretary. So, while I am aware of their actions, they do not report to me.

[5] Prior to the OMP, in early February 2020, the public health team commenced working within an incident management framework and prepared and maintained an Incident Action Plan (**IAP**). The IAP addressed outbreak management briefly but did not prescribe the specific steps taken in response to an outbreak.

[6] Between 14 May 2020 and the CHO's approval of version 1 of the OMP on 5 June 2020, revisions were made to the draft OMP based on experiences operating within its framework. However, the general process documented in the approved OMP remained substantially unchanged since 14 May 2020. The structure of the outbreak management reports and some content in relation to outbreak squads changed. The final plan, as approved, is Outbreak Management Plan version 1, 5 June 2020, DHS.0001.0003.0046.

28. The role and focus of an Outbreak Squad ultimately depends on the nature of the particular outbreak. The general role and focus of the squad is described in Appendix 1 of the OMP[7] as follows:

> *"… Squads will facilitate rapid testing, infection prevention and control, isolation of close contacts and support and relief to ensure effective containment of public health risks. The squads will deliver a dedicated focus to ensuring testing, contact tracing and deep cleaning is carried out as soon as a potential outbreak is identified. That includes delivering rapid mobile testing at outbreak sites.*
>
> *The squads provide rapid response mobile expertise of infection prevention and control specialists, nurses, environmental hygienists and others as required to respond to the circumstances of the outbreak.*
>
> *In addition to the outbreak control squads, the public health team will increase infection prevention and control activities in relation to COVID-19, including a workforce of infection control outreach nurses employed to focus on both infection prevention and control preparedness in high risk settings.*
>
> *The squads will work within each OMT. …".*

29. The composition of an Outbreak Squad depends on the particular circumstances being addressed. A squad may contain as few as two individuals, or a larger team of people as described in Appendix 1 of the OMP.

6. **What has been the role of "Outbreak Squads" in relation to the Hotel Quarantine Program?**

30. As far as I am aware, Outbreak Squads did not have direct involvement in the Hotel Quarantine Program while it was being established. Rather, their role in the context of the Program was incidental to the responses of the OMT to outbreaks, including the Rydges and Stamford outbreaks.

31. The response to both the Rydges and Stamford outbreaks involved attendance by Outbreak Squad nurses to inspect and report back to the OMT on the sites. Outbreak Squad nurses also revisited both sites on a number of occasions to ensure their recommendations were being followed.

32. The OMT used the Outbreak Squad reports to guide control measures. For example, in relation to both the Rydges and the Stamford outbreaks, the Outbreak Squad nurses reported to the OMT that they had observed poor hand hygiene, personal protective equipment (**PPE**) and IPC practices among hotel and security staff. The OMT acted on those

[7] Above, footnote 1.

reports by deploying the Outbreak Squad to provide education and training to hotel and security staff at each of those hotels, and at other hotels in the Hotel Quarantine Program.

33. I understand that the Outbreak Squad visited the Rydges and Stamford to instigate, via Operation Soteria command, a full clean of the settings and to monitor performance of cleaning at those settings.

7. How does the Outbreak Squad perform its functions?

34. The Outbreak Squad performs its functions at the direction of the Outbreak Squad Coordinator, who is a member of the OMT and is responsible for the coordination and logistics of the Outbreak Squad deployment. In broad terms, they check on IPC measures in place and report back to the OMT for the OMT to make decisions on controls. However, I am not aware of the precise manner in which the Outbreak Squad performs its functions and do not know, for example, the protocols under which they operate, as those functions fall outside of the CCOM team.

35. In the context of the Outbreaks at Rydges and Stamford, the Outbreak Squads were comprised of nurses who had training in IPC. They were referred to as Infection Prevention Control Outbreak Nurses (**IPCON**). The nurses attended the outbreak settings, made inspections, identified risks, reported back to the OMT and subsequently acted on behalf of the OMT to implement actions to address those risks. For example, after their initial visits, I recall that IPCON returned to the Rydges to assess and monitor cleaning standards.

36. The Outbreak Squad's information was reported to the OMT, who acted on it to put in place control measures. The focus of the OMT's decisions is primarily on controlling an outbreak. During this process information about how the outbreak may have been transmitted will be obtained.

COVID-19 PRECAUTIONS

8. Please describe your knowledge, as at 1 May 2020, of the ways that COVID-19 could be transmitted (including, if relevant, transmission by droplets, aerosols and fomites).

37. The understanding of COVID-19 continues to develop. As this has happened, so too has my understanding of the virus and its modes of transmission. I am not convinced that we yet fully understand how it is transmitted. It is also somewhat difficult now to pinpoint my knowledge about the virus at any particular date, such as at 1 May 2020.

38. At the beginning of the epidemic and since then, I have always understood that COVID-19 can be transmitted by droplets. However, the consensus on the infectious period has changed. When novel coronavirus (as it was then known) was emerging in early 2020, it was

thought to only be transmitted by droplet transmission from a symptomatic case. This expanded to transmission up to 24 hours prior to symptom onset and then up to 48 hours prior to symptom onset. As at 1 May 2020, I knew COVID-19 could be transmitted by droplets and I believe I knew at that time, that transmission could also occur within 48 hours prior to symptom onset.

39. Fomite transmission is when a droplet contaminates a nearby area, hand or clothing, that if another person touches, and then touches their own face (mouth, nose, eyes), they can be infected. We initially thought that while fomite transmission was possible, there was not much evidence that it was a significant source of infection, other than in the context of contaminated PPE. I believe, to the best of my ability to identify my knowledge at a specific date, that on 1 May 2020 I held the view that while fomite transmission from surfaces (as opposed to people's hands or objects) was possible, there was not significant evidence of it happening in outbreak settings in Victoria prior to that date and I did not consider it a significant source of transmission for local outbreaks. When I considered the Rydges outbreak in late May, it was the first time I considered fomite transmission as a likely source of transmission.

40. I also believe that as at 1 May 2020, I knew that aerosol transmission was recognised as a possible transmission. However, while airborne transmission of COVID-19 may occur during aerosol-generating procedures, where certain features mean that smaller droplets can be become suspended in the air and linger for longer, this was not considered to be a significant risk in non-clinical, non-hospital settings.

9. As at 1 May 2020, what precautions would you have recommended in a quarantine environment where there were possible or suspected cases of COVID-19? Please address:

(a) Location of quarantine facility;

(b) Physical distancing;

(c) Cleaning (including cleaning of communal spaces);

(d) Staffing arrangements;

(e) Use of personal protective equipment;

(f) Release of detainees from quarantine for breaks;

(g) Management and supervision of staff.

41. My role did not require me to consider these matters in detail, because my focus is on controlling an outbreak once it has occurred and I was not involved in the establishment of the quarantine program. There are other officers of the department whose focus is on infection prevention.

42. If I had considered these matters on 1 May 2020, my opinion about what precautions I would have recommended in a quarantine environment would be for the relevant IPC guidelines, which I identify below in answer to each topic, to be followed. In respect of each of the matters, I provide the following further views:

(a) *Location of quarantine facility* – in my view, a hotel is not an unreasonable place for quarantine of returning travellers, provided that all appropriate guidelines regarding IPC and PPE were in place and followed. Informally, I would have agreed with colleagues, if it came up, that having a hot hotel (namely a hotel where COVID-19 positive travellers were accommodated) was also a good idea in order to minimise the risk of further transmission to other returning travellers;

(b) *Physical distancing* – it would be necessary to ensure appropriate physical distancing was observed and that, where possible, travellers and confirmed cases were not sharing rooms (other than in family groups) because this close contact would increase the risk of transmission. Even in the context of family groups, we were clear that sharing rooms would require an extension of quarantine if any person in the family became unwell. Before the Rydges outbreak, but also as part of the response to the Rydges outbreak, we have offered alternative accommodation to positive cases that could not isolate properly in their residence;[8]

(c) *Cleaning* (including cleaning of communal spaces) – as above, it would be important to follow the appropriate guidelines and advice about cleaning standards. For general cleaning it would not need to be hospital standard. The Department has guidance[9] on its website on cleaning, which is what I usually refer to. Clearly the cleaning of a case's room and areas they have been in need to be thorough. Again, in response to the Rydges outbreak, I address this below;

(d) *Staffing arrangements* – to ensure staff were properly trained and followed appropriate guidelines. In hindsight, it became apparent that security guards have not had the adequate understanding of necessary precautions. Poor health literacy and language barriers in some cases, working multiple jobs, and employment and personal situations limiting a person's ability to take leave when unwell created risks of people working when unwell or failing to isolate when directed to do so. In addition, guards working in the quarantine hotels who were also working in other employment created the risk of transmission across workplaces;

(e) *Use of personal protective equipment* – to follow the relevant guidelines. I know that there has been debate about whether gloves should be worn and the advice about masks has changed over time. As at 1 May 2020, I preferred the view that in a non-clinical setting, regular hand hygiene is preferable to gloves because often people

[8] I reiterated this policy in my email copied to Prof Sutton on 6 July 2020, DHS.5000.0036.2492.

[9] See, for example, Cleaning and disinfecting to reduce COVID-19 transmission, Tips for non-healthcare settings – 20 March 2020, DHS.5000.0100.0441.

wear the same gloves all day, and so they become contaminated and become sources of transmission, if not changed after each interaction. It means risks are not being mitigated due to an incorrect understanding of the use of the equipment. In regard to masks, I would have recommended the use of surgical masks with regular changing every few hours for any staff that will have contact with returned travellers;

(f) *Release of detainees from quarantine for breaks* – to the extent that this question asks for my view on short, fresh air breaks (as opposed to permissions for travellers to leave quarantine), provided that appropriate IPC procedures are observed, it is not unreasonable to let persons in quarantine have fresh air breaks if necessary for wellbeing. Appropriate IPC measures would include frequent hand hygiene for both the returned traveller and the guard, or other person, escorting them; and

(g) *Management and supervision of staff* – that there be appropriate management and supervision of staff and that they all follow the relevant IPC and PPE guidelines.

10. Would your answer to question 6 be different if there were known positive cases in quarantine? If so, please specify how your response would differ.

43. If there were known positive cases in quarantine, my response to question 9 would not change. That is, the same approach should be adopted for all quarantined environments. People are quarantined because it is not known whether or not they are infected with COVID-19. This means one should assume they *are* infected. The unknown status of people in quarantine settings requires the same level of care and vigilance to be exercised to avoid potential transmission.

44. The factors raised in Question 9 are all relevant to Rydges, which was used exclusively for returned travellers who had tested positive for COVID-19, and to any hotel used in the Hotel Quarantine Program. Any person returning from overseas could be infected with COVID-19. This is why the Hotel Quarantine Program was implemented. As people are naturally more cautious around known positive cases, there is actually an argument that greater precautions should be taken in other hotels where it is not known whether or not the cases are positive, to overcome any tendency towards complacency.

OUTBREAK AT RYDGES HOTEL, CARLTON

11. What was your involvement (if any) in investigating and responding to the outbreak of COVID-19 at Rydges Hotel, Carlton?

45. I was notified of the positive case in a staff member at the Rydges on 26 May 2020.

46. I immediately convened and presided over the PAG that day and determined that an OMT should be formed to respond to the Rydges outbreak. I informed the PHC and CHO of that decision. An OMT was also convened on 26 May 2020.

47. I acted as Outbreak Lead for the first meeting of the OMT, on 26 May 2020. After that first OMT meeting, the Outbreak Leads became (on their respective rostered on days) Dr Sarah McGuinness, Dr REDACTED and Dr REDACTED

48. I remained involved by participating in daily, midday meetings with the OMT where particular concerns could be raised with me. The Outbreak Lead would also raise any concerns they had with me directly at other times. Mostly, I would address those concerns and would escalate important matters to the PHC and the CHO.

49. I also note that the Rydges Outbreak was managed in accordance with the draft Outbreak Management Plan up to 5 June 2020, and under the Outbreak Management Plan after that date.[10]

12. In your view, were there factors that:

(a) increased;

(b) did not sufficiently guard against,

the risk of transmission of COVID-19 at Rydges Hotel, Carlton, especially in light of the fact that it was (during the relevant periods of April-July 2020) intended to be a premises to facilitate the quarantining of returned passengers who were suspected or at risk of carrying the SARS-CoV-2 virus? If so, please provide details.

50. I cannot say that any individual factor increased the risk of transmission at the Rydges Hotel over other relevant factors.

51. While the genomics I received from Dr Alpren[11] indicated that the source of the outbreak was a family quarantined in the hotel, we have not been able to definitively identify how the infection spread from that family to either the first case to be diagnosed with COVID-19 (who is referred to as **case 1**) or to those later also found to be infected. We also could not determine if case 1 was the first person to actually become infected from the family and then

[10] Outbreak Management Plan – PHC Endorsed, 27 May 2020, DHS.5000.0036.5247

[11] Email from Dr Alpren to me and REDACTED 30 May 2020, DHS.0001.0003.0014.

infected other staff members, or if case 1 was infected from staff members that had been infected earlier than case 1 but tested COVID-19 positive after case 1 (or were never tested).

52. I formed an early view that the infection could have spread through fomite and poor cleaning practices or through face-to-face contact with the quarantined family.

53. The final Outbreak Management Report[12] states the issues and risks at the Rydges as follows:

> "*There is a high risk of transmission from COVID positive cases being detained in the hotel to the staff members working at the hotel. This is due to the inadequate education and cleaning procedures that are currently in place. The cleaning duties of communal areas were the responsibility of the security staff; specifically, for the elevators used to transport COVID positive cases. Because of this, there is a high likelihood of fomite spread from poor cleaning products being utilised, poor PPE used by security staff, and a lack of education surrounding cleaning practices. At risk populations include staff members from the hotel, DHHS staff, nurses, and various other HCWs [healthcare workers] that were onsite to attend to the people in hotel detention. Outside of the hotel, there has been onward household transmission to partners and housemates*."

54. The Infection Prevention and Control Outbreak Squad Nurse emailed me after her visit to the Rydges and raised a number of concerns, including:[13]

(a) general hotel and security staff were doing hotel cleaning, as opposed to dedicated cleaning staff or contractors. This included that case 1 was doing cleaning duties (cleaning the reception and function rooms, toilets, a coffee machine and the elevator used for COVID-19 cases). Further, the food and beverage manager removed double bagged rubbish from COVID-19 positive case rooms;

(b) case 1 was reported to wear a mask and gloves all the time as a way of protecting themself, but there were concerns about whether they were correctly using this equipment, by changing it regularly and using the approved mask;

(c) the cleaning equipment being used did not include bleach and it was not clear whether the cleaning cloths were being disposed of and replaced;

(d) at the time of the Outbreak Squad visit, a deep clean had not occurred; and

(e) security staff were constantly wearing vinyl gloves, non approved masks, and using unidentifiable hand alcohol/gel. They needed urgent education in relation to proper PPE usage.

[12] COVID-19 Outbreak Management Report Rydges on Swanston, 13 July 2020; DHS.0001.0036.0145

[13] Email copied to me on 27 May 2020, DHS.0001.0021.0025.

55. In my view, these factors had not been properly guarded against in relation to the risk of COVID-19 transmission at the hotel.

56. I accepted the IPCON's report to me and it informed our next steps and actions. I was not involved in making all of those decisions but was aware of the concerns raised above in paragraph 54 and the key steps to be taken, identified below in paragraphs 72 to 79. The concerns raised were sufficient for us to then consider the entire site as an exposure site, and that informed how broadly we managed the contact tracing and the number of staff that had to quarantine.

57. In addition, the way in which security guards interacted with each other and other staff at the Rydges created risks of transmission. Poor use of PPE and IPC and the cleaning regimes I described above were all factors that may have contributed to a risk of transmission.

58. These factors, however, do not tell us how each of the individual cases became infected. We do not know if it was fomite transmission or if one person was infected that way and then it was face to face transmission. It raises possibilities of transmission but does not demonstrate what the actual transmission event was.

13. Did any member(s) of the Outbreak Squad interview, question or speak directly to the:

(a) index case(s); or

(b) epidemiologically and/or genomically ascribed source(s),

of the transmission which precipitated the outbreak of COVID-19 at Rydges Hotel, Carlton? If so, what if anything did those discussions reveal about the circumstances of any potential transmission events?

59. The Outbreak Squad speak to staff and others managing the site, but do not directly speak with confirmed COVID-19 cases linked to the outbreak in order to investigate the outbreak.

60. The Case and Contact Lead, as part of the OMT, is responsible for the management of individual cases and contacts. These leads work in the CCOM structure, that sits under and reports to me. The contact tracers interview cases and those who may have been exposed as a close contact.

61. There are protocols and standard operating procedures as to how we manage any particular case. On an individual basis, case management is relatively standardised and we conduct the same interview for all cases, according to the standard CCOM protocols.[14] All close contacts receive the same information and guidance, which is based on their specific exposure dates.

[14] See, for example the Coronavirus disease 2019 (COVID-19) Case and Contact Management Guide, version 11, 29 April 2020, DHS.0001.0067.0001. This guide is updated from time to time.

62. In most situations, a single case interview will rarely give you a certain answer to the question of how the person became infected, but it can suggest a particular mode of transmission. The CCOM contact tracers interviewed the relevant cases to try to identify possible modes of transmission but are only ever able to identify a likely source rather than being definitive.

63. The conversations with the first case outside of a traveller and the subsequent cases contributed to our hypothesis for transmission but did not identify precise circumstances of transmission. The conversations revealed that staff members had worked overlapping shifts and this enabled us to then speak to those other staff members who had worked on the same shifts. Working on overlapping shifts would allow contact to the same environmental exposure or to the case exposure. It contributed to our understanding that there was a possibility of risk of transmission by exposure to the (entire) hotel site, as we did not know exactly where transmission occurred.

64. Genomics was also helpful in this case because it confirmed that all of the infections were found to have come from one family of returned travellers. We then were able to consider the overlap between the movements of that family and hotel or security staff. I asked the CCOM team to look into the possibility of that overlap but notwithstanding that consideration, we were still not able to identify any positive circumstance of transmission.

14. Was the Outbreak Squad able to determine the likely:

(a) mode(s) of transmission;

(b) event(s) in which transmission occurred,

(c) precise location(s) of transmission,

in respect of the outbreak at Rydges Hotel, Carlton?

65. I have partly answered this question above, in answer to question 13.

66. While we were not able to identify the precise mode or circumstance of transmission, we were able to identify a possible hypothesis.

67. The Outbreak Management Plan, which contributes to the final Outbreak Management Report, includes a hypothesis to help guide actions. The purpose of hypothesis formation is to guide activities and focus the investigation. At the same time, the efforts focus on control rather than working out precisely what happened. In my email to the PHC and CHO notifying them of the outcome of the OMT meeting on 26 May 2020[15], I expressed the following hypothesis:

"*Transmission of SARS-CoV-2 has occurred at the workplace from a COVID case in*

[15] Email from me to Dr Romanes and Prof. Sutton, 26 May 2020, DHS.5000.0036.5306.

quarantine (either directly, via fomites or through contact with an unidentified intermediary staff case)."

68. My hypothesis has remained the same throughout the investigation into the outbreak and was expressed in the same form in the final Outbreak Report. My hypothesis on fomite transmission meant that we needed to do more targeted IPC measures and cleaning.

69. Further, as I discuss above, while we know that an employee, case 1, was the first staff member to be diagnosed with COVID-19, we do not know that they were necessarily the first case to be infected. There may have been asymptomatic cases that we did not identify or subsequent cases that while diagnosed later, had been infected prior to case 1.

70. The outbreak investigation involved the following steps relevant to this question.

71. On 26 May 2020, the Operation Soteria EOC was informed that case 1 had started feeling unwell on 25 May 2020 and had been tested for COVID-19 by their general practitioner. During the course of 26 May 2020, case 1's test was confirmed as positive and they were identified as case 1.[16]

72. On the same day, 26 May 2020, I learnt of case 1. I was informed of the Rydges' employee's shifts worked while potentially infectious and that a list of staff rostered at the same times was being prepared.[17] These steps were taken to try to identify possible modes or events of transmission, as well as possible close contacts.

73. That night, at 8.10pm, I emailed the PHC and the CHO to provide an overview of case 1.[18] In that email, I expressed my view that it was likely that case 1 had become infectious from a resident in hotel quarantine (either directly, via fomites or through contact with an intermediary, unidentified staff case). I also described the actions that were going to occur, including that case 1 and their contacts were to remain in isolation/quarantine and that we would begin investigating the site and case 1. This included considering case 1's duties, the site's floor plan, case 1's interactions with guests and their roster to determine interactions with other personnel. We would also commence testing of all personnel working coinciding shifts and confirm that personnel were not working across other sites. The areas where case 1 had worked were to be cleaned.

74. During 27 May 2020, as part of this investigation and at the OMT's request, infection prevention control nurses from the Department visited Rydges and reported back to the OMT.[19]

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[16] Sandy Austin, Deputy Commander Hotels advised me, in my CCOM role of case 1. Email from Sandy Austin to me dated 26 May 2020, DHS.5000.0016.5475; email from Dr McGuinness to me, 27 May 2020, DHS.5000.0105.8087.

[17] Ibid.

[18] Above, footnote 15

[19] Email copied to me on 27 May 2020, DHS.0001.0021.0025.

75. On 27 May 2020, a second case was identified (**Case 2**). Case 2 worked at Rydges in addition to two other places.[20] They had worked on 23 May 2020 at the same time as case 1. As to case 2's other employment, CCOM staff began to contact any close contacts and map the locations within the hotel where they worked. As case two worked an overlapping shift with case 1, it is likely that they shared the same transmission source.

76. Also on 27 May 2020, I emailed the PHC and the CHO, at 2.53pm with the daily outbreak update including detail about the 2 Rydges cases (Cases 1 and 2) and that no close contacts had been identified at the workplace, but both cases had household contacts, that testing had been recommended for all staff who attended Rydges for more than 30 minutes on or after 11 May 2020 and testing had commenced, that a commercial clean had been arranged, and an outbreak investigation was underway.[21] That afternoon, I received an update about what was understood about Case 1 and 2.[22]

77. On Saturday, 30 May 2020, 4 new cases were identified. Given the long incubation period for COVID-19 it is possible that these cases share the same, or similar, exposure events. That evening, REDACT emailed the Public Health Commander and me the daily outbreak summary, including the snapshot of the Rydges outbreak.[23] Also on that evening, the Department's epidemiologist within Intelligence, Dr Alpren, sent REDACT and me the Case 1 sequencing report, indicating that case 1's COVID-19 genomic sequence clustered with a family of returned travellers that were COVID-19 positive and had been transferred to the Rydges from another hotel.[24]

78. On Sunday morning, 31 May 2020, a further three cases were identified. Also on that morning, the OMT held its sixth meeting. I understand from the minutes of that meeting (that I did not attend), that the actions arising from that meeting included for Intelligence to follow up on genomics, the outbreak squad to report on environmental assessment, and an IPC lead from a health service to be embedded.[25]

79. By Sunday evening, there were 8 cases for the Rydges outbreak. I emailed the Deputy CHO, Dr van Diemen, the outbreak summary email recording new information. The latest case was a close household contact, all staff were being re-tested prior to completing 14 days quarantine, and due to Rydges staffing issues, alternative accommodation was being sought.[26]

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[20] Email from Dr McGuinness to me, 27 May 2020, DHS.5000.0105.8087.

[21] Email from me to Dr Romanes and Prof. Sutton, 27 May 2020, DHS.5000.0036.4487.

[22] Email from Dr McGuinness, 27 May 2020, DHS.5000.0105.8087.

[23] Email from REDAC to me, Dr Romanes and Prof. Sutton, 30 May 2020, DHS.5000.0114.7070.

[24] Email from Dr Alpren to me and REDAC 30 May 2020, DHS.0001.0003.0014.

[25] Email copied to me, 31 May 2020, DHS.5000.0094.6312.

[26] Outbreak Summaries, 31 May 2020, DHS.5000.0072.0301.

80. On Monday, 1 June 2020 at 12.30pm, the OMT held its seventh meeting. The minutes record[27] the details of Case 8 as a household contact of Case 5, with symptom onset on 28 May 2020 and in isolation at Rydges since 31 May 2020. From around this date, contacts were household or close contacts of confirmed cases and so the circumstances in which they became infected did not help us to understand the mode of transmission at the Rydges.

81. On the evening of 1 June 2020, I emailed the Outbreak Summary to the PHC and CHO recording that Rydges cases numbered 12, with the 4 new cases linked to Rydges being household close contacts.[28] I also confirmed that my teams had been offering cases alternative accommodation where it was difficult for them to isolate in their residence.[29]

82. On 3 June 2020, I learnt that genomics on case 2 identified that it clustered with case 1 (and the family in quarantine at the Rydges).[30] I informed the DCHO to of that link. The symptom onset for cases 1 and 2 was on same day, therefore it is likely that they had the same acquisition source. Work was ongoing to trace the family's movements while they were at the hotel. As the family was in the hotel from 16 May 2020 onwards, transmission could have occurred from that date.[31]

15. In respect of meetings concerning the outbreak at Rydges Hotel, Carlton conducted by the Outbreak Squad, were notes or minutes taken? If so, please identify when such meetings occurred and who was present at them. In addition please provide copies of any notes or minutes of those meetings.

83. There were fifteen Outbreak Management Team meetings held in relation to the Rydges outbreak. Other than the first meeting, I did not attend, rather they were led by my Outbreak Leads.

84. These meetings were almost daily and were held on 26 May 2020 (6:30pm), 27 May 2020 (11:30am), 28 May 2020 (10:00am), 29 May 2020 (10:00am), 30 May 2020 (10:00am), 31 May 2020 (10:00am), 1 June 2020 (12:30pm), 2 June 2020 (1:00pm), 3 June 2020 (1:00pm), 4 June 2020 (1:00pm), 5 June 2020 (1:00pm), 6 June 2020 (1:00pm), 8 June 2020 (1:00pm), 11 June 2020 (12:00pm), 12 June 2020 (1:00pm).[32] The identity of those who participated in the meetings is generally recorded in the minutes of the meeting where they have been made, but not always.

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[27] I did not attend, Minutes of OMT meeting, 1 June 2020, DHS.5000.0090.0269.

[28] Outbreak Summaries, 1 June 2020, DHS.5000.0036.4473.

[29] Email chain ending in email from me to Dr van Diemen, 1 June 2020, DHS.5000.0121.1939.

[30] Outbreak Summaries, 3 June 2020, DHS.0001.0012.1125.

[31] The minutes record that this was discussed at the OMT meeting on 4 June 2020. Minutes of OMT meeting, 4 June 2020, DHS.5000.0093.8281.

[32] DHS.5000.0105.7824 (28 May 2020); DHS.5000.0072.7622 (29 May 2020); DHS.5000.0124.8365 (30 May 2020); DHS.5000.0090.0269 (1 June 2020); DHS.5000.0093.6261 (3 June 2020); DHS.5000.0093.8281 (4 June 2020); DHS.5000.0093.5729 (5 June 2020); DHS.5000.0093.8525 (6 June 2020); DHS.5000.0093.7866 (11 June 2020); DHS.5000.0093.6238 (12 June 2020).

HOTEL QUARANTINE PROGRAM

16. Did you have any reservations about any aspect of the Hotel Quarantine Program:

(a) generally;

(b) as administered at the Rydges Hotel, Carlton,

at any time? If you did, what were your reservations, and to whom, if anyone, did you express them?

85. I did not have any significant reservations about the Hotel Quarantine Program generally, or as administered at the Rydges, prior to the Rydges outbreak.

86. Prior to the Rydges outbreak, I was aware of logistical challenges on days when hundreds of people were released from hotel quarantine, particularly where some members of that cohort of returned travellers due to be released from quarantine had tested positive for COVID-19 or had their quarantine periods extended (due to new exposure a confirmed case while in quarantine). These challenges in working with the Operation Soteria team were largely resolved by the time the Rydges outbreak occurred.

FURTHER INFORMATION

17. If you wish to include any additional information in your witness statement, please set it out below.

87. Overall, I think the outbreak response to the Rydges and Stamford outbreaks was thorough and closely aligned with the OMP.

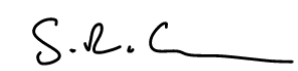
88. However, a significant challenge we faced in responding to these outbreaks was that obtaining accurate information from cases my team interviewed was sometimes challenging. These challenges included language barriers, mistrust of government and a lack of understanding about the importance of precise contact tracing by cases. A single staff member getting infected does not automatically lead to a community outbreak, but it was much harder to put control measures in place when the information gathered from cases and appropriate response from close contacts is not optimal.

89. One of the most serious cases of non-disclosure by a close contact was of their paid work. Rosters later revealed that they had worked as a security guard at the Stamford. This impeded the investigation and response to the Stamford outbreak. There were also individuals associated with the Rydges outbreak who made representations about their living arrangements. In one case, the case did not disclose having a housemate. In another, the case said he lived alone in a granny flat when in fact they shared a room with someone else. I understand why the cases may have not been forthcoming, but it remained a challenge and undermined our control efforts.

Signed at Melbourne

in the State of Victoria

on 21 August 2020



Dr Simon Crouch