Coroners Act, 1996
[Section 26(1)]

Western  ***Australia***

RECORD OF INVESTIGATION INTO DEATH

Ref No: 24/13

I, Dominic Hugh Mulligan, Coroner, having investigated the death of ***Allegra Amelie SCAFIDAS****, with an Inquest held at Perth Coroners Court on 4-7 June & 6-7 August 2013, find that the identity of the deceased person was* ***Allegra Amelie SCAFIDAS*** *and that death occurred on 5 May 2010, at Princess Margaret Hospital as a result of* ***Pneumococcal Meningitis,*** *in the following circumstances:*

Counsel Appearing :

Ms K Ellson assisted the coroner
Mr T Offer (instructed by Vertannes Georgiou) appeared on behalf of the family
Ms F Vernon (instructed by T Biddle, Norton Rose Fulbright Australia) appeared on behalf of Medibank Solutions
Mr J Jobson (instructed by John Cowell, Healthdirect) appeared on behalf of Healthdirect Australia
Ms W Gillan (instructed by T Biddle, Norton Rose Fulbright Australia) appeared on behalf of Nurse D Ison

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INTRODUCTION

1. I have had the advantage of reading counsel assisting, Ms Ellson's, submissions. She very succinctly sets out the relevant background. I have adopted, with some modification, a portion of her submissions below:

2. Allegra Amelie Scafidas was born on 19 October 2009 to Ms Nhon Vo and Mr Elias Scafidas. She was their second child.

3. In the time leading up to her death, Allegra was generally healthy. She had never been unwell, was meeting her developmental milestones and was up to date with her vaccinations.[1]

4. On 28 April 2010, Ms Vo had her pregnant sister staying with her. Her sister looked after Allegra while she and her son set up a cot.[2] Allegra was very settled and her sister did not appear to have any trouble with her.

5. However, at about 3.00pm, Allegra appeared to be unwell. Ms Vo had taken her daughter shopping and was putting her into a baby carrier when Allegra arched her back and 'projectile vomited' everywhere. She had just had a bottle of milk and so her mother was not that concerned -- she was a '*vomity baby*', although Ms Vo had only ever seen her '*projectile vomit*' once before. Ms Vo cleaned her up and took her home to change her clothes. Before she took her home, she vomited again, but only a little bit more. She wasn't crying and didn't seem to be in any pain. After changing her, Ms Vo took her back into the city and went shopping. Allegra stayed very quiet, sleeping, not making any noise. Normally, in the afternoon, she would play and would be awake from about 2.00pm until about 7.00pm.[3]

6. Ms Vo left the shops again at about 4 or 4.30pm. In the car on the way home, Ms Vo and her sister talked about

[1] t8
[2] t31
[3] t32

whether to take Allegra to hospital. According to Ms Vo, she felt Allegra had '*projectile vomit[ed] more than normal*' and because '*she was a bit too peaceful, too quiet*' .[4]

7. Ms Vo decided not to wake her, and took her home. They arrived home at about 6.45pm, and Ms Vo put her daughter in her cot. Allegra settled down without any issues.[5]

8. At about 8.00pm, Ms Vo asked her sister to prepare some formula for her and to feed Allegra. She hadn't eaten anything since she had vomited earlier in the day. While she was sleeping, Ms Vo heard her groan and asked her sister to check on Allegra and prepar a feed for her. Ms Vo's sister took her temperature with an infra-red no-touch thermometer when she was in her room. It was 38.9°C[6] (normal being generally 37°C[7]) and Ms Vo decided to give her some Panadol. Ms Vo's sister fed Allegra on her lap. Allegra took the Panadol and her feed, but as soon as she finished her bottle, which was about five or ten minutes later, she vomited it all up.[8] Her temperature lowered, to 37.6°C.[9]

9. At about 8.15pm, Ms Vo put her daughter down to sleep on her stomach. Her son needed to go to sleep and would only go to sleep in the car, and so Ms Vo said she would take him for a drive until he fell asleep. Before she left, she checked on her daughter and noticed her breathing was shallow and rapid. This was unusual for Allegra.

10. Ms Vo left with her son, and returned between 8:45pm to 9pm and asked her sister if Allegra had woken up. She had, but her sister had settled her back down. Ms Vo checked on her again and noticed she was still warm and her breathing was rapid.[10] It was more rapid than when she had left the house. In Court, Ms Vo described her breathing as *'it was like she couldn't get enough air, fast enough... but*

[4] t32-33
[5] t36
[6] t51
[7] t108
[8] t37; t39
[9] t51
[10] t40

it was just that she wasn't taking enough in and so she had to breathe faster to get the air in'.[11] Ms Vo had never seen Allegra breathe that way before. At the same time, Allegra was whimpering on and off, like a puppy, making an almost whiney, whimpering noise.[12]

11. Ms Vo took Allegra's temperature and it was 38.8°C.[13] She didn't want to give her more Panadol, because she had only given her some at 8.00pm and she didn't know how much had stayed down. Ms Vo took most of her blankets off and made sure there was nothing in her cot that might harm her and left her to rest.

12. At about 9:25pm Ms Vo returned to find Allegra still breathing in a fast and shallow way, and noticed she had started whimpering more. It was a little bit louder and more frequent.[14]

13. Ms Vo became concerned that she was coming down with something and she thought about going to the hospital, or calling Healthdirect.[15]

14. On 28 April 2010 at 9.27pm (western standard time), or 11.27pm (eastern standard time), Ms Vo rang Healthdirect for advice.

15. When she called Healthdirect she spoke to Ms Dianne Ison a nurse registered in Western Australia, but operating a stand alone computer, connected in her own home, located on the other side of the country on the New South Wales north coast.

16. The call was recorded and was played several times during the inquest.[16]

17. Among other things, Ms Vo advised Nurse Ison that her baby was not well; her breathing was shallow; she had been

[11] t40
[12] t41
[13] t40; t41; t51
[14] t42
[15] t44
[16] Ex 8; t44

throwing up for six and a half hours; had a fever of 38.8°C; and said that "*she keeps whimpering that sort of thing*". In addition, Ms Vo informed Nurse Ison that her baby had not had any fluid since lunch time, was normally a very healthy girl, and was very unsettled. [17]

18. Among the questions Nurse Ison asked of Ms Vo were whether her daughter was acting like she was in a lot of pain, and whether she was crying a lot. Ms Vo reported that her baby was not experiencing diarrhoea. Ms Vo and Nurse Ison discussed Allegra' eating and hydration and the fact that she had had Panadol and had brought it back up again. Ultimately, Nurse Ison indicated that it sounded like Allegra had a tummy virus and told Ms Vo to monitor her daughter, to slowly hydrate her, and to call back if her temperature increased to 39.5°C. [18]

19. Throughout the evening, Ms Vo monitored her child. Her temperature was taken every thirty minutes, but it did not reach 39.5°C. [19] Her breathing did not change and she maintained the same sort of temperature Ms Vo had reported earlier. [20]

20. Ms Vo followed Nurse Ison's advice. She trusted what she was told and, having no medical background herself, had no reason to argue with the advice she had been given. [21] Having dealt with Heathdirect before, Ms Vo believed that '*they must know what they are talking about. They would have told me to go to hospital if they'd felt it was an emergency, or they'd felt she needed more help than I could give her, or that the nurse could give her over the phone*'. [22]

21. Ms Vo stayed up with her daughter all night. She kept running in and out to check her temperature. There were no changes. At about 3.00am Allegra stirred but Ms Vo was able to settle her quickly on her shoulder. Allegra's

[17] Ex 1, Tab 1, p 2
[18] Ex 1, Tab 1, p 2
[19] Ex 1, Tab 1, p 2
[20] t46
[21] t47
[22] t55

breathing was the same -- fast and shallow.[23] Ms Vo did not call Healthdirect back because nothing changed. Her temperature stayed at 38 or so, but moved to about 39.1°C[24] at about 5.00am. Ms Vo then gave her daughter some Panadol which made her temperature drop dramatically -- to about '37 something'.[25] To Ms Vo, it seemed as though her fever had broken.

22. According to Ms Vo, based on the advice she received from Nurse Ison, she was to take her baby to hospital if her breathing became very laboured, or if her temperature reached close to 39 or 40°C.[26]

23. At 8.45am the following morning (29 April 2010), Ms Vo noticed her baby had turned blue around the mouth, her skin had taken on a yellow colour, and a rash had developed on her thighs. She was still breathing in a fast and shallow way, but she was also grunting -- another noise she had never made before.[27] The last time she had seen her baby properly awake was at about 3.00pm the previous day.[28]

24. Ms Vo called an ambulance, which arrived at 9.07 am and took Allegra to Princess Margaret Hospital (PMH).[29]

25. Allegra presented at PMH, with fever and mottling, intermittent vomiting since the day before and was reported to have been hot and grunting overnight.[30] On examination, she had a temperature of 38.2°C, a pulse of 190 and a respiratory rate of 90. Her oxygen saturation was 100% and her blood pressure was 97/64. She was pale and lethargic and mottling was observed on her legs and lower back. Her capillary response peripherally was slow, but good centrally. No rash was noted.[31]

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[23] t47
[24] t51
[25] t48-t49
[26] t48
[27] t48; t50; Ex 1, Tab 1, p 2
[28] t51
[29] Ex 1, Tab 1, p 2
[30] Ex 1, Tab 6, p 1
[31] Ex 1, Tab 14, Outpatient sheet MR310 (ED); Ex 1, Tab 14, General Observation sheet (MR867)

26. She was diagnosed with pneumococcal meningitis.[32]

27. Over the following days, Allegra' condition deteriorated and she was eventually pronounced life extinct at 3.00am on 5 May 2010.[33]

28. A post mortem was not undertaken although one of Allegra's treating physicians, Dr Nickson, completed a death notification form.[34]

29. Ms Vo contacted Healthdirect Australia after Allegra's death and asked for a transcript of her call with Nurse Ison.

30. In this case, Healthdirect Australia would not have known of the adverse outcome for Allegra if they had not received the letter from her parents.[35]

31. Ms Vo then arranged for a meeting to be held in order that she and Mr Scafidas could go into Medibank and have someone listen to the call.[36] As a result, Healthdirect Australia conducted investigations into what had happened and several recommendations were made.[37]

32. According to the incident report prepared by the Clinical Director of Medibank Health Solutions, early warning signs indicative of a more serious illness, such as whimpering and shallow rapid breathing, were not recognised, although the report prepared by Healthdirect asserted that the advice provided to Ms Vo was correct.[38]

33. Both Mr Scafidas and Ms Vo were concerned about the advice given to Ms Vo over the phone by Nurse Ison. In particular, they assert that the advice provided to them was incorrect, and that the quality and standard of care they received over the telephone was inadequate. Mr Scafidas

[32] Ex 1, Tab 1, p 2
[33] t11; Ex 1, Tab 1, p 2
[34] Exhibit 1, Volume 1, Tab 14 (MR101) discharge summary
[35] T474; t155; t156
[36] t15
[37] Ex 1, Tab 7, p 2
[38] t16; Ex 1, Tab 1, p 2

and Ms Vo believe that, had they not used the Healthdirect service, their baby would be alive today.[39]

SOME PRELIMINARY MATTERS OF LAW

34. The inquest into the death of the deceased was held in accordance with the *Coroners Act 1996* (WA) (the Act). Pursuant to section 25 (1) of the Act the coroner must find, if possible-

    a) The identity of the deceased;
    b) How death occurred;
    c) The cause of death; and
    d) The particulars needed to register the death under the Births, Deaths and Marriages Registration Act 1998.

35. The obligation to determine the manner of death also arises as part of the enquiry as to how the deceased died pursuant to section 25 (1)(b) of the Act. In this context Buss JA noted that '*in my opinion s 25 (1)(b) confers on the coroner the jurisdiction and obligation to find, if possible, the manner in which the deceased happened to die.*' ***Re The State Coroner; Ex Parte the Minister for Health*** [2009] WASCA 165 [42].

36. Pursuant to the *Births, Deaths and Marriages Registration Act 1998* (WA) the coroner must find, if possible, the manner of death. The manner of death is registrable information under section 49 (2) of that Act and is information that is captured on a BDM204 form which a coroner, or delegate, must provide to the Registrar of Births, Deaths and Marriages.

37. Section 25 (2) of the Act provides that a coroner may comment on any matter connected with the death including public health or safety or the administration of justice.

38. When making findings or comment a coroner needs to be mindful of section 25 (5) of the Act, which places the only statutory limitation upon how a comment or finding may be framed. Section 25 (5) of the Act provides:

> A coroner must not frame a finding or comment in such a way as to appear to determine any question of civil liability or to suggest that any person is guilty of any offence.

[39] Ex 1, Tab 3, pp 2-3

39. The analogous provision within the South Australian legislation was considered by the Supreme Court of South Australia in ***Perre v Chivell*** No. SCGRG-99-1218 [2000] SASC 279 (24 August 2000) when considering the appropriateness of a finding that had been made by the South Australian State Coroner in the following terms:

> Accordingly, I find, pursuant to section 25 (1) of the Coroners Act 1975, that the circumstances of the death of Detective Sergeant Geoffrey Leigh Bowen were that he died when he opened a parcel bomb, sent to him by Domenic Perre, and the bomb exploded in his hands.

40. After concluding that the finding didn't appear to determine any question of civil or criminal liability, His Honour considered whether or not the finding offended against the Act as '*suggesting*' that Mr Perre was guilty of a criminal offence or liable in a civil context. At paragraph 57 of the judgment His Honour Nyland J stated:

> As I have already mentioned, section 26 (3)[40] refers not only to findings of criminal or civil liability, but also any "suggestion" thereof. The addition of the word "suggestion" is liable to cause confusion as it might be argued that the mere finding of certain facts can, in cases such as the present, suggest or hint at criminal or civil liability and hence breach the section. This is due to the fact that certain acts, such as, in this case, sending a bomb, appear to have no possible legal justification. However, I do not think that section 26 (3) should be read in such a way. The mere recital of relevant facts cannot truly be said, of itself, to hint at criminal or civil liability. Even though some acts may not seem to be legally justifiable, they may often turn out to be just that. For example a shooting or stabbing will, in some circumstances, be justified as lawful self-defence. As I have stated, criminal or civil liability can only be determined through the application of the relevant law to the facts, and it is only the legal conclusions as to liability flowing from this process which are prohibited by section 26 (3). Thus, the word "suggestion" in this section should properly be read as prohibiting the coroner from making statements such as "upon the evidence before me X may be guilty of murder" or "X may have an action in tort against Y" or statements such as "it appears that X shot Y without legal justification". In other words, the term "suggestion" in section 26 (3) prohibits speculation by the coroner as to criminal or civil liability. In the present case, the coroner has neither found nor suggested that Perre is criminally or civilly liable for his acts.

41. Section 41 of the Act provides that a coroner holding an inquest is not bound by the rules of evidence and may be informed and conduct an inquest in any manner the coroner reasonably thinks fit. This section provides a coroner with latitude as to the types of evidence that can be

[40] *Analogous to s25 (5) Coroners Act 1996 (WA)*

considered by the coroner and allows a relaxing of the normal rules of evidence.

42. Section 41 does not allow a coroner to disregard the rules of natural justice or fairness developed in a series of cases beginning with ***Annetts v McCann*** (190) 170 CLR 596 FC 90/057 (20 December 1990).

43. It is trite to say that the standard of proof in a coronial matter is the civil standard; on the balance of the probabilities.

44. Caution does need to be taken in circumstances where a finding or comment may be adverse to a person involved in the inquest process.

45. Dixon J in ***Briginshaw v Briginshaw*** (1938) 60 CLR 336 at pp 362 - 3 articulated the concern a tribunal of fact should have when dealing with cases, which could potentially have serious consequences for one or more parties involved in the inquest:

> Reasonable satisfaction is not a state of mind that is attained or established independently of the nature and consequence of the fact or facts to be proved. The seriousness of an allegation made, the inherent unlikelihood of an occurrence of a given description, or the gravity of the consequences flowing from the particular finding are considerations which must affect the answer to the question whether the issue has been proved to the reasonable satisfaction of the Tribunal. In such matters reasonable satisfaction should not be produced by inexact proofs, indefinite testimony, or indirect inferences... when in a civil proceeding, a question arises whether a crime has been committed, the standard of persuasion is, according to the better opinion, the same as upon of the civil issues... but consistently with this opinion weight is given to the presumption of innocence and exactness of proof is expected.

46. I take the comments of Dixon J in ***Briginshaw*** to require a more cautious approach than that represented by the normal standard of persuasion, and to require a higher standard of persuasion, depending on the nature of the adverse finding under consideration. The more serious the allegation, the higher the required standard of persuasion.

47. A coroner also has a power under section 50 to refer individuals to a disciplinary body. Section 50 provides:

50. Reference to a disciplinary body

(1) A coroner may refer any evidence, information or matter which comes to the coroner's notice in carrying out the coroner's duties to a body having jurisdiction over a person carrying on a trade or profession if the evidence, information or matter —

(a) touches on the conduct of that person in relation to that trade or profession; and

(b) is, in the opinion of the coroner, of such a nature as might lead the body to inquire into or take any other step in respect of the conduct apparently disclosed by the evidence, information or matter so referred.

(2) In subsection (1) ***a body having jurisdiction over a person carrying on a trade or profession*** means a body empowered under a written law to —

(a) register, license or otherwise approve a person as a prerequisite to the person lawfully carrying on that trade or profession; and

(b) impose or recommend any punishment or liability in respect of wrongful, incompetent or otherwise unsatisfactory conduct of that person in relation to that trade or profession.

48. It is with that statutory and legal background that the inquest into the death of Allegra Amelie Scafidas has been held and this finding delivered.

WHY MS VO CALLED HEALTHDIRECT?

49. Ms Vo and her husband Mr Scafidas had used the Healthdirect service on about six occasions before Ms Vo called them on 28 April 2010. Those earlier calls related to Allegra's older brother who had been ill or hurt himself before a call was made to Healthdirect. On all of those occasions Mr Scafidas and Ms Vo had been advised to take their son to the emergency department.[41]

50. Ms Vo believed Healthdirect to be an authoritative and competent agency who would provide guidance in the event of illness or injury.[42]

[41] Transcript 4/06/2013 Page 34
[42] Transcript 4/06/2013 Page 36

51. Ms Vo's health nurse advised her to use it; and she was given a little magnet in a bag which said "call Healthdirect"; and a GP had advised her she could call Healthdirect if she had any concerns.[43]

52. Healthdirect was also promoted in Allegre's baby book which gave advice[44] to parents that if they are unsure (about their child's health) they should contact Healthdirect Australia (24hr health information and advice line). The relevant portion of the baby book provided:

When is a child sick?

If your child does not seem quite 'right' to you, he/she may be unwell.

A number of clues can help to identify if your child is not well and may need to see a doctor. Your child may:

- be fretful and listless
- cry readily and not be comforted easily
- lose interest in playing
- be abnormally quiet and inactive
- have breathing that sounds different
- not want to eat
- be irritable when disturbed
- feel hot to touch
- look tired and flushed
- feel cold and look pale
- be vomiting or have repeated diarrhoea
- have less than four wet nappies in 24 hours.

If your child has a fit or convulsion, vomits green fluid, or has a persistent high fever, see your doctor or emergency department immediately.

Children who look and behave as usual are unlikely to be very ill.

If you are unsure, contact *healthdirect Australia*
(24hr health information and advice line)
1800 022 222
TTY: 1800 555 677

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WHAT IS HEALTHDIRECT?

53. Healthdirect Australia, a government organisation, contracts to Medibank Health Solutions ('Medibank') to provide a 24 hour health advice line ('Healthdirect'). The

[43] t35-t36
[44] Exhibit 1, Volume 1, Tab 15, Page 4

main aim of the service is to provide health information and advice to callers and residents of Australia.[45]

54. Prior to 2006, several States and Territories of Australia had commenced programs aimed at triaging people over the telephone. The service in Western Australia commenced in 1998.[46] By an initiative of the Council of Australian Governments (COAG) in 2006, a plan to develop an organisation to procure and contract manage the telephone nursing triage systems on a national level was put into place. A national tender was completed in July 2008 and the company who have become Medibank Health Solutions were successful in winning the tender nationally.[47] Medibank became responsible for the medical staff, the set of algorithms that are required and the general on ground services.[48]

55. In 2010 Registered Nurses were engaged to provide assessment and advice to callers (hereafter referred to as a 'nurse operator'). Anywhere between 300 and 350 nurses are employed to triage calls.[49] Nurse operators work in every State and Territory. A nurse operator may answer a call in a call centre, or may be provided with a stand alone computer, internet connection and telephone, to answer calls at home.[50] Calls answered by nurse operators are not necessarily calls coming in from their own geographical location.

56. In order to provide advice to callers, each nurse operator must follow a set of protocols and guidelines to ensure each call is properly and efficiently triaged.[51] In July 2011, a new GP referral service was implemented, whereby calls to a call centre can be made from 6pm to 8am weekdays and 24 hours over weekends and public holidays.[52]

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[45] t222
[46] t222
[47] t139
[48] t143
[49] t231
[50] t231; t306
[51] Ex 1, Tab 8, p 1; Ex 2, Ex 3; Ex 4; Ex 5
[52] t142

57. In terms of the types of call received, the main top five queries are medication queries, paediatric vomiting, paediatric fever, trauma to young children, and chest and abdominal pain.[53]

THE HEALTHDIRECT FRAMEWORK

58. The Healthdirect system, as run by Medibank, consists of a myriad of guidelines, covering any number of symptoms and ailments. The guidelines themselves are originally sourced from the United States,[54] although the wording of them is not exactly reflected in the Healthdirect Australia system.[55] People in the United States review the guidelines annually and Healthdirect Australia receive an annual notification of the review.[56] According to Dr Karabatsos, the National Medical Director for Nurse Triage and After Hours GP for Healthdirect Australia, Healthdirect Australia review the United States report annually and appropriate changes are made to the system. Internally, other ad hoc changes are made, either as a result of 'as needs' internal reviews, feedback, quality monitoring, or the identification of an issue.[57]

59. Changes to current medical practices and any Australian Guidelines will mean a review of the Healthdirect Australia guidelines with a view to reflecting such changes.[58]

60. According to Dr Karabatsos, nurses have the ability to ask a question about a guideline, and reviews are conducted where a complaint is received or where there has been a clinical incident. However, this means that adverse outcomes, potentially requiring a review of the guidelines, are not actively identified, save for a relatively small amount of completed monthly customer surveys.[59] As noted above Healthdirect were unaware of Allegra's death until they were told about it by Ms Vo.

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[53] t145; t167-t168
[54] t274; t473; t518
[55] t274; t384
[56] T473; t153
[57] T473
[58] T473-t474
[59] T473-t475; t156

61. Healthdirect also uses British guidelines formulated by the National Institute for Clinical Excellence (NICE Guidelines)[60]. These are a set of stand alone guidelines specifically designed for clinical practitioners who see people face to face.[61] They were specifically developed for treating doctors, as well as for people in emergency departments. They are applied where applicable in by Healthdirect Australia. However, it is impossible to fully incorporate the NICE guidelines into Healthdirect's operation has the guidelines necessarily involve a visual assessment of the patient. .[62]

62. It became clear during the inquest that, in order to assess whether a child was an 'unwell child', anyone making the assessment needs to have regard to factors such as the child's general appearance, irritability, reduced feeding, sunken eyes, their level of alertness, respiratory rate, skin colour, any difficulty moving limbs, difficulty moving, the ability to rouse a child, the length of time for which they have been asleep, and whether they are struggling to breathe and what noise (if any) they are making when they breathe.[63] These are not simple things to address over a telephone.

NURSE ISONS TRAINING WITH HEALTHDIRECT

63. Nurse Ison undertook training with Healthdirect over a 12 day period. During the course of that training Nurse Ison was taught how to interact with callers. Nurse Ison was taught to ask closed questions so that she could obtain direct answers without the caller going off onto a tangent. Nurse Ison agreed with the proposition that the manner of training provided in this respect was quite antithetical to the manner in which a nurse would normally be trained to interact with patients.[64]

[60] Ex 1, Vol 2, Tab 18 (2007); Ex 1, Vol 2, Tab 17 (current)
[61] t384
[62] t123
[63] t184; t185; t192; t203
[64] Transcript 7/06/2013 Page 329

Mr Offer: Now, when you were doing your 12-day training, did they specifically give you any training in relation to interview techniques?

Nurse Ison: It was incorporated, yes.

Mr Offer: Incorporated into what in particular?

Nurse Ison: Just – well, from what I can remember – as I said, it was quite – you know, it's almost five years, just – one of the main things, they used to always that, you know, ask questions, like, closed questions, so that the – the caller couldn't go off into a tangent, so you could get direct answers.

Mr Offer: So you were trained, in fact, to ask closed questions?

Nurse Ison: Yes.

Mr Offer: Is that something that had been a feature of your nursing training previously: asking closed questions?

Nurse Ison: No, definitely not, was - - -

Mr Offer: In fact, isn't that quite antithetical to what a nurse would normally be trained for?

Nure Ison: Particularly if you've got someone in front of you, yes, I would say so, but from a telephone triage point of view, it's – it's a different sort of nursing.

Mr Offer: Your nursing training taught you to ask open questions because you might elicit responses from left field which might prove useful; would that be fair?

Nurse Ison: Yes, exactly. Yes, that's right.

WHAT WAS SAID DURING THE TELEPHONE CONSULTATION?

64. At about 9:27pm on 28 April 2010 Ms Vo called Healthdirect and was connected to a registered nurse working from her home in NSW, Nurse Dianne Ison.

65. Ms Vo's telephone consultation with Nurse Ison lasted approximately 13.4 minutes. During the course of the transcript the phrase '*Nurse'* is used to identify Nurse Ison. The term '*Caller'* is used to identify Ms Vo.

66. The transcript of the telephone call is as follows:[65]

[65] Exhibit 1, Volume 1, Tab 4

Transcript of Call to *healthdirect Australia* on 28th April 2010 at 23:27 EST regarding Allegra Scafidas

Nurse: healthdirect Australia this is Diane how can I help you

Caller: Hi Diane I am just wondering what to do with my um baby daughter

Nurse: ok she's not well at the moment

Caller: yeah

Nurse: ok is her breathing and she's there with you

Caller: um she's um breathing um it's shallow

Nurse: she's breathing ok she's not blue around her lips

Caller: no, no, no she's just fast and shallow breathing

Nurse: ok alright, is she making eye contact and responsive to you

Caller: ah she's asleep

Nurse: ah ok alright so what's your concern with her at the moment

Caller: um well she has been throwing up since um about, are you in Perth?

Nurse: no, no, no

Caller: no, she has been throwing up since, well it's 9.30 now, she's been throwing up since about 3 o'clock so 6 and a half hours um she threw up like everything she ate except at lunch time and then we tried to give her milk she threw that up as well

Nurse: yep

Caller: um and then we gave her milk at about 8 o'clock and she threw all that up and then we gave oh no 8.30 then we gave her Panadol and that took her temperature down to 37.6

Nurse: yep

Caller: but that was 50 minutes ago and its back up to 38.8

Nurse: ok

Caller: um, and so I'm just wondering

Nurse: so she has gone to sleep again now has she?

Caller: yeah, yeah she keeps whimpering that sort of thing (says something else can't make it out)

Nurse: has she got any diarrhoea at all

Caller: no

Nurse: ok I'll just open a file and ask you some questions, have you ever rung us before

Caller: yeah I have, quite a few times

Nurse: ok and your first name

Caller: Nhon. (spells) N H O N

Nurse: ok and your surname

Caller: Vo. (spells) V O

Nurse: ok Nhon I'll just find your file, anybody else in the family had any sort of gastro or any viruses or anything?

Caller: no, um not since October last year

Nurse: ok alright and your address there is

Caller: 37 Venn Street in North Perth

Nurse: and the little one is

Caller: Allegra Scafidas, (spells) A L L E G R A

Nurse: ok alright (mumbles as taking details) So it's (spells) A L L E G R A

Caller: Scafidas, (spells) S C A F I D A S is the surname, should I spell it again

Nurse: spells S C A F I D I S

Caller: A S at the end

Nurse: ah ok, and what's her date of birth

Caller: 19th October 2009

Nurse: ok and what was her fever the last time you took it

Caller: um just now its 38.8 but she only got Panadol 50 minutes ago so I thought it would last a bit longer

Nurse: ok and she kept that down the Panadol

Caller: um no

Nurse: with her vomiting

Caller: no she must have thrown that up as well

Nurse: ok so how long after she had the vomiting

Caller: uh huh

Nurse: did she vomit

Caller: um well she vomited straight away

Nurse: ok so she didn't keep it down

Caller: um so basically she has not had any fluid not since lunch time

Nurse: ok, and no diarrhoea

Caller: no

Nurse: ok, ok alright ok, (mumbles temps 38.8) any rashes anywhere on her body at all

Caller: not that we noticed, no (talks to person in background) Zoe any rashes, on Allegra any rash, no, no did not notice any

Nurse: ok, ok, is Allegra normally quite healthy, no medical conditions?

Caller: yes very healthy girl. When her brother got gastro last time she um didn't even get anything. And when he got sick she didn't get sick so she's normally very healthy

Nurse: ok yeah alright

Caller: she is very robust for her age

Nurse: ok (mumbles - info as she is inputting into triage re vomiting) and she has had the vomiting when did she first vomit

Caller: about 6 hours ago

Nurse: ok 6 hours, so how many times would she have vomited in that time

Caller: ah 3 times

Nurse: ok

Caller: first time was like really, really bad, literally she vomited everything

Nurse: ok so emptied her whole little tummy out ok yeah um alright so you said definitely no diarrhoea ok and each time she has vomited is that after she has had something to drink or something to eat or is she

Caller: no the first time it was an hour after she had eaten the second time it was um like an hour later or like half and hour later a follow up to the last one and this one was as she was feeding she threw it all up

Nurse: ok alright ok, so she is now asleep so it's a bit hard for me to do a triage on her because she is asleep

Caller: yeah (mumbles)

Nurse: most viruses if it's like a tummy virus which she's got which it sounds like

Caller: mmm

Nurse: they can vomit for 12 to 24 hours ok the most important thing is don't give them anything to eat or drink or anything to drink for at least an hour after they have vomited

Caller: right

Nurse: they still have that gag reflex and they will re vomit you know like with the Panadol

Caller: yeah

Nurse: they will bring it straight back up

Caller: Sure

Nurse: what you can (mumbles) and she is only 6 months is she breast or bottle fed

Caller: she is bottle fed now with solids

Nurse: ok what you need to do is just, I'll, I'll leave her when is she due for her next feed again?

Caller: um (speaks to someone in the background) did she just have some milk Zoe? Yeah she just had some milk, she just had some milk just now like it's been an hour since she threw up so yeah

Nurse: ok alright so I'll let her tummy rest now for a good few hours ok

Caller: yep

Nurse: and just try, does she drink water at all or she doesn't drink water

Caller: only as she eats her solids but not

Nurse: ok, I would just try her with some water ok um wait for her tummy to settle about 2 hours

Caller: yep

Nurse: try with small, small amounts of water ok about 10 mls at a time

Caller: yep

Nurse: and if she keeps that down then you can increase it

Caller: yeah

Nurse: then after 4 hours you can go back to formula

Caller: so I'm thinking it's gastro as well

Nurse: it sounds like it might be, what I want you to do though if you think when she wakes up again maybe you could ring us back, 'cause I don't want you to wake her up because she's obviously really tired from the vomiting

Caller: yeah

Nurse: but if she wakes up grab her put her on your lap and give us a ring back and we can do a proper triage

Caller: she has just woken up again (hear child crying in the background)

Nurse: ok has she, so she's awake

Caller: yeah

Nurse: ok alright I'll ask some questions then, she must have known

Caller: (to the child) shhh shh shhh (child crying in the background)

Nurse: is she really unsettled is she

Caller: yeah, yeah she is very unsettled

Nurse: aww poor thing is she still feeling quite hot

Caller: um yes she is, that's why I rang because it's shot back up

Nurse: she's not wrapped up, you haven't got her bundled up at all

Caller: no she's not, just a sheet

Nurse: ok alright, when was the last time she had a wet nappy

Caller: we changed her at 8.30 but I think she had been wet when you know

Nurse: so she has had a wee in the last few hours

Caller: yeah in the last 6 hours

Nurse: any blood or bile in the vomit

Caller: no

Nurse: ok, ok alright she's only 6 months isn't she, the fever has been around the 38.8 mark hasn't been higher than that

Caller: it was 38.9 then we gave her the Panadol

Nurse: ok is she acting like she is in a lot of pain like pulling her knees up to her chest and crying

Caller: no

Nurse: so she's not crying a lot ok

Caller: no she is just whimpering

Nurse: yeah she probably feels horrible

Caller: mmmm

Nurse: with a fever you know you feel a bit hot and it's horrible and definitely no diarrhoea so that's good

Caller: yeah

Nurse: Hasn't had any bump on her head or hurt her tummy in the last few days at all

Caller: no, her brother likes to jump on top of her but no I don't know I don't think so

Nurse: ok alright ok, it sounds like she does have a tummy bug ok um

Caller: uh huh

Nurse: and usually that can last um or tummy virus it usually stops in about 12 to 24 hours so it should be starting to settle down soon ok. Helps if (mumbles) If she wants to go to sleep that's fine simply because sleep often empties your stomach

Caller: yes ok

Nurse: and removes that need to vomit ok and she is too little to go the nausea thing with her, she's too little, and she's bottle fed, ok alright, um alright so she has vomited more than once yes ok, I would just try her with a little bit of water and if she had diarrhoea we would advising you to get Gastrolyte or Paedalyte but she hasn't got the diarrhoea so that's ok

Caller: yes

Nurse: so after the tummy has been empty for about I would say the way she's going I'd let her go for at least 2 hours ok

Caller: yep

Nurse: just a teaspoon of water and do that about every 2, every 10 minutes after 4 hours of that then you can increase the amount ok

Caller: why do I know if she is dehydrated?

Nurse: dehydrated is no wet nappy for 8 hours and the insides of their mouth get really, really dry, so if she was quiet well hydrated up until then she'll probably be ok alright

Caller: yeah uh huh

Nurse: and um she probably will she's on solids you said she probably will refuse food so that's ok alright um so you just um return to regular formula if she um, increase the amount of her fluids she is only little she's only 6 months old isn't she,

Caller: yeah mmm

Nurse: so probably give her small amounts of um just try a little tiny bit of formula after 4 hours of not vomiting and just see how she goes

Caller: yeah

Nurse: if not you are going to have to start to go back to square one again ok when she does start eating again I would always leave it about 24 hours return to like cereal, strained bananas really, really bland things after 24 hours of not vomiting

Caller: yes

Nurse: ok um with the fever um Panadol is the best thing if you can keep the Panadol into her um we'd want you to call back if her vomiting persisted over 24 hours those signs of dehydration

Caller: yeah

Nurse: no wet nappy, insides of mouth very dry and no tears when she cries

Caller: yeah

Nurse: or if you thought she was in pain now with fevers up to 38 degrees is a low grade fever up to 39 is moderate 39- 40 is a high grade fever now they are all ok alright but anything up to 40 that doesn't respond

Caller: yeah

Nurse: she is just on that thing so at 6 months of age probably anything above 39, 39.5 you'd probably need to see somebody it's a bit high for her at 6 months of age

Caller: yeah

Nurse: ok um if she is not keeping the Panadol down just you can we don't really like to sort of give them you know cool baths or that, but just you can just sponge her but do it with

warm water never ever with cold water because we don't want to give her a chill or make her shiver

Caller: sure, sure

Nurse: alright but look any new or worse symptoms any change in her at all, anything that you are worried about at all for any reason give us a call back ok

Caller: if it hits over 39 and I give her Panadol or if it hits 39 and a half I should just take her to

Nurse: yeah give us a ring back give us a ring back if it gets up to that ok yeah if she was a bit older we go up to the 40 but she is that age where its not quite, we like to keep an eye on it when it gets to 39.5

Caller: yeah

Nurse: um what were you thinking of doing? Going to the doctors or you didn't know what to do?

Caller: um no I was inclined just to stay up all night and make sure she is ok

Nurse: ah ok did you get transferred through, or you've got our number haven't you because you've rung us before just pick up the phone any concerns at all ok Nhon

Caller: yeah ok sure thanks very much

Nurse: ok, you're very welcome and they do randomly survey our callers from time to time are you ok for that

Caller: yeah that should be fine

Nurse: ok alright good luck take care with that

Caller: thank you bye

THE TRIAGE PROCESS

67. The function of the Healthdirect triage service is to provide a caller with a *'disposition'*. The disposition is the clinical recommendation made by the nurse at the end of the telephone consultation. There are three dispositions available to the registered nurse taking the call. In order of acuity the dispositions are that;

1. **The caller/patient is advised to attend a hospital emergency department immediately.** In this event it may be that the Healthdirect registered nurse calls the emergency services and arranges for an ambulance transfer of the caller/patient or it may be that the caller/patient makes their own arrangements in this regard.
2. **The caller/patient is advised to see a doctor within a stated timeframe.** The second level of acuity is that which sees the registered nurse recommend that the patient sees his or her doctor within a stated timeframe. The timeframe may be from four hours to the next two weeks.
3. **The caller/patient is advised to recover at home.** The lowest level of acuity allows the registered nurse to recommend home/self care. This disposition occurs when the registered nurse, with the assistance of the guidelines provided by Healthdirect, concludes that either seeing a doctor or attending at a hospital's emergency department is not warranted and that the caller/patient can safely recover at home.

68. The triage process is designed to provide the caller/patient with a disposition (referral to an emergency department, doctor or home/self care), it is **not** designed to provide a diagnosis to a caller/patient.

69. When one of the registered nurses employed by Healthdirect receives a telephone call he or she follows a process designed to enable the nurse to provide one of those three dispositions.

70. The call is effectively broken into four stages:

1. An introduction of the registered nurse to the caller/patient with a simple question asking how the registered nurse can help the call/patient. This opening is aimed at determining the basic ABC of triage (referred to as DRABC), that is to determine whether the patient/caller's airways, breathing and circulation are satisfactory or whether emergency assistance is required.

2. A question as to what the concern of the caller/patient is so that the registered nurse can try and determine the nature of the concerns and which guideline or guidelines, the registered nurse should adopt during the balance of the consultation.

3. The registered nurse determining which guideline to follow and then working through it in order to arrive for the appropriate disposition.

   The computer system used by Nurse Ison contained a multitude of guidelines which relate to a very wide spectrum of illness and injury. In this case the most relevant guidelines applicable to Allegra's condition were a paediatric fever guideline and a paediatric vomiting guideline. Nurse Ison elected to follow the paediatric vomiting guideline.

4. The call is concluded with the registered nurse providing the home/self care disposition and reassuring the caller with a description of the likely cause of the vomiting ('it sounds like vomiting from a stomach virus'), some care instructions in relation to the need for sleep etc and advise to call back if

the vomiting persists, there are signs of dehydration or if the child becomes worse.

Nurse Ison worked her way through the vomiting guideline completing a response in return for each prompt on the guideline. The available responses were either yes or no. Nurse Ison was required to complete a yes or no response to each prompt or query before being allowed to move to the next prompt query.

It should be noted that if a yes response was given prior to the conclusion of the guideline then a disposition other than home/self care would be given.

It was only possible to arrive at a disposition of home/self care if Nurse Ison arrived at the final question with there being no previous 'yes' response.

71. The results of the consultation were recorded in a document called '*Call Detail Report*'. The Call Detail Report, captures the questions the registered nurse must consider and the yes or no answer. It does not record all prompts that exist within individual questions.

72. The Call Detail Report relating to Allegra is as follows:[66]

[66] Exhibit 1, Volume 1, Tab 8

Call Detail Report

Master Contract: Healthdirect Australia

Contract: Western Australia

CONFIDENTIAL

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Call Information

Call Start Date & Time: 28/04/2010 11:27:11PM EST
Call End Date & Time: 28/04/2010 11:40:37PM EST
Call Length (minutes): 13.4
Session Id : 3455266
Operator Name: Ison RN, Dianne
Source: N/A
Reason: N/A
Outcome: N/A

Caller Information

Caller Name: Vo, Nhon
Relationship to Patient: is parent of

Patient Information (Current as of 9/05/2011)

Name: Scafidas, Allegra
MRN:
Gender: Female
Date of Birth: 19/10/2009
Address:

Contract Id: 1474411
Medicare No:

Redacted

Phone:
Fax:

Call Details

*Plan Name:
*Patient Plan Id:
*GP Name:
GP Phone(s):
GP Fax(es):

*Presenting Problem:

*Encounter Notes:

Service Number : 9425439 Assessment

Assessment Notes

Assessment:	Nurse Triage Call Summary	Version: 2
	DRABC	stable
	Presenting Problem/Symptoms/Information required	vomiting
	Location/Cause	No diarrhoes/ had vomiting for 6 hrs
	Onset/Duration	Vomited x 2 in 6 hours
	Pain descriptor/Treatments tried/Effect	T38.8 , vomited her Panadol
	RELEVANT Medical/Mental Health History/ATSI Origin	nil other symptoms

This report does NOT report on No Services

*Information is accurate as of the time the call was taken. EmbeddedReviewCall.rpt Page 1 of 4

Service Number : 9425460 Triage

Guideline Title Question (All questions, regardless of response)	Response	Question Note
Vomiting (Paediatric) , Version: C00039		
[1] Signs of dehydration AND [2] grey cold skin or very weak	No	
Vomiting only occurs after taking a medicine	No	
Could be poisoning with a plant, medicine, or other chemical	No	
Vomiting occurs only while coughing	No	
Diarrhoea is the main symptom (vomiting is minimal)	No	
Drinking very little AND more than two signs of dehydration [no urine for >12 hours, dry mucous membranes, absent tear production, capillary refill >2 seconds, generally ill appearance	No	
[1] Blood in the vomit AND [2] not from a nosebleed or other obvious site (eg nipple for breast fed babies) (EXCEPTION: few streaks and only occurs once)	No	
[1] Bile (green colour) in the vomit AND [2] constant abdominal pain not relieved by vomiting	No	
[1] Age < 12 weeks AND [2] bile (yellow or green colour) in the vomit	No	
[1] Age < 12 weeks AND [2] fever > 38 C	No	
[1] Fever AND [2] > 40.5 C (EXCEPTION: age > 1 yr, fever down AND child comfortable. If recurs, see now)	No	
Difficult to awaken or confused when awake	No	
[1] Abdominal injury AND [2] in last 3 days	No	
Child sounds very sick or severely dehydrated to the triager	No	Question 11911
High-risk child (e.g. diabetes mellitus, brain tumor, V-P shunt, inguinal hernia, newborn)	No	
Signs of diabetes (excessive thirst, frequent urination, weight loss, rapid deep breathing, etc.)	No	
[1] Severe headache AND [2] persists > 2 hours AND [3] no previous migraine	No	
Vomiting an essential medicine	No	
[1] Continuous abdominal pain or crying AND [2] persists > 2 hours (EXCEPTION: intermittent abdominal pain relieved by vomiting is quite common in viral gastritis and need not be seen) (Continue with triage)	No	

This report does NOT report on No Services

*Information is accurate as of the time the call was taken. EmbeddedReviewCall.rpt Page 2 of 4

Sounds like intussusception to the triager (attacks of severe abdominal pain/crying suddenly switching to 2-10 minute periods of quiet, age usually < 3)	No
[1] Age < 12 mo AND [2] vomited CLEAR fluids > 2 X . AND [3] watery diarrhoea	No
[1] Recent head injury within 3 days AND [2] vomited 2 or more times (EXCEPTION: minor injury)	No
[1] Age < 12 weeks AND [2] vomited 3 or more times (EXCEPTION: Usual reflux after feeding)	No
[1] Fever AND [2] present > 3 days	No
3 months to 2 years old AND vomited > 24 hours (EXCEPTION: (1) mild vomiting AND (2) associated diarrhoea)	No
Over 2 years old AND vomited for more than 48 hours (EXCEPTION: (1) mild vomiting AND (2) associated diarrhoea)	No
[1] Mild vomiting with diarrhoea AND [2] persists > 1 week	No
Vomiting is a recurrent problem	No
[1] Continuous vomiting BUT [2] hydrated	No
Mild vomiting, probably viral gastritis (all triage questions negative)	Yes

Recommended Disposition	Original Inclination	Intended Action
Provide Home/Self Care	Home/Self Care	*Will Follow Disposition

Physician Contacted: No **Physician Instructions:** N/A

Care Advice Text:

REASSURE the CALLER: It sounds like vomiting from a stomach virus. It usually stops in 12 to 24 hours. Help your child go to sleep (Reason: sleep often empties the stomach and relieves the need to vomit.) Your child doesn't have to drink anything if he feels nauseated.

CALL BACK IF

- Vomiting persists > 24 hours (> 48 hours if age > 2 years)
- Signs of dehydration
- Your child becomes worse

FOR BOTTLEFED INFANTS (< 1 year old), offer Gastrolyte or Pedialyte Oral Rehydration Solution for 8 hours.

- For vomiting once, offer smaller amounts of formula more frequently.
- For vomiting 2 or more times, offer Gastrolyte or Pedialyte.
- If significant frequent vomiting give small amounts (1 teaspoon) every 10 minutes.
- After 4 hours without vomiting, increase the amount.
- After 8 hours without vomiting, return to regular formula.

SOLIDS: Many children will refuse food. This is not a problem as long as clear fluids are taken. If the child requests solids then they can be given.

- For infants > 4 months old, also return to cereal, strained bananas, etc.
- Normal diet OK in 24-48 hours.

Associated Messages

None

Caller Information (Current as of 9/05/2011)

Name: Vo, Nhon
MRN:
Gender: Female
Date of Birth:
Address:

Contract Id: 1474411
Medicare No:

Phone:
Fax:

Call Details

*Plan Name:
*GP Name:
GP Phone(s):

*Patient Plan Id:

GP Fax(es):

*Presenting Problem:

*Encounter Notes:

Service Number : 9425501 Person Profile

Service Number : 9567343 Message Center

Associated Messages

None

This report does NOT report on No Services

*Information is accurate as of the time the call was taken.

73. Nurse Ison worked through the paediatric vomiting guideline and provided no responses to all but the last question. This meant the disposition the software recommended was that Allegra be provided with home/self care. Nurse Ison adopted that recommendation and gave Ms Vo advice consistent with the computer generated recommendation of home/self care.

74. It should be noted that Nurse Ison had a discretion to depart from the disposition recommended by the triage software and escalate the disposition to a referral to a doctor or emergency department if she felt that was appropriate.

75. In this case Nurse Ison concluded that Allegra's complaints did not warrant either the consideration of a doctor or attendance at an emergency department.

TRIAGE OR DIAGNOSIS?

76. The reason why Nurse Ison decided that home/self care was the appropriate disposition was because Nurse Ison seemed, on the basis of the paediatric vomiting guideline, to have concluded that Allegra had a stomach virus.

77. In this regard Nurse Ison told Ms Vo during the course of the telephone consultation '*most viruses if its like a tummy virus which she's got which it sounds like they can vomit from 12 to 24 hours ok the most important thing is don't give them anything to eat or drink or anything to drink for at least an hour after they've vomited*'[67] and '*ok alright ok, it sounds like she does have a tummy bug ok um and usually that can last um or tummy virus it usually stops in about 12 to 24 hours so it should be starting to settle down soon ok*'.'[68]

78. Nurse Ison also gave Ms Vo advice as how to care for Allegra's tummy virus '*ok alright so ill let her tummy rest now for a good few hours ok*'[69] and '*ok, ill just try her with some water ok um wait for her tummy to settle about two hours…try with small, small amounts of water ok about*

[67] Exhibit 1, Volume 1, Page 4 of the transcript of the telephone consultation
[68] Exhibit 1, Volume 1, Page 6 of the transcript of the telephone consultation
[69] Transcript Page 4

10mls at a time…and if she keeps that down you can increase it…then after 4 hours you can go back to formula'.[70] *'I would just try her with a little bit of water and if she had diarrhoea we would advising you to get Gastrolyte or Paedalyte but she hasn't got the diarrhoea so that's ok'.*

79. In my opinion a reasonable person in Ms Vo's position would conclude that Nurse Ison's comments implied that Nurse Ison had concluded Allegra had nothing more serious than a tummy virus which would pass in a short time and which did not require review by a doctor or attendance at a hospital emergency department.

80. In my opinion Nurse Ison clearly left Ms Vo with the impression that Allegra had a tummy virus and that medical intervention was unwarranted.

81. During the course of the inquest I had the opportunity to hear from Emeritus Professor Max Kamien who assisted the court by providing an opinion in relation to Allegra's case.

82. Professor Kamien highlighted that *'in my medical training, and in that which I have offered to two future generations of doctors, it has always been stressed that it is an unwise doctor who tries to make a diagnosis over the telephone. Dr Paul Nisselle, the former General Manager of Clinical Risk Management for the Avant Medical Indemnity Group, has repeatedly published his 10 Commandments of Risk Management. His sixth commandment is: "don't diagnose and treat over the phone*".

83. In most cases, the doctor will be responding to a patient that he or she knows. The nurse, working for a Tele-health company and answering calls from 3,000km away, is dealing with a patient's query without the benefit of that background knowledge.

84. If a doctor, whose education, training and practice is largely focused on being able to make a diagnosis, should not attempt to diagnose the ill over the telephone, then in my

[70] Transcript page 4-5

opinion a triage nurse with less training and experience in diagnosis should avoid making unqualified comments to callers/patients that give the impression of a diagnosis.

Recommendation No. 1

I recommend that Healthdirect require the registered nurses employed by it, who are undertaking telephone triage duties, to tell callers/patients the nature of the triage service being provided and expressly advise callers/patients that they are unable to provide a diagnosis over the telephone.

WHETHER ALLEGRA'S SYPMTOMS AS DISCLOSED BY MS VO TO NURSE ISON WARRANTED REVIEW IN HOSPITAL OR BY A MEDICAL PRACTITIONER?

85. Professor Kamien was asked to consider whether or not any of the symptoms described by Allegra's mum were significant concern to warrant review in hospital by a medical practitioner. Specifically whether the reports of *'fast and shallow breathing'*, *'whimpering' and being 'very unsettled' would raise concern.*[71]

86. Professor Kamien gave evidence to the effect that the *'bible'* of general practise is Professor John Murtheh's book, *'General Practise'*. It is now in its fifth addition. Each addition sells about 20,000 copies in Australia. The fourth addition (the latest available to Prof Kamien), published in 2007, has a chapter, *'An approach to the child'*, that contains a section on the 'Recognition of Serious Illness in Infancy' which provides:

> It is vital to diagnose serious life-threatening diseases in children, especially in early infancy. Certain symptoms and signs that provide a reliable indicator to such a problem are:
>
> - Drowsiness
> - Irritability

[71] Exhibit 1, Volume 1, Tab 10

- Decreased activity
- Persistent vomiting
- Whimpers and lies quietly (as opposed to crying lustily)
- Reduced feeding
- Less than four wet nappies in 24 hours
- Increased respiratory rate
- Cold extremities
- Sunken eyes

Serious illnesses to consider include: pneumonia, septicaemia and various forms of meningitis.

87. Professor Kamien concluded that experienced doctors and seasoned nurses get pretty good at recognising the sick child who requires immediate treatment and hospitalisation. A computer protocol attempts to quantify when a child can be deemed sick enough to be hospitalised.

88. Even if such consultations were conducted on '*Skype*' or similar video conferencing facilities they would still be a long way behind the sixth sense of experience in observation that quickly detects an acutely ill child.

WHAT SYMPTOMS WERE DISCLOSED BY MS VO TO NURSE ISON

89. During the course of the telephone consultation Ms Vo provided details of Allegra's symptoms. Those symptoms were:
    - Shallow and fast breathing
    - Vomiting (on three occasions in the six and a half hours between 3pm and the time of the telephone call of approximately 9:30pm)
    - A temperature 38.9°C, then Allegra was given some Panadol at approximately 8:30pm and that reduced her temperature to 37.6°C but at the time of the telephone call Allegra's temperature had risen again to 38.8°C
    - Whimpering being very unsettled

90. According to Professor Kamien's list of indicators suggesting Allegra may have had a serious illness, irritability,

whimpering, and increased respiratory rate are all factors which suggest the child may have been seriously ill at the time of the telephone consultation.

UNDISCLOSED SYMPTOMS

91. During the course of the afternoon of 28 April 2010 a number of other symptoms and observations relevant to the triage process were unreported to Nurse Ison these included:

    1. Allegra slept more than normal during the course of the afternoon and evening of 28 April 2010.Allegra was normally awake between the course of 2pm and 7pm. However on 28 April 2010 she slept almost without interruption throughout that period. According to Ms Vo she last saw her daughter properly awake at about 3pm[72]
    2. Allegra's sleep was of such a nature that at 8pm when she was fed with a quantity of milk from a bottle, she drank the content without opening her eyes. This was not unusual for Allegra but it was indicative of her drowsy state[73].
    3. The shallow breathing began after Allegra's bottle and was noted to have worsened upon Ms Vo's return home at about 8:45pm[74].
    4. Allegra's breathing became worse at about 9:25pm[75].
    5. Allegra began to whimper after about 8:45pm she sounded almost like a puppy and had never made that type of sound before.

92. The additional evidence, relating to Allegra being largely asleep from 2pm through to the time of the telephone consultation, the timing of the onset of the shallow breathing and the very recent onset of whimpering and the fact of Allegra feeding whilst very drowsy may have painted

[72] transcript page 51
[73] transcript page 39
[74] transcript page 40
[75] transcript page 43

a different picture to Nurse Ison as she undertook the consultation.

93. The additional information, particularly relating to the recent onset of the respiratory issues and whimpering, may have suggested to her that Allegra's condition was steadily deteriorating and that she was sufficiently unwell to warrant examination by a doctor or, given the time of the evening, by a doctor in an emergency department.

94. Regrettably that further information was not elicited during the course of the telephone consultation.

95. The constellation of symptoms (those disclosed to Nurse Ison and those which were not disclosed to Nurse Ison) would suggest Allegra may have been unwell and possibly developing a serious illness which warranted prompt examination by a doctor, which given the late hour, was only likely to be achieved at a hospital.

DOCTOR PETER RICHMOND

96. Dr Peter Richmond, a Paediatrician who works at Princess Margaret Hospital for Children as a Consultant Paediatrician and as an Academic with the School of Paediatrics and Child Health at the University of Western Australia gave evidence during the course of the inquest. Dr Richmond teaches medical students and junior doctors about paediatrics and he also has had a research interest in the area of infectious diseases and immunisations since 1996. Dr Richmond has been a consultant paediatrician at Princess Margaret Hospital since October 1996.

97. Dr Richmond gave evidence about the range of temperatures Allegra had during the course of 28 April 2010, before Allegra's mother called Healthdirect.

98. Dr Richmond began by saying that a normal babies temperature is between 36.5 and 37°C, although generally

speaking 37°C is the temperature to be considered normal.[76]

99. Between 38-39°C would be considered a moderate fever, and over 39°C would be considered a high fever or very high fever.[77]

100. According to Dr Richmond the significance of a fever varies with the age of the child.

101. Dr Richmond gave evidence as to what he would do if his child of two months of age had a temperature of 38.9°C (the temperature Allegra had before she was given Panadol). Dr Richmond said: *'I would think that they would need a medical review, and If – you might want a paediatrician, then I would take them to see my doctor or if it's out of hours, potentially an emergency room'.*[78] Dr Richmond also spoke about the significance of a temperature of 38.9°C in a child like Allegra in a hospital setting. Dr Richmond said: '*but I think in the context, say, of a hospital setting, that would be potentially – over 38.5 would be a potential trigger point for doing some specific investigations such as cultures from blood or doing some additional testing'*.

102. Dr Richmond was asked about the significance of a child having shallow breathing, breathing rapidly, whimpering, vomiting and having a temperature of 38.9°C and asked what he, as an experienced paediatrician, would he have concluded was wrong with the child:[79]

Coroner:	All right. Well, if hypothetically you were the nurse at Healthdirect and you were told that the child had shallow breathing, was breathing rapidly, had a temperature of 38.9, and was whimpering in addition to vomiting, what would you do?
Dr Richmond:	I would be concerned that the child – which is the – I would be more concerned that the child had a more serious underlying infection. And with that story, I would have probably – the

[76] Transcript 5/06/2013 Page 108
[77] Transcript 5/06/2013 Page 108
[78] Transcript page 108-109
[79] Transcript page 109

first thing I would think about would be does this child have pneumonia, for instance. Whimpering is always a difficult term to understand, and one of the challenges of paediatrics is that you were always dealing in third hand information, so what is the – what is the parent's interpretation of what we see. But when I think about whimpering, I think of a child who is trying to cry but not making much of an effort, and the other symptom that we sometimes may be confused with that, is something what we call grunting, which is when the baby has difficulty in breathing out and – and usually in the context of pneumonia, but it can be seen in other illnesses, and that makes a small sound at the end of breathing. And that's – that would be the other thing I would be thinking, is that what that mother is talking about. So – but that's not necessarily a terribly specific sign, so still the 90 – more than 95 per cent of children who presented with that scenario you described then would probably still have a viral illness, but I would be concerned with those additional symptoms, that the child had something more serious, particularly if they didn't improve within a period of time after having the antipyretic. So it's – but, you know, a lot of people have looked at this really closely to try and triage and identify, even with people being seen by general practitioners who may have the similar things that sent the children home would then have to represent to emergency department. So it is – it is a very difficult scenario to try and understand, but when I read that transcript, that was what I was thinking at the time, was this is a child with a fever, some rapid breathing, is this pneumonia or something like that. It probably should be assessed. And that – so that was my comment about when the – the triage call went down the vomiting route, which is – according to their protocol, we sort of lost that information, I think, in terms of the overall picture of what was happening.

103. Dr Richmond was asked about his expectation of a nurse in, Nurse Ison's position receiving the information, to which he gave the following evidence:[80]

Coroner:	Speaking as a clinician, would you expect a nurse to receive that information (indistinct) discuss the temperature of 38.9, the breathing, and the whimpering on top of vomiting to have a low threshold for referring the child to a hospital or a doctor or a high threshold?
Dr Richmond:	I would have thought it would be a low threshold, and that age group as well. So six months is still a young infant who is – is at more risk for serious infections than say a three and a half year old who could present with a similar scenario. So the age is really important there as well, but, yes, that's – I was surprised by that.
Coroner:	So you – I'm not being critical of the nurse at all?
Dr Richmond:	No.
Coroner:	She followed the procedure which she was no doubt was told to do, but speaking from a therapeutic setting, your expectation would have been that that information is sufficient of itself to warrant advice that Mrs Vo take the child to a hospital or a doctor?
Dr Richmond:	Yeah, that would be my opinion.

104. Dr Richmond also gave evidence that It would have been his expectation that Allegra's life to have been saved if she was taken to a hospital during the course of 28 April 2010, but as time progressed her chances diminished and even if she had come to hospital on that day, there was no guarantee as to what damage would have or would not have done to Allegra.[81]

[80] Transcript 5/06/2013 Page 110
[81] Transcript 5/06/2013 Page 114

BARRIERS TO A CORRECT DISPOSITION

105. Professor Kamien made the point that the failure to diagnose is the most common cause of a general practitioner being sued. The process of medical diagnosis, in a child such as Allegra, is for the doctor to ask him or herself three main questions:

1. Does this child look sick?
2. What is the most likely cause of this child's illness?
3. What are the serious disorders that I should not miss?

106. Doctors get into diagnostic difficulties when they fail to ask these questions. Perusing a paper based or a computer generated list of disorders that '*should not be missed*' is an aide memoire to considering rarely seen and there for easy to miss, serious conditions.

107. Allegra's case is a pertinent example. In 2002 in the whole of Australia, 761 children under the age of five years were notified as having had a pneumococcal disease. Nine of them died. It is estimated that the pneumococcus causes 700 cases of septicaemia at about 70 cases of meningitis yearly in children under five years of age. Pneumococcal meningitis is a rare disorder.

108. There are approximately 25,000 doctors practising as general practitioners in Australia. On a statistical basis a GP would expect to see one case of pneumococcal septicaemia in a child under the age of 5 every 36 years. That is effectively, one case in a practising lifetime. For pneumococcal meningitis a group practise of eight doctors would see only one case in 40 years.

109. The issue in this case is whether the computer generated questionnaire used by Healthdirect, is capable of alerting a nurse, such as Nurse Ison, at the end of a telephone that this child is sick and needs prompt medical attention.

110. In this case Nurse Ison's use of the guideline suggests that it was too insensitive to alert her to the fact that Allegra was unwell with a bacterial infection which would likely lead to her death if untreated.

111. In order for Nurse Ison to have teased out sufficient information for her to have seen the constellation of symptoms which would suggest that Allegra was unwell and needed higher level intervention, Nurse Ison would need to have been trained to identify the relevant symptoms and then to ask further questions in order to gain a fuller picture of what was causing Ms Vo concern about her daughter's health.

112. One question (question 11911) asked by the guideline was whether '*the child sounds very sick or severely dehydrated to the triager?*'

113. The question was supported by a prompt (Prompt 3601) visible to Nurse Ison on her computer screen. The prompt required Nurse Ison to '*make an objective assessment of the child's clinical status by assessing changes in alertness, arousal, behaviour, breathing, circulation (colour) and fluid intake and output. Crying, distress, pain not an indicator of acuity of illness without clinical signs'*.

114. Doctor Georgia Karabatsos, director of clinical quality, Healthdirect Australia gave evidence during the course of the inquest. Dr Karabatsos conceded that Nurse Ison did not ask important questions associated with question 11911 such as whether the child was behaving normally or were there any changes in activity levels or sleep patterns.

115. The significance of the symptoms, which could have been elicited by such questions, is not that of themselves they compel action. More subtly, they add to a constellation of symptoms suggestive of a sick child who needed to be medically reviewed. Dr Karabatsos was asked:[82]

[82] Transcript 7/08/2013, Page 493

Mr Offer: If she had elicited that the baby was not as responsive as normal, not as active as normal, had a fever and was vomiting, if she had elicited those symptoms, those symptoms alone should have dictated that this child ought to have been medically reviewed; would you agree with that?

Dr Karabatsos: Yes.

Mr Offer: And then we add in the whimpering and the shallow breathing and the case becomes even stronger?

Dr Karabatsos: Yes.

116. Reverting to the point made by Professor Kamien the questions asked by Nurse Ison, prompted by relevant guidelines, should have focused not only on what the most likely cause of Allegra's illness was but more importantly upon what serious disorders may exist and should not be missed during the course of the consultation.

117. Whilst doctors like Dr Karabatsos and Dr Kamien may be able to look at a constellation of symptoms and find them sufficiently suggestive of a child being unwell so as to warrant review by a medical practitioner, a registered nurse is very unlikely to have the same level of expertise and experience.

118. The guidelines need to be sufficiently robust that they compensate for the difference in experience and expertise between an experienced doctor in the field and the registered nurse undertaking this triage. The quality of the guidelines should be such that they prompt the nurse to consider the same matters as would an experienced doctor and arrive at the same conclusion as to the appropriate disposition.

119. Question 11911 was apparently too vague to properly direct Nurse Ison to the constellation of symptoms available to her.

120. Likewise Nurse Ison's questioning was not sufficiently sophisticated for her to have asked questions about Allegra's changed sleeping pattern (asleep between the

hours of 2-7pm when she was normally awake, the fact that she had remained apparently asleep until the time of the call to Healthdirect at 9:27pm and the fact that at about 8pm she had the content of her bottle with her eyes closed).

121. Dr Kamien's view (shared by Dr Richmond) was that Allegra had a constellation of symptoms which should have been recognised as suggesting she was unwell and was potentially unwell with a serious illness.

122. In response to this proposition Dr Karabatsos gave evidence that after the death of Allegra Healthdirect arranged for five experienced nurses, employed by the service, to listen to the call along with other vomiting calls and that the nurses didn't identify the rapid shallow breathing as a significant change or potential clinical sign that Allegra may be very unwell.[83]

123. It is of some concern that the combination of training, job experience and the use of carefully created guidelines which identified the type of symptoms which properly considered may suggest an underlying serious condition were insufficient for Nurse Ison and five of her colleagues to arrive at the appropriate disposition.

SHOULD HEALTHDIRECT ADOPT A LOW THRESHOLD FOR RECOMMENDING A REVIEW BY A MEDICAL PRACTITIONER WHEN ASSESSING A FEBRILE INFANT

124. According to Professor Kamien children aged six months to two years have an immature immune system. Babies have an innate immune system and this is bolstered by immunoglobulins that are passed from the mother. The protective effect of these passive antibodies in these immunoglobulins decreases by three to six months of age. So a six-month-old baby is particularly susceptible to infections.

[83] Transcript 6/06/2013 Page 265

125. Mothers and fathers vary in their ability to give accurate information about a child's symptoms and signs. The information being recorded through a telephone interview may be wide for the mark rendering the best of computer decision assisting programmes invalid.

126. A health professional should always ask a mother how worried she is about a child. If the mother says that her baby is not right then that baby should be seen by a doctor. For those reasons Professor Kamien believes there should be a very low threshold for recommending medical review for any child, especially those under two years of age.[84]

CONFLICT BETWEEN PAEDIATRIC FEVER GUIDELINE AND THE PAEDIATRIC VOMITING GUIDELINE

127. Allegra's case highlights one danger with the reliance upon guidelines. Guidelines maybe inconsistent and following one guideline as opposed to another guideline may result in different results or dispositions.

128. Allegra had a range of symptoms which included both fever and vomiting. Nurse Ison could have followed either guideline, or both guidelines had she been so minded.

129. The fever guideline provides that 'a fever is an elevation in core temperature. It is not an illness but a symptom. It is usually the bodies response to an infection. In children it is most commonly viral but can be due to bacteria'. The fever guideline provides that normal temperature is usually defines as 36.4 to 37.2°C the guideline also provides that a fever is a temperature over 37.8°C measured by any method, although it is important to keep in mind that thermometers can be inaccurate especially tympanic thermometers in young children (less than 6 months).

130. The fever guideline also provides that there are indications for seeing patients immediately for fever.[85]

[84] Exhibit 1, Volume 1, Tab 10, Page 6-7
[85] Exhibit 1, Volume 1, Tab 9, Page 1, Fever Guideline

INDICATIONS FOR SEEING PATIENTS IMMEDIATELY FOR FEVER
* Associated serious symptom with any level of fever
* Age < 90 days (3 months) with any level of fever
* Age > 90 days AND fever > 40.0 C persistent. (Reason: increased risk of serious bacterial infection)
* Any unwell child with a temperature > 38 C should be seen.
NOTE: Ages and temperatures are generalizations to assess clinical risk and are not absolutes.

131. As can be seen from the extract above, a patient being triaged under the paediatric fever guideline who was unwell and had a temperature of greater than 38°C should be seen by a doctor.

132. At the time of the triage Allegra's temperature was 38.8°C. It had earlier been 38.9°C although it had fallen to 37.6°C after Allegra was given Panadol. Leaving aside the fact that the method of taking Allegra's temperature was unreliable it appears that Allegra satisfied the condition that her temperature was above 38°C. Moreover, she was an unwell child. She had been vomiting, whimpering and her breathing had become fast and shallow. She was plainly unwell.

133. Had Nurse Ison followed the paediatric fever guideline and had regard to the introductory notes that I have highlighted it would seem that the appropriate disposition of the matter was not home/self care but referral to a doctor. It should also be noted that the notes to paediatric fever guideline highlight the fact that thermometers can be inaccurate.

134. Allegra's temperature was measured using an infra red 'no touch' thermometer her temperature was measured at 8pm and was found to be 38.9°C. Allegra was given some Panadol and within 5-10 minutes she vomited. Her temperature was taken and she was found tot have a temperature of 37.6°C, suggesting the Panadol had some effect in reducing her fever. Later, at about 8:50pm Allegra's temperature was taken again and found to be 38.8°C.

135. Infra red thermometers of the type used by Ms Vo are not considered to be particularly accurate. The NICE Guidelines suggest the inaccuracy can be as high as 1.2°C, whilst Dr Richmond, a Paediatrician at Princess Margaret Hospital believed the inaccuracy would likely be in the range of half a degree above or below the stated temperature.[86]

136. Dr Kamien also highlighted that obtaining an accurate temperature was dependent on the site at which the temperature was taken. A rectal temperature would be the most accurate temperature. The next most accurate reading would be an axial temperature taken from under the patient's arm and then a measurement taken up under the patient's tongue, which in turn would be more reliable than a temperature taken using a tympanic thermometer from a patient's ear.

137. In this case the infra red thermometer took a measurement from Allegra's temple. Neither the thermometer nor the site at which Allegra's temperature were measured were unlikely to provide an accurate reading.

138. Nurse Ison did not consider either the type of thermometer used or the location from which the temperature was determined a determination as to the reliability of the reports of Allegra's temperature.

139. During the course of the telephone consultation Nurse Ison told Ms Vo:

> at 6 months of age probably anything above 39, 39.5°C you'd probably need to see somebody it's abit high for her at 6 months of age.

140. A little later Ms Vo clarified the advice:

> If it hits over 39°C and I give her Panadol or if it hits 39°C and a half I should just take her to…

141. At which point Nurse Ison interrupted and said:

[86] Transcript 5/06/2013 Page 136

> yeah give us a ring back give us a ring back if it gets up to that ok, yeah if she was abit older we go up to the 40°C but she is that age where it's not quite, we like to keep an eye on it when it gets to 39.5°C.

142. It may be that Allegra's temperature was already at the level (39.5°C) but it was not reflected by the temperature recorded by a relatively inaccurate device at a location on Allegra's body not known for accurately reflecting a patient's temperature.

143. An enquiry by Nurse Ison as to the type of thermometer used and the location from where the temperature was gauged, may have caused her sufficient concern about the accuracy of the temperature related to her to waive the strict temperature requirement under the vomiting guideline and to have exercised her discretion to escalate Allegra's disposition so that she saw a doctor.

QUESTION 11911 IS THE THRESHOLD TOO HIGH?

144. Question 11911 requires the registered nurse to consider whether the child is '*very sick*'. If the registered nurse enters yes then the disposition becomes one where the child is referred to an emergency ward at a hospital.

145. Counsel assisting and the counsel for Allegra's parents submit that this threshold is too high. They make the points that under the fever guidelines an unwell child of a temperature of 38°C or above should be seen by a doctor. There is no similar requirement under the vomiting guideline adopted by Nurse Ison.

146. They also make the point, as did Professor Kamien that the constellation of symptoms which in isolation show the child to be only unwell taken together may suggest the child has a condition which if not treated promptly may lead to him or her becoming very unwell.

147. I agree with the submissions of counsel and the point made by Professor Kamien.

148. Healthdirect have taken a number of steps to try ensure that a case like Allegra's will not re-occur. They have changed the content of the paediatric vomiting guideline and they have improved the training registered nurses receive in relation to the constellation of minor sounding symptoms which may suggest an underlying serious condition. They have also trained registered nurses, as far as is possible within the confines of a Tele-health service, the use of the traffic light system developed by NICE, which highlights important symptoms and the appropriate response to those symptoms.

149. Whilst I believe Healthdirect has made genuine attempts to improve its service and has an ongoing commitment to continue to improve its offering to the public, the service needs to be sufficiently robust not only be able to handle straightforward cases, such as those suffering from a stomach virus, but also to be able to detect the symptoms of difficult and complex cases, such as the onset of a case of paediatric pneumococcal meningitis.

150. The true value of a service like that provided by Healthdirect is not its ability to identify the simple cases with an easy disposition, but to provide a service which the public can rely on when the detection of subtle symptoms can be the difference between life and death.

Recommendation No.2

I recommend that Healthdirect work to improve the content of its guidelines and the training given to registered nurses undertaking triage in order to ensure that those presenting with subtle symptoms of difficult and complex cases such as Pneumococcal Meningitis.

SUMMARY

151. During the afternoon of 28 April 2010, Allegra Amelie Scafidas began to show the signs of a bacterial infection; pneumococcal meningitis.

152. By 9:27pm Allegra's condition was such that her mother called Healthdirect for advice.

153. During the course of the telephone consultation Ms Vo told Nurse Ison of a number of symptoms which were causing concern.

154. Those symptoms would have suggested to an experienced doctor that Allegra may have a serious illness.

155. Nurse Ison, who was using computer-based guidelines provided by Healthdirect did not view the constellation of symptoms reported to her by Ms Vo has suggestive of a condition that required Allegra to be referred to a doctor or to an Emergency Department.

156. At the conclusion of the telephone consultation Nurse Ison left Ms Vo with the clear impression Allegra was suffering nothing more serious than a '*tummy virus*'.

157. Had Allegra been taken to hospital on 28 April 2010, it is likely she would have survived, although the bacterial infection may have caused her significant harm.

158. Allegra's condition rapidly deteriorated at about 8:45am on 29 April 2010. She was taken to Princess Margaret Hospital for Children, where she was diagnosed as suffering from pneumococcal meningitis.

159. Allegra's condition was such that she could not survive the illness and she died during the early hours of 5 May 2010.

160. I find death arose by way of Natural Causes.

DH Mulligan
Coroner
28 November 2013