Medical Centre Company

General Practitioner, Dr B

Doctor, Dr C

A Report by the

Deputy Health and Disability Commissioner

(Case 20HDC02300)

Health and Disability Commissioner

Te Toihau Hauora, Hauātanga

Contents

Executive summary

1. This report discusses the care provided to a four-year-old girl by a medical centre company over two appointments when the girl was seen by two doctors. The girl had abnormal urine results obtained by triage nurses, but both times these results were overlooked in her doctor consultation, and her parents were not informed about the concerning results. When the girl presented again to another doctor a few days later, she was diagnosed with type 1 diabetes and referred to hospital for treatment. This case highlights the importance of doctors reading nursing triage notes, including examination findings.

Findings

2. The Deputy Commissioner found that by failing to review and act on the abnormal urine results obtained during nursing triage appropriately, the doctors breached Right 4(1) of the Code. These omissions led to a delay in the girl being diagnosed with type 1 diabetes.

3. The Deputy Commissioner also made adverse comment regarding the medical centre company for not having triage guidelines in place at the time that were sufficiently clear to guide nursing staff to respond to a child at risk appropriately.

Recommendations

4. It was recommended that both doctors provide a written apology to the family for the identified breaches in care. These apologies have been provided and forwarded to the family.

5. The Deputy Commissioner also made a number of recommendations to the company, including to provide HDC with updates regarding changes to triage resources and the effectiveness of the changes, and to use anonymised details of this case for the education of its staff so that the lessons from this complaint are shared appropriately.

Complaint and investigation

6. The Health and Disability Commissioner (HDC) received a complaint from Mr A about the services provided to his four-year-old daughter, Miss A, at two locations (Clinic 1 and Clinic 2, owned and operated by the same company). Specifically, Mr A complained about a delayed diagnosis and failure to manage Miss A's type 1 diabetes during two separate visits to the company's clinics in November 2020. The following issues were identified for investigation:

- *Whether the medical centre company provided Miss A with an appropriate standard of care in November 2020.*
- *Whether Dr C provided Miss A with an appropriate standard of care in November 2020.*
- *Whether Dr B provided Miss A with an appropriate standard of care in November 2020.*

7. This report is the opinion of Deputy Commissioner Dr Vanessa Caldwell and is made in accordance with the power delegated to her by the Commissioner.

8. The parties directly involved in the investigation were:

Mr A	Complainant/father of consumer
Medical centre company	Provider
Dr B	General practitioner (GP)
Dr C	Doctor
RN D	Registered nurse
RN E	Registered nurse

9. RN F and Dr G are also mentioned in the report.

10. In-house clinical advice was obtained from GP Dr David Maplesden (Appendix A), and independent advice was obtained from RN Karen Hoare (Appendix B).

Information gathered during investigation

Introduction

11. This report discusses the care provided to Miss A by two registered nurses and two doctors over two appointments, on 5 and 18 November 2020. The complaint relates to a delayed diagnosis of type 1 diabetes,[1] a failure to manage this condition, and a failure by medical practitioners to inform Miss A's parents of her abnormal urine test result prior to the diagnosis.

Triage presentation on 5 November 2020

12. On 5 November 2020, Miss A's parents took Miss A to Clinic 1. Miss A's father, Mr A, told HDC that the reason for the visit was because Miss A was suffering from abdominal pain with vomiting and a fever.

Triage nurse assessment

13. Initially, Miss A was seen by RN D for a triage assessment. RN D recorded that Miss A's mother told her that Miss A had had abdominal pain and had vomited the previous night and that morning. RN D documented: "[N]o urinary symptoms reported, no diarrhoea. [Miss A] eating and drinking normally as per mother, no diet changes, chest clear upon auscultation[2]."

[1] A chronic condition in which the pancreas produces little or no insulin.
[2] Listening to the internal sounds of the body, usually using a stethoscope.

14. RN D documented Miss A's vital signs as: temperature 36.7°C, heart rate 110 beats per minute (bpm); respiratory rate 30 breaths per minute; and oxygen saturation 100%.[3] All vital signs were considered to be within the normal range for a four-year-old child.

15. RN D performed a urine dipstick test,[4] which showed glucose 2+[5] and ketones 3+[6] — ie, abnormally high levels of glucose and ketones in the urine.

16. RN D told HDC that she does not recall informing Miss A's parents of the abnormal result. She said that generally she would not give this information to a parent unless they asked her for the results or they appeared particularly anxious about the test. RN D stated: "This is because I anticipate that it will be discussed with the patient or in this case with their parent when they have the impending medical consultation."

Additional testing

17. RN D said that she did not perform any further testing (ie, a finger prick glucose test) on Miss A following her abnormal urine result, as it was not the company's policy to do so unless the child presented with a history of diabetes. RN D stated that the rationale behind limiting this type of testing is to minimise trauma and distress to a child. She said that in her experience, the finger prick test is not performed unless explicitly requested by one of the medical staff.

Triage score

18. RN D gave Miss A a triage score of 5, which indicated that she should be seen by a doctor within 120 minutes.

19. RN D told HDC that normally she would not provide a verbal report to the doctor about an abnormal urine test result, as the doctor would refer to the clinical records as part of their consultation. RN D stated:

> "If a patient had a higher triage score, or required immediate or urgent attention, I would of course alert the doctor accordingly, as well as closely monitor the patient in the interim, and/or provide immediate cares or interventions."

Presentation to doctor on 5 November 2020

20. Following the triage appointment with RN D, Miss A was seen by Dr C. Dr C acknowledged to HDC that RN D's triage notes were available during his appointment with Miss A and contained Miss A's abnormal urine results, and that he overlooked these at the time of Miss A's appointment.

[3] The normal heart rate is 95–140bpm; the normal body temperature for a healthy four-year-old child is approximately 37°C; the normal respiratory rate is 25–30 breaths per minute; and the normal oxygen saturation level is 95–100%.
[4] A thin, plastic stick with strips of chemicals on it is placed in the urine. The chemical strips change colour if certain substances are present or if their levels are above typical levels.
[5] Glucose is not usually found in urine.
[6] Ketones are chemicals made in the liver and are produced when there is not enough of the hormone insulin. Normally, there should be no ketones in urine; 3+ is considered a high ketone level in the urine.

21. Dr C recorded in his notes that Miss A was seen with both parents, and the following history was taken:

> "[One episode of vomiting] today at 4:30am … some [abdominal] cramps … no [lower urinary tract symptoms] … Had breakfast ok today, [didn't vomit it out], nil fevers, nil nausea/vomiting [so] far after breakfast, nil loose stools."

22. Dr C noted that Miss A was alert and comfortable and not in distress or pain, and he recorded a diagnosis of "vomiting symptoms". Dr C told HDC that he discussed a treatment plan with Miss A's parents consisting of ibuprofen if her abdominal pain recurred, and ondansetron for vomiting as required. Dr C stated that he also advised Miss A's parents to return to the medical center if Miss A's symptoms did not settle or became worse. Dr C told HDC that had he noted Miss A's abnormal urine result, he would have repeated the test, ordered a finger prick blood sugar level test, and "perhaps ordered labs[7]".

Triage presentation on 18 November 2020

23. Mr A told HDC that on 18 November 2020, Miss A felt sick at her day-care center and at home. Mr A said that initially the family visited Clinic 2 and informed them that Miss A was having abdominal pain and had a rash all over her body. Mr A told HDC that Miss A was in a "bit worse condition than before".

Triage nurse assessment

24. Miss A was seen by RN E for a triage assessment from 9.31am to 9.39am. RN E recorded that Miss A's mother told her that Miss A's presenting complaints were: "Vagina red and painful. Itchy all over body. Increased [eating and drinking]. Weakness." RN E stated that prior to seeing Miss A, she read Miss A's 5 November 2020 clinical notes and saw that a urine dipstick test had been completed on that day and had shown a high level of glucose. RN E told HDC that she noticed that Dr C had not made any reference to the abnormal urine result in his 5 November consultation notes. RN E said that Miss A's presenting symptoms, along with her prior consultation notes, immediately made her think of a possible diagnosis of diabetes, which led her to perform a further urine dipstick test on Miss A.

25. RN E discussed her usual practice of recording the results of a urine dipstick test as follows:

> "While [the patient is] in the bathroom, I type in my triage notes and observations, and make sure to write 'Urine checked' under the 'Action Taken' as part of my observations. By this time, the patient would have returned from the bathroom with urine sample in hand, which was the case with [Miss A]. I then immediately check the urine by doing a dipstick check, this only takes 2 minutes to show the full results, by the time I wash my hands, I can read the results … I then immediately place the results into the computer under the Urine dipstick screening template (URI) … Then and only then do I move the patient's name over to the doctor's queue to await consultation and move onto calling my next patient for triage."

[7] Laboratory tests.

26. RN E also stated:

> "It is the expectation and usual practice that the doctor will read the entire triage notes and observations and check the urine results in the screening template section. The urine results can also be seen in the clinical notes area with the results displayed with +'s only to each corresponding place that represents a urine finding. The doctors know what space represents what finding even without opening the screening template to read the exact findings."

27. Miss A's repeat urine test showed the same results as her 5 November test — ie, abnormally high levels of ketones and glucose in her urine. RN E wrote in her triage notes that Miss A's "urine [had been] checked". RN E stated that normally she does not write the urine results into the triage notes, as usually they are entered only into the screening template, and "the doctors check the results themselves".

28. RN E told HDC that usually she does not check the urine in front of a patient or inform the patient of the results, as "[patients] generally become quite alarmed and more anxious while waiting to see the doctor". RN E explained that her rationale for this is that the doctor will discuss the urine results with the patient, at the same time as giving a diagnosis and treatment plan.

29. RN E documented Miss A's vital signs as: temperature 37.3°C; heart rate 150bpm; and oxygen saturation 98%.

Additional testing

30. RN E told HDC that she did consider checking Miss A's blood sugar level by doing a finger prick, but she decided against this because of the distress exhibited by Miss A. RN E said that already two urine dipstick tests had been performed within a very recent timeframe, and both had shown an abnormal level of sugar in the urine. RN E stated:

> "I did not think an immediate blood sugar level was warranted until the patient was seen by the doctor as she was already so distressed and crying and would have had to be physically restrained in order to do a blood sugar level."

Triage score

31. RN E gave Miss A a triage score of 4, which indicated that she should be seen by a doctor within 60 minutes. RN E told HDC that Miss A's observations were stable enough not to warrant a triage score of 3 (which indicates that the patient should be seen within 30 minutes). RN E stated that because Miss A was distressed and crying, she placed her in the "awaiting consultation queue" with the notation "IN" (intervention needed), which she said "bumps the patient straight to the top of the doctor's queue". RN E said that the "IN" notation "alerts the doctor to see the patient as soon as possible, even if the observations do not warrant a more critical triage score".

32. RN E told HDC that Miss A was placed onto the awaiting doctor's consultation queue at 9.39am, and RN E entered Miss A's urine results into Miss A's clinical notes at 9.53am. RN E stated that she "would have entered [Miss A's] urine results onto the computer well before

the doctor had even started their consultation with [Miss A]". RN E said that it was the expectation and usual practice that the doctor would read all of the triage notes and observations and check the urine results in the screening template section as part of their consultation.

Presentation to doctor on 18 November 2020

33. Miss A was seen by Dr B at 10.15am.

34. Dr B told HDC that it is his usual practice before seeing patients to first review the clinical notes made by the triage nurse. Dr B said that he did not notice RN E's note that she had taken a urine sample to be checked during Miss A's appointment, but said that had he noticed, he would have followed this up.

35. Dr B stated that he did not read RN D's triage notes from 5 November 2020, and read only Dr C's consultation note, which did not mention a urine test.

36. Dr B told HDC that ordinarily RN E was very diligent about informing him of any abnormal results, but on this occasion she omitted to do so. Dr B stated that this may have been because the medical center was very busy on 18 November 2020.

37. Dr B recorded in his notes that Miss A presented with an itchy skin rash from flea/insect bites, and nappy area redness and itching. Dr B noted: "[Miss A] systemically well … No other concern today and mentioned her [abdominal] pain which was there [a] couple of weeks ago has resolved and today mainly came for rash."

38. Dr B told HDC that he did notice that Miss A's heart rate was fast, but he was told by her parents that Miss A starts to cry as soon as she sees a medical professional. Dr B stated that considering her normal temperature of 37.3°C and her otherwise systemically well presentation, he felt that there was no indication to take further history.

39. Dr B said that Miss A's mother mentioned to him that Miss A was seen by Dr C on 5 November because of "abdominal pain", but he was not concerned by this as Miss A's mother informed him that the pain had since resolved.

40. Dr B recorded a diagnosis of "insect bite [not otherwise specified]" and "Candidal nappy rash". He told HDC that he advised Miss A's mother to bring Miss A back to the practice if her symptoms did not improve or if her condition became worse.

Presentation on 21 November 2020

41. Mr A told HDC that he and his wife took Miss A to Clinic 2 on 21 November 2020 because Miss A felt sick and was not eating properly, but Miss A was not seen on that day because the centre said that it did not have time to check her.

42. In relation to this presentation, the company told HDC that Miss A and her parents arrived at Clinic 2 at about 11am, and the practice was due to close at 1pm, and at the time of Miss A's arrival "there were already too many patients [waiting] to be seen before 1pm". The company stated that Miss A's mother was informed that Miss A could be seen by a triage

nurse that day, and if Miss A's presentation was found to be urgent then she would be seen by a doctor, but if not, she should present to the Clinic 1, which was open until 8pm. The company said that Miss A's mother was upset on hearing that Miss A might not be seen at Clinic 2, and she left without Miss A being seen by any clinician.

43. The company told HDC that its triage policy at the time stated that a patient could be diverted to another clinic "if there is a long waiting time and enough patients in the clinic before closing time". The company stated that before diverting to another clinic, a patient needs to be assessed by a nurse, and a discussion with a doctor must take place to check whether diversion is safe. The company confirmed that this did not happen because Miss A's family departed before this could occur.

Presentation on 22 November 2020

44. Mr A told HDC that Miss A visited Clinic 1 again in the early morning of 22 November 2020.

Triage nurse assessment

45. Miss A was seen by RN F for a triage assessment. RN F noted that the history given by Miss A's mother was abdominal pain and vomiting on and off for two weeks, no loose bowels, decreased appetite, on and off fever, no cough, no runny nose, no other symptoms but potentially some weight loss.

46. RN F documented Miss A's vital signs as: temperature 37.0°C, heart rate 112bpm; and oxygen saturation 100%. RN F noted a family history of diabetes and gave Miss A a triage score of 5.

GP assessment

47. Miss A was seen by Dr G, who took the following history from Miss A's mother:

> "[V]omited one time 2 weeks ago; [abdominal] pain since then sometimes ok sometimes bad worse last 3–4 days; no [diarrhoea]; urine frequency; no coryza[8] or cough; drinking well."

48. Dr G made the following observations during the appointment: "[W]as crying (mum says that she is crying when see Drs always); afebrile[9]; abdomen soft [and not tender]; [ear, nose and throat, no abnormality detected]." Dr G noted the high sugar and ketones in the urine tests taken at the previous presentations.

49. Dr G requested that RN F complete a blood sugar test for Miss A before continuing his appointment. RN F recorded the result as: "[G]lucometer shows [high], exceeding the limits." Dr G noted that the likely diagnosis was diabetes type 1. He advised Miss A's family to take her to the Emergency Department at the public hospital.

[8] Common cold.
[9] Not feverish.

50. Mr A told HDC:

> "Finally, one doctor at that medical centre checked the urine test reports and told us that her urine test was very bad and [Miss A] was identified with high diabetes/glucose. [The GP, Dr G] called the hospital and advised us to take her to hospital immediately."

Hospitalisation

51. Miss A was admitted to hospital on 22 November 2020 for monitoring and was administered IV fluids and insulin. Miss A was deemed fit for discharge on 27 November 2020.

Further information

Mr A

52. In his complaint, Mr A told HDC that Miss A is now on insulin three times a day for diabetes. He stated that the delayed diagnosis caused his family severe stress.

The medical centre company

53. Following Mr A's complaint, on 15 December 2020 the company completed a Significant Event Investigation Report. The Report concluded that Dr C and Dr B had both overlooked the urine results.

54. The company told HDC that it is usual and accepted practice for doctors to take responsibility to check and confirm all the information gathered by the nurse at triage. The company stated that this includes the history taken, as well as the examination findings and the results of investigations performed.

55. The company said that in most clinics, if a nurse is worried about a patient, they will knock on the duty doctor's door and interrupt a consultation to alert the doctor.

56. The company stated:

> "It is uncommon to find glycosuria[10] and a high capillary blood glucose in a child. With accompanying ketonuria[11] and tachypnea[12] this would have indicated this child was sick and should be brought to the attention of a duty doctor. Because the child looked well this did not happen."

57. The company said that had Miss A's parents been informed about their daughter's abnormal urine results by the triaging nurses, they could have discussed their significance with the GP (even if the abnormal results were not raised by the GP).

58. Furthermore, the company said that at the time of Miss A's presentation, its clinics used only an adult triage score. The company stated that the paediatric Early Warning Score[13] was introduced in 2021. the company also stated:

[10] Sugar in the urine.
[11] Ketones in the urine.
[12] Abnormally rapid breathing.
[13] A tool used to determine the degree of illness of a patient.

> "However, if [the paediatric EWS had been] available, on 5 November 2020 [Miss A] with a respiratory rate of 30 would have been a Triage Score of 2 (SICK) and likely to need hospital admission. On 18 November, [Miss A] was upset (crying) and her heart rate was 150/min. However, had [Miss A] settled and this was a non-distressed heart rate this would also be a Triage Score of 2 (SICK). The doctor would consider repeating recordings if the appearance of a child is more settled when being reviewed."

RN E

59. RN E stated that on 18 November 2020, she believed that she "[did] what [she] had to do as a nurse". RN E reiterated that as a nurse, it was not in her scope of practice to diagnose a patient. She told HDC:

> "I have checked what I thought was appropriate to check at the time of triage and made the appropriate handover to the doctor as per our usual practice, this does not involve calling the doctor but was done through the triage notes and through the triage score and placement on the awaiting consultation queue … I can only check observations and use my initiative to check any other diagnostic tools such as urine, then document everything into the computer for the doctor to view and assess."

RN D

60. RN D stated that she recognises that a finding of glucose and ketones, as documented in Miss A's case, was clinically significant and suggestive of new onset diabetes. RN D said that she always endeavours to treat all patients, parents and whānau with respect and dignity, and to deliver care in line with company policies.

Dr B

61. Dr B told HDC that when he was informed of Miss A's diabetes diagnosis, he was deeply upset, and on 8 December 2020 he rang Miss A's parents to apologise.

62. Dr B stated that he wanted to explain what had happened, and to offer his sincere apologies for missing an opportunity to diagnose Miss A with diabetes. Dr B said that the results of Miss A's urine test were not communicated to Miss A's parents in a timely manner, and he wanted to acknowledge the stress that this caused them. Dr B explained: "I was instead focused on treating [Miss A's] rash and the symptoms she had presented with."

Dr C

63. Dr C told HDC that he was sorry to have missed an opportunity to diagnose Miss A when he saw her on 5 November 2020. He stated that he suspected the reason for overlooking the urine results may have been because Miss A did not present with any lower urinary tract symptoms. Dr C accepted that he should have paid more attention to the urine results, and stated: "Had I noted [Miss A's] dipstick results, I would have repeated the test, ordered a finger prick blood sugar level test and perhaps ordered labs."

64. Dr C told HDC that he acknowledged that on this occasion he fell short of the standard he expected of himself, and extended his apologies to Miss A and her family.

Responses to provisional opinion

65. Mr A was given the opportunity to respond to the "Information gathered during investigation" section of the provisional report, and he had no further comment to make.

66. The company, Dr C and Dr B were given the opportunity to respond to relevant sections of the provisional report. They accepted the provisional findings.

67. The company said that the lessons from this case were shared with doctors at a peer review meeting in June 2022, and its further comments concerning the recommendations from this report are incorporated below.

Opinion: Preliminary comment

68. To assist my assessment of whether the care provided to Miss A was of a reasonable standard, I obtained independent advice from RN Karen Hoare, and in-house clinical advice from GP Dr David Maplesden.

69. The company and its staff had a duty to provide services to Miss A with reasonable care and skill. Miss A's parents took her to the company's clinics on four occasions between 5 and 22 November 2020. During this period, Miss A was seen by several nurses and doctors. However, it was not until 22 November 2020, following a third abnormal urine test result, that Miss A was referred to hospital and a diagnosis of type 1 diabetes was made.

70. Primarily I am concerned about the care provided to Miss A by Dr C on 5 November, and by Dr B on 18 November. Both doctors have accepted that they overlooked Miss A's abnormal urine results and missed an opportunity to diagnose Miss A with type 1 diabetes earlier than 22 November 2020.

71. I acknowledge that the company, Dr C, and Dr B have altered their practice to prevent any further omissions and have created new policies and tools to better identify risk to its younger patients.

Opinion: Dr C — breach

72. Miss A saw Dr C on 5 November 2020 following a triage assessment by RN D. RN D undertook a urine dipstick test and entered the results in the urine screening template on the company's online management system. The system allows a reader to view the results by clicking on the requisite section. The urine result showed an abnormal ketone level and the presence of glucose.

73. Dr C acknowledged to HDC that Miss A's notes contained the abnormal urine results, and that he overlooked the results at the time. Dr C told HDC that he is sorry to have missed an opportunity to diagnose Miss A on 5 November 2020.

74. Dr C noted in Miss A's clinical record that Miss A was alert and comfortable, and not in distress or pain, and he recorded a diagnosis of "vomiting symptoms" only.

75. My in-house clinical advisor, Dr Maplesden, advised that the history and assessment notes recorded by Dr C represent a very common paediatric presentation in primary care — a "non-specific unwellness" with a single episode of vomiting in the absence of any particular localising signs. Dr Maplesden said that apart from the abnormal urine results, Miss A's presentation did not raise particular concern about a diagnosis of diabetes.

76. Dr Maplesden advised:

> "[A] urinalysis was performed and the presence of glycosuria raised the possibility of underlying diabetes with presence of ketones raising the possibility of [diabetic ketoacidosis]. While the abnormal urinalysis cannot be regarded as diagnostic of diabetes I would expect point of care capillary blood glucose [CBG] to be tested in this situation to exclude significant hyperglycaemia."

77. Dr Maplesden said that it is expected practice for a GP to review triage observations as part of the patient assessment. He stated that the failure to review or act on the abnormal urine results must be regarded as a moderate departure from accepted practice. He advised that he would be more critical of this oversight if Miss A had presented with symptoms suggestive of underlying diabetes.

78. I accept Dr Maplesden's advice and agree that it is accepted practice for a GP to review triage observations as part of patient assessment. I am critical that Dr C overlooked the urine results during his appointment with Miss A.

79. In my view, Dr C's omission led to a delay in Miss A being diagnosed with type 1 diabetes. I consider that Dr C's omission to view or act on the urine results did not meet the required standard of care, in breach of Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).[14]

[14] Right 4(1) states that every consumer has the right to have services provided with reasonable care and skill.

Opinion: Dr B — breach

80. Following Miss A's 5 November 2020 appointment with Dr C, her condition did not improve, and Mr A took her back to the company on 18 November 2020. Mr A told HDC that Miss A was in a worse condition than at her previous appointment.

81. Miss A was assessed by RN E, who tested Miss A's urine and entered the results in the dipstick screening template (which could be viewed by the doctor by clicking on that section). The result showed an abnormal ketone level and the presence of glucose. RN E also wrote directly in Miss A's clinical notes that her urine had been checked, specifically for Dr B's attention. Following RN E's assessment, Miss A saw Dr B.

82. Dr B told HDC that his usual practice was first to review the clinical notes made by a triage nurse, but on 18 November 2020 he did not notice RN E's note that Miss A's urine test results were available, nor did he check the screening template. Dr B said that instead, he reviewed only Dr C's notes from 5 November 2020. Dr C's notes did not mention Miss A's urine results and did not allude to potential symptoms of diabetes. As a result, Dr B was not aware of the abnormal urine results and took no follow-up action. Dr B told HDC that he was very upset to learn of Miss A's diabetes diagnosis, and offered Miss A's family his sincere apologies for missing an opportunity to diagnose Miss A with type 1 diabetes on 18 November 2020.

83. Dr Maplesden advised that it was accepted practice for GPs to review triage observations as part of patient assessment. I agree with Dr Maplesden. Dr B did not review the triage notes adequately, and this contributed to the delay in diagnosing Miss A with type 1 diabetes.

84. Dr B stated that his expectation based on previous practice was for RN E to inform him directly if there was any abnormality in a patient's urine test. Dr Maplesden stated: "[I]t appears there were differing expectations as to the appropriate means of communication of the result which could indicate systemic issues." I acknowledge Dr Maplesden's observation, and I find it concerning that the relationship and communication between a triage nurse and a doctor was not clear in this setting. However, I consider that ultimately the responsibility to review the triage notes and results lay with Dr B as the doctor.

85. Dr Maplesden also noted that there appears to have been significant contrast between the perceptions of RN E and Dr B in relation to Miss A's main presenting issues. Dr Maplesden advised that Miss A presented with significant tachycardia, and he is mildly critical that Dr B did not document an assessment of hydration in this context. Dr Maplesden stated:

> "[RN E] has recorded symptoms that might have raised concern for diabetes or at least deserved further clarification in the GP consultation (increased appetite and drinking, weakness) while [Dr B] has described an essentially well child with nappy rash and an insect bite."

86. I accept Dr Maplesden's advice and agree that it is accepted practice for a GP to review triage observations as part of patient assessment. In my view, Dr B's omission to read RN E's triage notes, which recorded the availability of the urine test results, and to observe the urine results, led to a further delay in Miss A being diagnosed with type 1 diabetes, and did

not meet the required standard of care. I am also critical that Dr B omitted to review RN E's clinical observations, which, as discussed by Dr Maplesden, contained potential symptoms of diabetes. Accordingly, I consider that Dr B failed to provide services to Miss A with reasonable care and skill, in breach of Right 4(1) of the Code.

Opinion: Medical centre company — adverse comment

87. As a healthcare provider, the company is responsible for providing services in accordance with the Code. In this case, I consider that the deficiencies in Dr C's and Dr B's care were individual clinical failures.

88. The company has acknowledged that it did not have comprehensive triage guidance for triage nurses, as well as a recognised triage system specifically directed at recognising risk in children. The triage nurses at the company were required to use an adult triage system to categorise risk in its patients. The company has accepted that on 5 November 2020, had Miss A been assessed using the paediatric triage EWS (PEWS) (put in operation in the company's clinics from 2021), instead of an adult triage score of 5, she would have been assessed as category 2, and likely in need of hospital admission. The company also accepted that using the PEWS categorisation, Miss A would also have been categorised as category 2 on 18 November 2020.

89. I am concerned that the triage guidelines in place at the time were not sufficiently clear to guide nursing staff to respond to a child at risk appropriately. Nonetheless, guidelines should not replace clinical judgement and critical thinking. As outlined above, and regardless of the adequacy of the guidelines in place at the time, I am most concerned that two doctors at the company failed to look at the urine test results, despite the results being available for their perusal. I consider it appropriate for the company's management to reflect on the issues raised in this report, specifically the relationship and information management between triage nurses and doctors. RN Hoare has reviewed the new policies implemented by the company and has suggested some improvements. I urge the company to implement the recommended changes.

Nursing care — no breach

Triage assessments

90. Both RN D and RN E (the triage nurses) recorded Miss A's urine results in the urinalysis screening template. RN E also wrote in her triage notes that the urine had been checked. The triage nurses stated that it was their expectation that the assessing doctor would review the results and discuss them with the patient.

91. RN Hoare advised:

> "I suspect that the nurses were extremely busy and in a different location to the doctors. I believe the standard of care provided by both nurses in accurately documenting the

> urine results in the patient management system is acceptable. Both nurses have provided good rationale for how they communicated the abnormal urine results via the patient management system. Additionally, these results were available in a timely manner for the doctors to see them prior to their consultation with [Miss A]."

92. I accept RN Hoare's advice on this matter, and I am not critical of the nursing care provided to Miss A at the company during the relevant period.

Triage category

93. The triage score in a primary health setting determines how long a patient should have to wait to be seen, based on the clinical impression. RN D assigned Miss A a triage score of 5, which indicated that Miss A should be seen by a doctor within 120 minutes.

94. RN Hoare advised that if Miss A looked well and her vital signs were normal, it was understandable that RN D assigned Miss A a triage score of 5 using the adult scoring system.

95. RN E reported that Miss A was crying and presented to the company in a distressed state. RN E told HDC that she gave Miss A an "IN" triage category so that the doctor would see Miss A as soon as possible.

96. RN Hoare advised that this action demonstrated that RN E was thinking critically about the child's condition, and the assignment of the "IN" triage category was appropriate.

97. I consider that both the triage nurses recorded Miss A's presentation adequately within the parameters of the management system.

Communication

98. As part of his complaint, Mr A raised concerns that although the staff knew that Miss A's urine test results were abnormal, his family were not informed of this on 5 and 18 November 2020.

99. RN D told HDC that she did not inform Miss A's parents of the abnormal urine results, as generally she would not give this information to a parent unless a parent asked her for the results or they appeared particularly anxious about the results. RN D stated: "This is because I anticipate that it will be discussed with the patient or in this case with their parent when they have the impending medical consultation." Similarly, RN E stated that usually she does not check the urine in front of a patient or inform the patient of the results, as the doctor will discuss the results with patients at the time of giving a diagnosis and treatment plan.

100. RN Hoare advised that both nurses provided a very acceptable standard of care by not informing the parents of the abnormal urine results. She stated that tests are only a part of the picture when forming differential diagnoses. RN Hoare advised:

> "[The triage nurses] would have expected that the doctor take the test results into consideration after performing a physical examination of [Miss A] and following scrutinizing the history of [Miss A's] presenting complaint. Giving parents only a part of the picture when assessing a sick child is not the right thing to do. I therefore completely

agree that the nurses provided a reasoned rationale for not informing the parents of the abnormal urine result."

101. I accept RN Hoare's advice in respect of the nurses' reasonable expectation that the doctor would follow up. The results were entered for the doctors' attention, and whilst there is a reasonable rationale presented for the triage nurses not to share the results with Miss A's parents at the time of the triage assessment, I do note that the decision not to inform them of the abnormal results did remove the possibility that they could have introduced that information into the consultation themselves and been more active participants in the care of their child, given they also had information about a family history of diabetes.

Further testing

102. As part of my investigation, I considered whether, on obtaining an abnormal urine test result, the triage nurses should have initiated any further testing to provide the GPs with a clearer picture of Miss A's presentation. In particular, I considered whether it would have been appropriate for the nurses to undertake a capillary blood glucose test (CBG).

103. RN Hoare stated that Miss A did not need to be traumatised further by having a CBG in the primary care setting. RN Hoare explained that Miss A's urine results and symptoms were sufficient for immediate discussion with a doctor, with a view to admission as a medical emergency. RN Hoare advised:

> "The nurses … did not need to traumatise this poor child any further by performing a CBG as the hospital would have performed all the necessary tests in a much more child friendly way than the primary health care setting can."

104. I accept RN Hoare's advice. In my view, it was appropriate for the triage nurses not to complete further testing at the time of their respective assessments. The triage nurses completed appropriate testing to an appropriate standard in response to Miss A's presentation.

Changes made

The company

105. The company told HDC that in 2021 it introduced a Paediatric Early Warning Score across all its clinics, to help its nurses and doctors to identify a sick child and those at risk. The company stated that had Miss A been assessed using the paediatric scoring system, she would have received a triage 2 score (sick and likely to require hospital admission) rather than triage 5 (not at risk and safe to wait). The company explained that a triage 2 code would "give permission" for the nurse to alert and interrupt the duty doctor. The company has accepted that these resources were not available to its nurses at the time of Miss A's presentation.

106. The company said that the importance of checking the nursing notes, including examination findings and investigations performed, will be highlighted at peer review meetings.

107. The company has written a Triage Workbook and Triage by Nursing Staff Protocols policy for triage nurse training and future resource in both adult and children triage practices. The company told HDC that these resources were not available at the time of Miss A's presentations and have come out of the review of nurse triaging following Mr A's complaint. The newly written Triage Workbook has a section on "When to check glucose in non-diabetic patients", which guides its staff on when to expect a CBG test for patients with an abnormal urinalysis.

108. As part of my investigation, I asked my nursing advisor, RN Hoare, to review the company's Triage Workbook. RN Hoare made the following recommendations to be included in the Triage Workbook to help to prevent a similar occurrence in the future:

- All children younger than five years should have their capillary refill time (CRT) measured. Along with tachycardia, a sluggish CRT response is a sign of dehydration.
- Familiarise all nursing and medical staff with the "3 minute toolkit" — a toolkit that will rule in or rule out serious illness in young children. The toolkit is described in the "Spotting the Sick Child" resource. RN Hoare referred the company to this resource as a basis for its young child triage system, and said that it is used to educate medical and nursing students in primary health care and in the emergency department.[15]
- Another excellent resource is "Fever in the under 5s: assessment and initial management".[16]
- Parental reports of concern should be taken seriously. RN Hoare noted that her workplace has developed an easy pictorial triage system for parents whose first language is not English.

RN E

109. RN E advised that her learning from the complaint and the experience as a whole has been that she now follows up with the doctor to make sure that the urine results are acknowledged in the diagnosis.

Dr B

110. Dr B advised that he has reflected on his practice, and he has been reminded of the importance of taking time to review not just previous doctors' notes but also screening entries and nursing notes. Dr B stated that he is also more mindful of asking patients' parents if they have had an opportunity to discuss all of their concerns, and checking to see whether nurses' triage notes record all potentially relevant information.

[15] RN Hoare recommended use of the resource on: https://spottingthesickchild.com/, and said that it was free to register on this site.
[16] RN Hoare recommended use of the resource on: https://www.nice.org.uk/guidance/ng143.

Dr C

111. Dr C told HDC that he now takes greater care to take time to fully review urine dipstick results and nurses' notes regardless of patients' presenting symptoms.

Recommendations

112. In my provisional opinion I recommended that Dr C provide Mr A and his family with a written letter of apology for the aspects of care that I identified as deficient. Dr C has since sent the apology to HDC, and this has been forwarded to Mr A.

113. In my provisional opinion I recommended that Dr B provide Mr A and his family with a written letter of apology for the aspects of care that I identified as deficient. Dr B has since sent the apology to HDC, and this has been forwarded to Mr A.

114. In my provisional opinion, I recommended that the company:

a) Provide HDC with an update on the implementation and effectiveness of the updated Triage Workbook and protocol as well as the PEWS chart, including whether any further changes have been made. In response, the company provided an updated copy of its PEWS chart that it noted has been adapted from the resources recommended by RN Hoare. I acknowledge this and look forward to receiving an update on the implementation and effectiveness of the updated PEWS chart, as well as the Triage Workbook and protocol, within three months of the date of this report.

b) Report back to HDC on its consideration of further amendments to its Triage Workbook — namely, the addition of RN Hoare's suggestions for preventing occurrences similar to this case — and for it to provide HDC with the latest copy of the Triage Workbook with any new additions. In response, the company confirmed that the recommended improvements to the Triage Workbook and training resources had been sent to its Director of Nursing and Clinical Governance Group for consideration. I look forward to receiving an update on the outcome of these considerations, and a copy of any updated version of the Triage Workbook, within three months of the date of this report.

c) Use an anonymised version of the final report as a case study to provide continuing education to its GPs on the importance of reading triage notes, and the importance of recognising symptoms identified by the triage nurses. In response, the company confirmed that the learnings from this case were shared with doctors at a peer review meeting in June 2022, and that as of April 2023 it is facilitating presentations to discuss the lessons learned with all new house officers, new GP registrars, and new doctors when they start working at the company. It provided HDC with evidence of a "Learning from Complaints" presentation, which included anonymised details of Miss A's case. I am satisfied that this action meets my recommendation for staff to be educated about the lessons from this complaint.

Follow-up actions

115. A copy of this report with details identifying the parties removed, except the advisors on this case, will be sent to Te Tāhū Hauora Health Quality & Safety Commission, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

116. A copy of this report with details identifying the parties removed, except the advisors on this case, will be sent to the Medical Council of New Zealand, and it will be advised of Dr C's and Dr B's names.

117. A copy of this report with details identifying the parties removed, except the advisors on this case, will be sent to the Royal New Zealand College of General Practitioners, and it will be advised of Dr B's name.[17]

[17] As Dr C is not a member of the Royal New Zealand College of General Practitioners, he will not be identified to that body.

Appendix A: In-house clinical advice to Commissioner

The following expert advice was obtained from Dr David Maplesden:

"1. My name is David Maplesden. I am a graduate of Auckland University Medical School and I am a practising general practitioner. My qualifications are: MB ChB 1983, Dip Obs 1984, Certif Hyperbaric Med 1995, FRNZCGP 2003. Thank you for the request that I provide clinical advice in relation to the complaint from [Mr A] about the care provided to his young daughter, [Miss A], by staff of [Clinic 1] and [Clinic 2]. In preparing the advice on this case to the best of my knowledge I have no personal or professional conflict of interest. I agree to follow the Commissioner's Guidelines for Independent Advisors.

2. I have reviewed the following information:

- Complaint from [Mr A]
- Response from [the company]
- Response from [Dr C]
- Response from [RN D]
- Response from [Dr B]
- Response from [RN E]
- [Public hospital] clinical notes
- [Clinic 1]/[Clinic 2] clinical notes

3. [Mr A] states he took his (then) four-year-old daughter, [Miss A], to [Clinic 1] on 5 November 2020 with symptoms of tummy-ache, vomiting and fever. She was prescribed ibuprofen and an anti-nausea agent. [Mr A] has discussed that a urine dip-stick test performed at the time showed 2+ glucose but he was not informed of this finding. On 18 November 2020 [Mr A] took [Miss A] to another branch (Clinic 2) as she remained unwell and now had a rash. Urine dipstick was again performed and [Mr A] states it showed 5+ glucose but no action was taken other than prescribing of anti-allergy medication. On 21 November 2020 [Mr A] reattended [Clinic 2] as [Miss A] was not eating but was drinking a lot of water and had wet her bed. He was apparently told the centre was too busy for [Miss A] to be seen. Early on 22 November 2020 [Mr A] and [Miss A] attended [Clinic 1]. On this occasion previous urine results were reviewed and [Miss A] was referred urgently to [the public hospital] where she was diagnosed with diabetes and required a six day inpatient stay for stabilization on insulin. [Mr A] is concerned at the delayed diagnosis.

4. Clinical notes for the consultation dated 5 November 2020 indicate [Miss A] was first triaged by [RN D]. History is recorded as: BIB mother due to vomiting and fever. Mother reports pt vomited last night and this morning, ?abdo pain, no urinary symptoms reported, no diarrhoea. Pt eating and drinking normally as per mother, no diet changes,

chest clear upon auscultation. Observations include: alert, … interactive, cap refill brisk … P 110, T 36.7, resps 30, O2 sats 100%, weight 17.3kg. Dipstick urinalysis showed 1+ protein, 2+ glucose, 3+ ketones, neg blood, neg WBC. This was recorded in the narrative notes and also in the urinalysis screening template (requires separate access). Triage category 5 was assigned.

5. [RN D] has stated her normal process is to record the results of the urinalysis in the patient chart and she did so on this occasion. She states it is her expectation the assessing GP will review the results and discuss them with the patient. She would not normally perform a fingerprick blood glucose on a child without known diabetes unless directed to do so by the GP. She would not discuss the result directly with the GP unless the patient was very unwell and required assessment.

6. [Miss A] was then reviewed by [Dr C]. Notes read:

> Seen with parents, x1 episode vomitus today at 4.30 am ? some abdo cramps Nil LUTS. Had breakfast ok today — didn't vomit it out. Nil fevers, nil nausea/vomiting so far after breakfast, nil loose stools. BO this am normal Nil LUTS Nil previous abdo surgeries
>
> Alert, comfortable. Noted vitals. Not in distress/pain, oral mucosa moist
>
> HS_1+2+0 Chest clear Abdo — SNT, BS +ve, nil masses, nil rebound LL eczema
>
> Imp : X1 episode vomitus

Prescription was provided for ondansetron, 'standby' ibuprofen, Sorbolene cream. Safety netting advice was provided as: rv as needed with worsening symptoms.

7. [Dr C] confirms the events presented in the clinical notes including provision of safety netting advice. He acknowledges overlooking the urinalysis results and states: I am now aware that the urine dipstick test [RN D] carried out on 5 November was positive for proteins 1+, glucose 2+, white cells and blood negative and some ketones. In hindsight, I have to accept that I overlooked these results or at least paid insufficient attention to them at the time. I suspect the reason for this may have been because [Miss A] had no lower urinary tract symptoms. It is also possible that I didn't see the entire results and suspected possible contamination. However, I accept that I should have paid more attention to these in any event. Had I noted [Miss A's] dipstick results, I would have repeated the test, ordered a finger prick blood sugar level test and perhaps ordered labs.

8. Comment: The history and assessment notes recorded represent a very common pediatric presentation in primary care — non-specific unwellness with a single episode of vomiting in the absence of any particular localising signs. There was no fever or symptoms to suggest respiratory tract infection and no lower urinary tract symptoms (LUTS) to suggest urinary infection. Leaving aside the urinalysis, the presentation did not raise particular concern for diagnosis of diabetes. One study of children with newly

diagnosed diabetes listed the following symptom frequency at diagnosis: polyuria (92%), polydipsia 88.8%, weight loss 83.9%, nocturia 68.8%, diabetic ketoacidosis (DKA) 49.9% and abdominal pain 49.3%[1]. If there had been no urinalysis performed I would not be critical of this omission and note the diagnosis of diabetes would not have been made. However, a urinalysis was performed and the presence of glycosuria raised the possibility of underlying diabetes with presence of ketones raising the possibility of DKA. While the abnormal urinalysis cannot be regarded as diagnostic of diabetes I would expect point of care capillary blood glucose to be tested in this situation to exclude significant hyperglycaemia. It is also accepted and expected practice for the GP to review triage observations as part of the patient assessment and while [Dr C] refers to 'vitals' being noted, it appears he either overlooked the urinalysis result or the significance of the result. The former might be regarded as human error sensitive to workload while the latter might be regarded as a clinical competency issue. I am unable to state which is the more likely scenario. However, the failure to review or act on the abnormal urinalysis result must be regarded as a moderate departure from accepted practice. Had [Miss A] presented with symptoms suggestive of underlying diabetes I would be more critical of this oversight.

9. [Miss A] next presented on 18 November 2020 and was triaged by [RN E]. History is recorded as: Vagina red and painful. Itchy all over body. Increased E+Ding. Weakness. [Miss A] was noted to be alert but distressed with observations pulse 150, T 37.3, O2 sats 98%. There is a note urine checked but no record of the results of the urinalysis in the triage report. However, the results were abnormal: 4+ glucose, 3+ ketones, 1+ WBC, neg blood, neg nitrite.

10. [RN E] states in her response that on reviewing [Miss A] she noted the recent presentation to [Clinic 1] and the finding of glycosuria there but no mention of this finding in the accompanying GP notes. With [Miss A's] reported history of increased eating and thirst [RN E] states she suspected possible underlying diabetes and for this reason she repeated the urinalysis. The result was recorded in the urinalysis screening template but not in the narrative portion of the notes, although [RN E] states: The urine results can also be seen in the clinical notes area with the results displayed with +'s only to each corresponding place that represents a urine finding. The doctors know what space represents what finding even without opening the screening template to read the exact findings. [I am unable to confirm this and a screenshot may be required to illustrate this observation.] [RN E] states it is not her usual practice to discuss urinalysis results with the patient as it is her expectation that the GP will discuss results as part of the assessment process. [RN E] prioritized [Miss A] for review because of [Miss A's] distress and she is confident she completed the urinalysis screening template well before the GP review. [RN E] did not perform a capillary blood glucose reading because [Miss A] was already distressed and she felt it would be preferable to leave this until after GP review and under the direction of the GP.

[1] Al Rashed AM. Pattern of presentation in type 1 diabetic patients at the diabetes center of a university hospital. Ann Saudi Med. 2011;31(3):243–249

11. [Miss A] was then seen by [Dr B]. Clinical notes read:

> 1/ Bitten by flea/insects and now itchy rash last 2 weeks
>
> 2/ nappy area redness and itching
>
> here with mother
>
> systemically well
>
> flea/insect bite type urticarial rash no infection
>
> vulval area redness and patchy
>
> imp; insect bite+nappy rash
>
> Education and advise regarding the disease/medication given
>
> r/v prn
>
> No other concern today and mentioned her abdo pain which was there couple of weeks ago has resolved and today mainly came for rash.

Prescriptions were provided for the topical preparations MicremeH and Crotamiton and antihistamine loratidine. An ACC form was completed for allergic reaction to insect bite.

12. In his response, [Dr B] states it is his usual practice to review patient alerts, medications and triage notes prior to starting the consultation. He states he noted [Miss A's] elevated pulse rate (usual range for [Miss A's] age around 80–120) and attributed this to her distress at being examined. [Miss A's] mother referred to a recent presentation with abdominal pain which had since resolved. However, the main concerns appeared to be an allergic rash and nappy rash. These issues were addressed and safety netting advice provided for [Miss A] to reattend should she have any ongoing issues. [Dr B] states he overlooked the note that a urinalysis had been performed and therefore did not check the result. His expectation, based on previous practice, is that [RN E] would verbally inform him if there was any abnormality in the urinalysis. He did review [Dr C's] notes (which made no mention of glycosuria) but not the accompanying triage note.

13. Comment: There are similarities here to the previous consultation in that the GP has not adequately reviewed the associated clinical documentation (triage notes) and this has contributed to the delay in diagnosis. There may also be issues with the accepted processes in place for GPs being informed of abnormal triage findings (in particular urinalysis) — see recommendations section. There appears to be a significant contrast between the perception of [RN E] and [Dr B] in relation to [Miss A's] main presenting issues. [RN E] has recorded symptoms that might have raised concern for diabetes or at least deserved further clarification in the GP consultation (increased appetite and drinking, weakness) while [Dr B] has described an essentially well child with nappy rash and an insect bite. The complaint refers to [Miss A] being worse than at her initial presentation. [Miss A] did have a significant tachycardia and I am mildly critical there is no documented assessment of hydration in this context although it is recorded she was

perceived to be systemically well. There was a breakdown in communication between [RN E] and [Dr B] in relation to the abnormal urinalysis and it appears there were differing expectations as to the appropriate means of communication of the result which could indicate systemic issues. However, triage notes did indicate urinalysis had been performed and there was evidently an acknowledged process for results to be accessed through the screening template. I am therefore moderately critical [Dr B] did not access the urinalysis results as part of [Miss A's] assessment, particularly noting the symptoms recorded in [RN E's] triage note.

14. [Miss A] attended [Clinic 2] again on Saturday 21 November 2020 and was told it was unlikely she could be seen there because of the number of patients already waiting and closing time of 1pm. According to [the company's] response the usual practice is to offer a nurse triage and to redirect patients to [Clinic 1] (closing 8pm) if not urgent, or see them at [Clinic 2] if urgent. However, [Miss A's] parents were upset they could not be seen at [Clinic 2] and did not wait for the nurse triage.

15. [Miss A] attended [Clinic 1] on 22 November 2020 and was triaged by RN F. Her notes include: History given by: mom; tummy ache and vomiting on and off since 2 wks, nil loose bowels, decreased appetite, on and off fever, nil cough, nil runny nose, nil other symptoms, also ? weight loss. BSL check done, glucometre shows Hi, exceeding the limits. [Miss A] was noted to be alert with pulse 112, T 37.0, O2 sats 100%. She was then seen by [Dr G] who noted:

> With mother, vomited one time 2 weeks ago, abdo pain since then sometimes ok sometimes bad worse last 3–4 days
>
> no diarrhoea
>
> urine frequency
>
> no coryza or cough
>
> drinking well
>
> o/e was crying (mum says that she is crying when see Drs always)
>
> afebrile
>
> abdomen soft NT
>
> ENT nad
>
> no CLA
>
> Imp abdo pain reasons?
>
> I noticed that she had urine test dip during last presentation showed sugar ++++/Ketones
>
> +++/WCC + on 18/11/2020
>
> see nurse do blood sugar test and repeat urine dip then i will see her
>
> blood sugar came Hi

Dx likely diabetes

discussed with paediatric reg to go to ED 1st

16. Comment: The combination of symptoms recorded of weight loss and urinary frequency raised the possibility of diabetes (amongst other diagnoses) and the consultation pattern (three attendances in two and a half weeks) increased the likelihood of a significant illness. It is unclear if [Dr G] would have considered the diagnosis of diabetes or ordered urinalysis in the absence of the previously recorded urinalysis results. However, he was conscientious in reviewing the previous results (compared with [Dr B's] management) and observing the significant glycosuria and ketonuria, with point of care capillary blood glucose then performed with hyperglycaemia confirmed. [Dr G's] management of [Miss A] was consistent with accepted practice.

17. [The public hospital's] discharge summary dated 27 November 2020 notes [Miss A's] admission and treatment for moderate ketoacidosis secondary to newly diagnosed type 1 diabetes. Blood glucose on admission was 37.0 mmol/L. History was recorded as: Presents to CED with 5 week history of weight loss. Associated with polyuria and polydipsia. Nocturia. Seen by GP on 18th and had urine dipstick done — glycosuria + ketonuria. Not referred then. Presented back to GP today with 3 day history of abdominal pain. No diarrhoea. No coryza or cough. No fevers. [Miss A] was treated with IV fluids and insulin and was discharged on insulin on 27 November 2020 after appropriate diabetes education.

18. Final comments and recommendations:

(i) Delayed diagnosis of diabetes in the pediatric population is not uncommon. Factors influencing delay have been illustrated in a number of studies: In a Swedish study[2], parental suspicion of diabetes was associated with milder DKA at hospital admission (earlier diagnosis). Delayed referral was seen in a considerable proportion of children (43%) with primary healthcare contacts for symptoms associated with diabetes. Symptoms leading to primary healthcare contacts were similar regardless of whether delay occurred or not. Increased awareness of diabetes symptoms is of paramount importance. Comments from a New Zealand study[3] include: DKA was associated with no family history of T1DM, higher glycated hemoglobin (HbA1c) values at presentation, self-presenting to secondary care, health care professional contacts in the 4 weeks before final presentation, and greater deprivation. Although a delay in referral from primary care for laboratory testing was common, only delay for more than 48 hours was associated with increased risk of DKA. Conclusions: These data suggest that in addition to lack of

[2] Wersall J, Adolfsson P, Forsander G et al. Delayed referral is common even when new-onset diabetes is suspected in children. A Swedish prospective observational study of diabetic ketoacidosis at onset of Type 1 diabetes. Pediatric Diabetes. 2021 May 12. doi: 10.1111/pedi.13229. Epub ahead of print. PMID: 33978305.

[3] Gunn ER, Albert BB, Hofman PL, Cutfield WS, Gunn AJ, Jefferies CA, et al. Pathways to reduce diabetic ketoacidosis with new onset type 1 diabetes: Evidence from a regional pediatric diabetes center: Auckland, New Zealand, 2010 to 2014. Pediatric Diabetes. 2017;18(7):553–8.

family awareness potentially modifiable risk factors for new onset DKA include prolonged delay for laboratory testing and a low index of medical suspicion for T1DM leading to delayed diagnosis. These studies suggest that contact with primary care leading up to the diagnosis appears to delay rather than expedite the diagnosis in a significant proportion of cases, and a high index of suspicion is required to facilitate the diagnosis. The irony in this case is that urinalysis was undertaken on 5 and 18 November 2020 when some clinicians would not have done this (as isolated attendances), and could have facilitated a timely diagnosis of diabetes. However, for a variety of reasons the results were not given appropriate clinical consideration.

(ii) In order to finalize this advice I recommend the following information is obtained:

a. A copy of any practice policy or process documentation relating to role of urinalysis and capillary blood glucose testing in the triage process and the accepted process for notification of abnormal triage results to the GP. In the absence of such documentation, comment from the practice regarding the expected mode of communication of abnormal triage result findings (in particular abnormal urinalysis findings) to the GP.

b. A copy of any incident investigation undertaken by the organisation as a result of this complaint, and any process improvement or other remedial measures arising from the investigation

c. A copy of the clinical notes audit report for the consultations of 5 and 18 November 2020

(iii) I recommend expert practice nursing advice is sought regarding the actions of [RN D] and [RN E] with respect to their management of the abnormal urinalysis results. This should be deferred until copies of any relevant process or protocol documents are available.

19. **Addendum 21 June 2022**

(i) I have reviewed the additional information provided by [the company]. The Incident Report provided by [the company] indicates [Dr C] and [Dr B] both overlooked the urinalysis result rather than failing to recognise its clinical significance, and confirmed that the doctor is expected to review nurse triage notes and recordings. I remain of the view that the failure by [Dr C] to review or act on [Miss A's] abnormal urinalysis result on 5 November 2020 must be regarded as a moderate departure from accepted practice. I remain of the view that the failure by [Dr B] to review or act on [Miss A's] abnormal urinalysis result on 18 November 2022 must be regarded as a moderate departure from accepted practice. I note peer education on the importance of reviewing triage documentation has been undertaken as a remedial measure.

(ii) It appears there was a formal process in place at [the company's] practices at the time of the events in question for nurse triage and screening results to be entered into the patient notes prior to the patient being reviewed by the doctor and this occurred as expected on both occasions in question. Taking into account the events that occurred, it appears the process was not sufficiently robust to prevent the type of incident that occurred and subsequent to these events [the company] has implemented a more intensive education programme regarding the nurse triage process and a pediatric early warning system (PEWS). The education programme workbook includes reference to capillary blood glucose (CBG) being performed as part of the triage process when glycosuria is evident on dipstick urinalysis. There is also comment in the [company's] response that the triage nurse might be expected to report any abnormal findings to the child's parent/carer in the case of pediatric triage, and in [Miss A's] case this might have been an additional safeguard to ensure her glycosuria was not overlooked.

(iii) I remain somewhat concerned that the triage nurses involved in this case did not flag the glycosuria result to the doctor by way of verbal communication or some form of highlighting in the triage note, even if this did not form part of the formal triage process at the practice (ie lack of clinical initiative). However, I agree the primary responsibility for recognizing the significance of the result and acting on it lay with the doctor. I note the retrospective comments by [the company] regarding the triage categories assigned by the nurses concerned. I recommend you proceed with gaining external expert nursing advice regarding the following issues:

- *Adequacy of the nurse triage process in place at [the company] at the time of the events in question (including quantification of any departure from accepted standards in this regard)*
- *Adequacy of the nurse triage assessments undertaken on 5 and 18 November 2020 including appropriateness of the triage category assigned and any comment on management of the urinalysis result*
- *Any comment on the remedial measures since undertaken at [the company] including the triage workbook*

I am not sure we have a copy of the triage process/policy documentation in place at the time of these events and that might need to be obtained from [the company] (I would expect there to have been such a document).

(iv) I note [Dr B's] consultation notes were accessed on 15 December 2020 and a printout of the full audit log for the consultation of 18 November 2020 should be obtained for review.

(v) I have no additional comments or recommendations."

Dr Maplesden's Addendum 27 September 2020

"1. I have reviewed the expert nursing advice received.

I agree with the advice in principle. Probably the most pertinent observation is that both nurses had the opportunity to notify the GP verbally of the abnormal urinalysis even if that meant departing from the triage protocol in place at the time. Nevertheless, the nurses were following accepted practice and the GPs involved held ultimate responsibility for reviewing the observations recorded by the nurses. I do not believe any further nursing advice is required.

2. It does not appear we have acquired a notes audit as recommended in my original advice s 19(iv):

I note [Dr B's] consultation notes were accessed on 15 December 2020 and a printout of the full audit log for the consultation of 18 November 2020 should be obtained for review.

This was requested only because the notes were accessed around the time the complaint was made and I wanted to be sure there had been no retrospective entry or alteration, noting particularly the difference between the medical history obtained by the nurse and that recorded by [Dr B]. However, I will leave it to your judgement as to whether you want to proceed with the request. If there were significant retrospective alterations made to the notes, this may increase the gravity of [Dr B's] departure from accepted practice.

3. Addendum 27 September 2022

An audit of the clinical notes dated 18 November 2020 has been reviewed. These show that [Dr B] added to the notes on 15 December 2020 the following information: No other concern today and mentioned her abdo pain which was there couple of weeks ago has resolved and today came mainly for rash. [Dr B] has made the following statement with respect to the audit logs: I later reflected on my consultation notes of 18 November 2020. I realised that they did not fully capture my clinical reasoning and enquiry made at the time. Instead of making an explicit post-dated entry I made an addendum to my notes on 15 December 2020. I appreciate that this should have been noted as a post-dated note as is my normal practice.

I agree with [Dr B's] final comment. It is of some concern that the note was added to following the complaint received from [Mr A] and the change was not identified as a retrospective entry. However, it was reasonable to clarify or expand the note if this accurately reflected the content of the consultation but important to identify the change as a retrospective entry. I do not believe the additional information recorded in this case alters my original assessment of the file or comments, but it is disappointing the entry was not identified as retrospective and I am mildly to moderately critical it was not.

4. There is nothing in the additional information provided by [the company] on 19 September 2022, with respect to notes made by [RN E] that alters my original advice."

Appendix B: Independent clinical advice to Commissioner

The following independent advice was obtained from Professor Karen Hoare, a paediatric nurse and health visitor:

> "Professor Karen Hoare is a UK trained paediatric nurse and health visitor. Her nursing training occurred at Great Ormond Street Children's Hospital in London, one of the world's most highly regarded institutions for paediatric healthcare. She is additionally registered in New Zealand as a Nurse Practitioner working clinically as a business partner at Greenstone Family Clinic in Manurewa with four other GPs. As a Professor of Nursing she teaches nurses, medical students and GP registrars paediatric assessment skills. Her experiences managing sick children spans the globe, having practised at the UK's Medical Research Council Laboratories in a remote Gambian village in West Africa. She is currently coaching a paediatric ICU nurse at St Gertrude's hospital in Nairobi, Kenya as part of the Child Health Nursing Development project at the University of Cape Town. She manages the final year Nurse Practitioner training programme at Massey University.
>
> **Complaint: [The company]**
>
> **Your ref: 20HDC02300**
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> **Context of caring for small children in a primary health care setting**
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> Caring for small children in a primary health care setting is very challenging. When acutely unwell, they are difficult to triage. Additionally, the parents/carers may also be distressed and extremely worried. Health care professionals are charged with providing the correct care for the child while at the same time calming and reassuring the parents. Child friendly environments that include toys and bubble machines along with healthcare personnel trained in paediatrics will assist in accurately assessing a young child.
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> I am unaware of the geography of the two clinics who provided care for [Miss A]. I assume that the doctors and nurses work in quite separate areas and may have been quite far away from each other. The geography of the clinics and who works where and whether it would be easy for nurses to interrupt the doctor to advise them of abnormal results could be investigated as part of the resolution of this complaint. Additionally, I have suggested some initiatives that may be helpful for the clinics, at the end of this report.
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> *Whether [RN E] and [RN D] provided [Miss A] with an acceptable standard of care in not verbally notifying the GPs of abnormal urine dipstick results on 5 and 18 November 2020. Should RNs have drawn the GP's attention to the abnormal urine dipstick results in any other way considering [Miss A's] age and presenting symptoms at the time of her appointments on 5 November and 8 November 2020?*
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> I suspect that the nurses were extremely busy and in a different location to the doctors. I believe the standard of care provided by both nurses in accurately documenting the

urine result in the patient management system is acceptable. Both nurses have provided good rationale for how they communicated the abnormal urine results via the patient management system. Additionally, these results were available in a timely manner for the doctors to see them prior to their consultation with [Miss A].

Whether [RN E] and [RN D] provided [Miss A] with an acceptable standard of care in not informing her family of abnormal urine dipstick results at the time of her appointments on 5 November and 8 November 2020. Is it appropriate and usual for Triage Nurses not to communicate abnormal tests to patients at the time of Triage?

Both nurses provided a very acceptable standard of care by not informing the parents of the abnormal urine result. Tests are only a part of the picture when forming differential diagnoses. Both nurses considered the psychological impact on the parents of knowing that the child's urine test was abnormal prior to seeing the doctor. They would have expected that the doctor take the test results into consideration after performing a physical examination of [Miss A] and following scrutinising the history of [Miss A's] presenting complaint. Giving parents only a part of the picture when assessing a sick child is not the right thing to do. I therefore completely agree that the nurses provided a reasoned rationale for not informing the parents of the abnormal urine result.

Whether [RN E] and [RN D] provided [Miss A] with an acceptable standard of care when they did not administer a capillary blood glucose test (CBG) after obtaining an abnormal urine dipstick test.

[Miss A] did not need to be further traumatised by having a CBG in the primary care setting. Her urine result and symptoms were sufficient for immediate discussion with a paediatrician with a view to admission as a medical emergency. The nurses (or doctors) did not need to traumatise this poor child any further by performing a CBG as the hospital would have performed all the necessary tests in a much more child friendly way than the primary health care setting can.

Whether the Triage Nurse policies and procedures in place at [the company] at the time of [Miss A's] appointment were adequate and appropriate to successfully triage a child of [Miss A's] symptoms.

Both nurses have provided eloquent critically reasoned statements regarding their provision of care for [Miss A]. I would expect a thoughtful conscientious RN would deviate from [the company's] policies if the care suggested in the policy was not in the best interests of the child. The nurses would then demonstrate upholding the United Nations Convention on the Rights of the Child. Sometimes policies are written by personnel unfamiliar with the speciality of paediatrics. These policies then reflect what is appropriate for an adult but not for a child.

Would you kindly mind elaborating on this issue further.

Could you please provide a further discussion on the adequacy of the nurse triage process in place at [the company] at the time of the events in question including

quantification of any departures from accepted standards in this regard. *Please can you provide a discussion on the appropriateness of the triage category assigned by the two nurses when they reviewed [Miss A].*

On November 5th [RN D] triaged [Miss A] and assigned her a triage score of 5, [RN D] cannot recall the encounter with [Miss A]. Dr […] suggests that a respiratory rate of 30 in a four year old child is abnormal, however I consulted page 36 of the 6th edition of Australia and New Zealand's *'Advanced Paediatric Life Support: A practical approach to emergencies'* (2017) and the normal respiratory rate for a four year old child is 20–30. If the child looked well and her vital signs were normal, I think it was understandable that [RN D] assigned a triage score of 5. I do agree that her abnormal urine result needed highlighting, however [RN D] tested the urine and highlighted the result in [Miss A's] notes for the doctor to see.

On November 18th 2020, [RN E] circumvented the triage system as [Miss A] was crying and distressed. In point 10 of her statement she suggested that she gave [Miss A] an 'IN' triage category so that the doctor would see [Miss A] as soon as possible. This action demonstrates that [RN E] was critically thinking about the child's condition. I think that assigning this triage category to [Miss A] was appropriate.

In addition, for comparison, I would appreciate it if you could ***please provide any comments on the remedial measures since the events undertaken at [the company] including the Triage Workbook that has been developed.***

I would recommend that [the company] refer to the resources I have recommended below to include in their triage workbook.

Recommendations for improvement that may help to prevent a similar occurrence in the future:

1. All children younger than 5 years should have their capillary refill time (CRT) measured. Along with tachycardia, a sluggish CRT response is a sign of dehydration.
2. Familiarise all nursing and medical staff with the '3 minute toolkit' — a toolkit that will rule in or rule out serious illness in young children. This toolkit is described in the 'Spotting the Sick Child' resource. I would refer [the company] to this resource as the basis for their young child triage system. We use it to educate medical and nursing students in primary health care and the emergency department. See: https://spottingthesickchild.com/. It is free to register on this site.
3. Another excellent resource is 'Fever in the under 5s: assessment and initial management'. See: https://www.nice.org.uk/guidance/ng143
4. Take parental reports of concern seriously. We (at Greenstone Family Clinic, where I am a business partner and nurse practitioner) have developed an easy pictorial triage system for parents whose first language isn't English. This triage system corresponds with the NICE traffic light system described in point 3. I have attached it as a pdf.

Professor Karen Hoare. 22/8/22"