Investigation into the circumstances surrounding the death of a man at HMP Littlehey in February 2012

Report by the Prisons and Probation Ombudsman for England and Wales

December 2012

This is the report of an investigation into the death of a man, a prisoner at HMP Littlehey. He died in February 2012 of diabetic ketoacidosis, secondary to an infection caused by norovirus, and diabetes mellitus. He was 38 years old. I offer my condolences to his family and friends.

An independent clinical review of the care the man received was conducted. Littlehey cooperated fully with the investigation.

The man suffered from Type1 (insulin dependant) diabetes, which the clinical reviewer considers was not managed as well as it could have been He developed diarrhoea and vomiting on 25 February 2012, during an outbreak of norovirus at Littlehey. The reviewer believes that, overall, the norovirus outbreak was managed satisfactorily. However, it appears that the emphasis was on how to contain and stop the spread of the virus rather than taking into account prisoners' particular needs. His individual care during the outbreak was less than satisfactory and as his diabetes was not thoroughly assessed his deteriorating condition was not noticed. On the day he died a nurse identified he was unwell and was due to assess him later but he was found collapsed before that could be done.

After the man collapsed the doctor pronounced his death very quickly after arriving at the scene, possibly without allowing sufficient time for a concerted effort to revive him. The doctor no longer works at Littlehey, but there is a need for the PCT to ensure that concerns about his performance are appropriately addressed. Some improvements are also required to emergency procedures in the prison.

I agree with the clinical reviewer that the man care was not as good as it should have been. The investigation identified some significant problems in the management of prisoners with diabetes, particularly when they are unwell from other causes, and a number of recommendations are made to help improve their care.

This version of my report, published on my website, has been amended to remove the names of the man who died and those of staff and prisoners involved in my investigation.

Nigel Newcomen CBE
Prisons and Probation Ombudsman **December 2012**

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SUMMARY

1. The man was convicted of serious offences on 11 May 2011. After a short time at HMP Wormwood Scrubs, he transferred to HMP Littlehey on 21 July.

2. On arrival at Littlehey the man was seen for a reception health screen. He had Type 1 (insulin dependant) diabetes. Despite this, basic observations such as blood sugar level, blood pressure, height or weight were not taken. Two weeks later, on 5 August, he was seen by the prison's diabetic nurse but again his blood sugar level was not tested.

3. On 8 September, a urine sample taken a few days earlier was found to have raised albumin and creatinine levels, which were suggestive of mild kidney damage. The man was prescribed ramipril to help prevent further kidney damage.

4. The community specialist diabetic nurse attended Littlehey on 6 October. The nurse reviewed the man and reduced his insulin dosage after she found he had been "over insulinised [prescribed too much] for his weight".

5. After 6 October, it appears the only interactions the man had with healthcare before February 2012, were in relation to the diagnosis and treatment of lymphadenitis (an inflammation of the lymph nodes) and lipohypertrophy (lump under the skin caused by theaccumulation of fat caused by multiple injections of insulin).

6. The man developed sickness and diarrhoea on 25 February 2012, during an outbreak of norovirus at Littlehey. During his illness he was confined to his cell as part of the outbreak control measures. Food and drink were brought to his cell and he was encouraged to drink plenty of fluids. He was visited daily by healthcare staff who asked how he was, but they did not assess his diabetes thoroughly and thus did not notice the deterioration in his health.

7. On the day the man died he was visited by a nurse who noticed he was unwell. She said that she would return later to assess him in more detail, but he was found collapsed in his cell before the assessment was made. He was declared dead by a prison doctor, who did not make a thorough assessment to enable him to detect any reversible medical problems.

8. We make eight recommendations as a result of this investigation. These include recommendations about the management of diabetes, the management of outbreaks of communicable diseases and the response to emergencies

THE INVESTIGATION PROCESS

9. The investigator visited Littlehey on 7 March 2012, and collected copies of the man's prison files and medical records. She met the Governor, healthcare manager, an Independent Monitoring Board (IMB) member and the family liaison officer. She viewed his cell and introduced herself to the staff on the wing. She also issued notices announcing the investigation to staff and prisoners, and asked anyone with information about his death to contact her. 11 prisoners from D wing (where he lived) came forward.

10. The investigator returned to Littlehey on 26 April, to interview five members of staff and 11 prisoners. She interviewed an additional two members of staff that afternoon and returned to Littlehey on 3 May to re-interview two members of staff. The investigator interviewed a locum doctor on 17 May and met a paramedic at St Neots ambulance station on 23 May.

11. A review of the clinical care the man received in prison was carried out on behalf of NHS Cambridgeshire. The review was received by the investigator on 3 July.

12. The investigator provided some feedback to the Governor on 26 April and further feedback by email on 30 April and 2 May. This report will be forwarded to the coroner's office to assist with their enquiries.

13. One of the Ombudsman's family liaison officers contacted the man's family and spoke to his brother, his nominated next of kin. She explained the investigation process and provided him with an opportunity to raise any concerns. The man's brother said that his family's main concern was how his brother's diabetes and blood sugar levels had been monitored and what his diet had been during the four days he had been unwell. They believed that his condition should have been seen as more serious due to his diabetes, and asked why he had not been hospitalised.

14. The family thought that the prison should have been more aware of his medical needs after he was hospitalised in October 2011 as a result of a skin condition caused by multiple injections (of insulin) in the same area. His family asked how the man could summon help in an emergency, and whether the emergency bell in his cell was working and if he had used it at any time.

15. After seeking advice from a doctor in the community the man's family felt that even though he was diabetic, he was young and that there was no reason for him to have died from this if he had been monitored to keep him safe. We hope this report helps to answer their questions.

16. The family received a copy of the draft report and were given the opportunity to comment on the contents. They commented that the report was very distressing to read, and had found it hard to accept that the man's death was a result of systematic failures of the Prison Service and the staff working in it. The man's brother commented that it was unfortunate that his brother was where he was and that he died due to negligence on the part of people put on

duty to provide the necessary care. His brother's death was a great loss to his family beyond words can describe, and they hoped that a truthful and moral verdict would be reached during the inquest.

HMP/ YOI LITTLEHEY

17. HMP Littlehey is a category C male prison outside the village of Perry in Cambridgeshire. It has a maximum capacity of 726 adult male prisoners plus 480 young adults accommodated in a new young offender unit opened early in 2010. The man lived on D wing at Littlehey, a standard residential unit.

18. Health services at Littlehey are commissioned by the Cambridgeshire Primary Care Trust. Medacs Healthcare Group provides locum GPs at the prison. On site specialist services include dentistry, optometry, podiatry and physiotherapy. Nurse led clinics are held for life-long conditions such as asthma and diabetes.

Her Majesty's Inspectorate of Prisons

19. The most recent HMCIP report was an unannounced full follow up inspection conducted in November 2011. Inspectors commented that healthcare services were generally good, but considered the healthcare department was too reliant on locum doctors. Inspectors noted that

> "The medical provider, Medacs, used a high number of locum staff, which resulted in inconsistency in prescribing and decision-making."

Independent Monitoring Board (IMB)

20. All prisons have an IMB made up of unpaid volunteers from the local community who monitor day-to-day life in the prison to help ensure that proper standards of care and decency are maintained. In its latest report for the year from February 2011 to January 2012, the IMB commented that,

> "The Board believes that the Healthcare department generally offers a caring environment for the prisoners within HMP Littlehey. Medical services offered within the prison are supplied by the local Primary Care Trust (PCT). The provision of GP services by Medacs continues to cause concern, particularly with the supply of temporary cover. The prison is working with the PCT to remedy this inconsistent medical service".

Previous deaths at Littlehey

21. This office has previously investigated 18 deaths at Littlehey. None of the circumstances of those deaths are reflected in this report.

KEY EVENTS

22. The man was convicted of serious offences on 11 May 2011. On 22 June 2011, he was sentenced to five years and six months imprisonment.

23. Following sentencing, the man arrived at HMP Wormwood Scrubs, where he was seen by a nurse for a reception health screen. He explained that he had suffered from Type 1 diabetes (which meant he was insulin dependant) for roughly 13 years. She noted that he was "slightly underweight, but fit and well".

24. The man was referred to the prison GP for a secondary health screen. He was prescribed insulin. His blood pressure was high at 198/112, and blood sugar levels were reported to be high although the exact reading was not recorded in his notes.

25. While at Wormwood Scrubs, the man's blood sugar readings were recorded daily. Between 22 June and 21 July, his blood sugar levels ranged from 2.5mmols to 22.2mmols. (NICE (National Institute for Health and Clinical Excellence) guidelines recommend that blood sugars should be between 4 and 7mmol before meals, and less than 9mmol two hours after meals.)

26. In response to the man's uncontrolled blood sugar levels on 1 July, he was seen by a nurse at the prison's diabetic clinic. His insulin dosage was reduced and the prison kitchen was asked to provide him with extra food to help stabilise his sugar levels.

27. The man remained at Wormwood Scrubs until 21 July. He moved to HMP Littlehey, where a nurse conducted a reception health screen. She noted his current insulin dosage and gave him a health education leaflet advising on what food he should be eating. Although he was an insulin dependant diabetic, basic observations such as blood sugar level, blood pressure, height or weight were not taken at this appointment. The nurse made a referral for him to be seen by the prison's diabetes nurse.

28. The following day the man was seen by prison doctor and was given a supply of hypodermic insulin needles.

29. Two weeks later, on 5 August, the man was seen by the diabetes nurse for review of his diabetes. She issued an instruction to the kitchen that he be given diabetic meals. Although this was a specialist diabetic review, his blood sugar level was not tested.

30. The diabetes nurse next saw the man on 13 August. She decided that he did not need a special diabetic diet and that he "can make his own choices". She also noted that "as his BM's [blood sugar level] tend to run high it is not that likely that he will go hypo [have a hypoglycaemic attack]". There is again no record that his blood sugar reading was taken.

31. Three days later, the man saw a doctor. The doctor noted that he had been having the occasional hypoglycaemic attack (low blood glucose level requiring

treatment and if left untreated can result in drowsiness and coma) around 11.00am. The doctor reduced his insulin to try and correct this but noted that his current diet was satisfactory. A referral was made for him to see the visiting community diabetic nurse when she next visited the prison.

32. The man provided a urine sample on 6 September. This was reviewed two days later and showed raised albumin/ creatinine levels. A locum GP commented that this was "suggestive of mild kidney damage". He prescribed ramipril to help prevent further kidney damage.

33. On 15 September, the man had an HbA1C blood test which gives information about diabetes control over the previous 2-3 months but does not give information on hypoglycaemia events. NICE guidelines suggest a target level of 7.5% or lower. His HbA1C blood glucose result was 8.5% suggesting that he had a raised risk of complications from his diabetes.

34. The community specialist diabetic nurse attended Littlehey on 6 October. She saw him and reduced his insulin dosage after she found he had been "over insulinised [prescribed too much] for his weight". She asked that he be given biscuits and glucogel (sugar gel) in case his blood sugar levels dropped during the night.

35. Between 6 October, and 25 February 2012, the man's only recorded interactions with healthcare were in relation to the diagnosis and treatment of lymphadenitis (an inflammation of the lymph nodes) and lipohypertrophy (a lump under the skin caused by the accumulation of fat caused by multiple injections of insulin) which resulted in a brief stay in hospital.

36. On 23 February, the Clinical Services Manager at Littlehey informed the Health Protection Unit (part of the Health Protection Agency and the primary reporting route for outbreaks of infectious gastroenteritis) that there had been eight recent cases of gastroenteritis (sickness and diarrhoea) in the prison. The cause was believed to be norovirus.

37. An Incident Management Team meeting was arranged the next day, attended by the Health Protection Unit, representatives from NHS Cambridgeshire and the local authority environmental health team. During the meeting the prison was advised how to control and prevent the spread of the virus, and that anyone reporting symptoms should be isolated in their cells for next 48 hours with meals delivered to the cell door. Aspects of hygiene were discussed and healthcare staff were told to instruct prisoners affected to drink as much clear fluid as they could tolerate.

38. The man first reported symptoms of sickness and diarrhoea on the evening of 25 February. He was advised that he would be seen by healthcare the following morning when he was seen by a healthcare assistant (HCA). She noted in his medical records "Symptoms ongoing – review tomorrow". Despite being an insulin dependant diabetic, he was not medically examined during this visit. Instead, she conducted a visual check and asked him to confirm his symptoms.

39. The man was seen again the next morning, 27 February, when it was noted that his symptoms (sickness and diarrhoea) were ongoing and that he was to remain in isolation. It is unclear who visited him that morning; the HCA said that she did not visit him, but had entered the information into his medical record on behalf of another nurse. Again, this visit consisted of a visual check with no physical examination.

40. Nurse A said she visited the man on 28 February. She was aware that he was diabetic and monitored his own sugar levels. She asked if he was taking enough fluids, and if he was managing his diabetes satisfactorily. This visit was observed by an officer, who said that during this visit he was coherent and that the nurse advised him to try and eat something if he felt better. However, there is no entry in his medical record to show that this visit took place.

41. At around 8.30am on 29 February, Nurse A attended D Wing to carry out her daily checks on prisoners suffering with the effects of norovirus. The man was one of four prisoners on D wing still in isolation. She and an officer visited him in his cell at 8.45am. He was sitting under his duvet and said that he still felt unwell. He had stopped being sick but was still suffering from diarrhoea.

42. The officer said in his police statement that the man “did not appear totally compos mentis” that morning and appeared to be shivering. Nurse A asked him when he had last taken his blood sugar reading and he replied “two days”. She said she was concerned that he had not recovered as quickly as other prisoners (within two to three days) and wanted to check his blood sugar levels and blood pressure but she did not carry any medical equipment with her when completing norovirus checks. He had his own blood sugar monitor machine in his cell, but she explained to him that she had one more person to see and would return to see him after that.

43. After making her final check on D Wing, Nurse A returned to healthcare. Before the norovirus outbreak the Head of Healthcare had issued an instruction for all healthcare staff to attend a clinical supervision meeting that morning at 9.30am. The diabetes nurse had been excused from the meeting to allow her to run the integrated drug treatment clinic (IDTS) later that morning and Nurse A asked her to review the man while she was at the meeting.

44. Before the diabetes nurse was able to attend D Wing she received a call to go to reception with some paperwork. She said she collected her medical bag and planned to attend reception on her way to D Wing to see the man. However, after arriving at reception, she realised that she would not have time to see him and return to healthcare in time to start the IDTS clinic. She said she returned to healthcare to speak to Nurse A (who was still in the meeting) to explain that she was unable to see him as arranged.

45. A nurse and a HCA were in the clinical supervision meeting and recall that the diabetes nurse came into the meeting twice. On one of these occasions, they said she mentioned the words ‘diabetic coma’. The nurse agrees that she entered the meeting twice. She explained that on the first occasion she went to

inform Nurse A that she was unable to visit the man, and the second time to speak to a HCA. She said that when she went to speak to Nurse A she had not seen him and was unaware of his condition.

46. After speaking to the diabetes nurse, Nurse A left the clinical supervision meeting, collected her medical bag and went straight down to D wing to see the man. Nurse A was escorted to his cell at about 10.00am by an officer and they found him lying on his bed unresponsive. The nurse shook his arm and checked his eyes with her light pen. She was unable to find a pulse in his neck or groin area and asked the officer to call an ambulance and get the prison doctor. Prison records show that an ambulance was called at 10.07am, after an officer called the control room.

47. The man remained on the bed while Nurse A began cardiopulmonary resuscitation (CPR). The senior officer in charge of the wing, a Senior Officer (SO), was in a meeting when the man was found and a radio call was put out for him to return to the wing. Nurse A conducted CPR for around five minutes before the SO came to assist. The SO noticed the nurse looking distressed and took over CPR.

48. At the nurse's request a call had been made to healthcare requesting immediate assistance from the locum prison doctor. The diabetes nurse took the call (she could not remember who the call was from) and asked a nurse to escort the doctor to the wing as the doctor did not have a set of keys. She remained in healthcare to supervise the issue of methadone and she gave the emergency response bag to the Clinical Services Manager.

49. The Clinical Services Manager was originally wrongly directed to B wing, not D wing where the man was and after a short delay he and the doctor arrived at the cell at around 10.15am, although the exact time is unclear. The SO asked if he should continue CPR and he asked him to do so. It is unclear what medical observations the doctor conducted as there are differing accounts. The doctor said that on entering the cell he checked for a pulse in the neck, groin and wrist, checked the man's eyes with a light for a reaction, tapped his face and called out his name. However, the SO said that the doctor checked his pulse and then told him to stop CPR. The doctor said that because he was cold to the touch and he could not find a pulse he believed him to be dead.

50. There is some confusion about the exact time that the doctor pronounced the man dead. The officer who kept a log during the events noted that the doctor pronounced the man dead at 10.25am and the paramedics arrived at 10.28am. The doctor himself said it was 10.15am, as did the SO. The paramedic said he had been told it was 10.15am. After the man was pronounced dead, Nurse A returned to the healthcare centre.

51. The Clinical Services Manager also went back to healthcare to get the defibrillator, which the doctor wished to use to obtain a record that there was no heart rhythm, rather than as an aid to resuscitation. Although we understand that the man was hirsute, the doctor did not shave his chest area but instead placed the defibrillator pads directly on his chest, which decreases the reliability

of the defibrillator reading. This was not too important as the defibrillator was not being used for resuscitation. While the doctor was waiting for the defibrillator to provide a reading the ambulance crew arrived.

52. Ambulance and prison service records show that the 'first responder' ambulance car arrived at 10.19am, and a paramedic arrived in an ambulance at 10.22am. The ambulance service had been told by the prison that the man was a 38 year old man in a possible diabetic coma but was still breathing and a doctor was on scene. Because the information they had about his condition, suggested they did not need two paramedics, the first responder radioed back to control to inform them that he was free to attend another emergency.

53. The paramedic was escorted at a walking pace to the man's cell and arrived at 10.32am. He was not aware that CPR was being conducted, but was told that the man's condition had deteriorated just before he reached the wing.

54. When he got to the cell, the paramedic asked the doctor what had happened. He replied that "he's passed". The paramedic again asked about his condition so he could assist and the doctor answered "he's passed". He noticed the doctor was holding a defibrillator to show that there was no electrical output from the heart so he could record this in the medical notes, but because of the man's chest hair, the defibrillator pads appeared to have poor contact with his skin. The paramedic offered to use the ambulance's electrocardiogram (ECG, a diagnostic tool that measures and records the electrical activity of the heart), and placed the electrodes to his arm and leg.

55. The paramedic noted that when he placed the electrodes on the man, he was warm to the touch. He pressed the doctor for more information as originally he understood from the doctor that the man was dead when he was discovered. He was concerned that he was not being resuscitated. The doctor again responded that "he's passed". The paramedic said that the doctor explained that he had found him in cardiac arrest and that the SO was conducting CPR before he told him to stop.

56. The doctor said that CPR had been conducted but had ceased roughly 15 minutes before the paramedic arrived. After being told that a blood sugar reading had not been done before confirming death, the paramedic challenged the doctor's decision to declare death at that stage. He explained to the doctor that the man could have been hypoglycaemic and it was possible that the condition could have been reversible. After being challenged, the doctor again told the paramedic that "he has already passed" and left the cell.

57. The paramedic spoke to another prison officer to ask if he knew when CPR had ended. The officer said that CPR had stopped only a few minutes earlier, and the paramedic then considered his options. The man had been declared dead by a senior clinician and he was unable to determine exactly how much time had passed since CPR had been conducted. He concluded that any attempts of resuscitation would now be futile. He left the cell and asked the doctor if he was happy with his decision to stop resuscitation given that, because of his age

and potentially reversible condition the man was a viable resuscitation case. He said the doctor replied “yes of course”.

58. The paramedic told the investigator that he was asked to wash his hands before leaving the wing. When he asked why, he was told that the man had been suffering with norovirus and had been in quarantine for more than 48 hours. He said he had previously been unaware of this.

59. Littlehey’s Family Liaison was informed of the man’s death at 10.50am and obtained his next of kin details. A debrief was conducted at 11.20am. Staff discussed what had occurred that morning and the chaplain and care team offered support. She visited his brother’s home in London at 2.15pm to inform him of the death. Notices were placed around the prison advising staff and prisoners of his death and offering support. The prison checked all prisoners who were or had recently been monitored as at risk of suicide and self-harm to check their welfare.

60. At the request of his family, the man’s body was repatriated to Goa on 15 March 2012, where his funeral was held. Littlehey contributed to the costs of the repatriation and funeral costs. A memorial service was held at the prison on 25 April, attended by his family.

ISSUES

The man's clinical care

61. At Wormwood Scrubs, the man's sugar levels were recorded daily by healthcare. He was seen in the diabetic clinic and his insulin levels and diet was reviewed.

62. Although he was insulin dependent, the man's blood sugar levels were not checked at his reception health screen at Littlehey. The first time he had a blood test (HbA1c test) as part of a diabetes check was on 15 September which showed a glucose level of 8.5%. This was higher than NICE guidelines (the higher limit for which is 7.5%) and suggested that he was at risk of complications from his diabetes.

63. While at Littlehey, the man monitored his own sugar levels, injecting himself with insulin as necessary. The diabetes nurse explained at interview that prisoners' blood sugar levels were not routinely taken during the reception health screen. She said that prisoners were 'adults' and as long as they declared on arrival that their blood sugar levels were stable they would be reviewed roughly every six months at the diabetic clinic. She explained that all insulin dependent diabetics at Littlehey are provided with an Accu-chek blood sugar meter (for which a drop of blood from the finger is added to a test stick on an electronic device) to enable them to monitor their own blood sugar levels.

64. After the man died, two blood sugar meters were found in his cell, a 'one touch ultra easy' digital meter and an Accu-chek meter. The coroner's office took possession of both meters after his death. The 'one touch ultra easy' meter showed records of use on 28 January 2012. Readings showed that on 27 January, he took his sugar levels seven times that day, and three times the following day, 28 January. This meter showed sugar levels (on 27 and 28 January) ranging from 3.6 to 20.09 mmols over the two days.

65. The last recorded readings on the second meter (the Accu-chek meter) were on 18 February 2012, seven days before he contracted norovirus. There was a recorded reading at 12.25pm which showed a level of 13.08. The clinical reviewer commented that "in 2004 NICE recommended that self-monitored blood sugars should be between 4 and 7mmol/l before meals, and less than 9mmol/l two hours after meals". The man's blood sugar levels were therefore above the recommended level. It is not clear whether these were the last readings he took or whether there were more recent readings which were not stored on the meters.

66. The man's medical notes highlighted that he was sometimes prone to low blood sugar levels. After he was seen by Specialist Nurse Practitioner in October 2011, his insulin levels were reduced due to him being 'over insulinised', leading to hypoglycaemic episodes (low sugar levels) at night.

67. The man was also prescribed ramipril for a raised albumin/ creatinine level of 4.9 mmol/l. The clinical reviewer commented that "NICE states the upper limit

of normal is regarded as a urine albumin/creatinine ratio of 2.5 mg/ mmol in men and 3.5 mg/ mmol in women". This indicated that his diabetes might have affected his kidneys.

68. The clinical reviewer was of the opinion that "his overall diabetic control was not optimal when compared to the NICE guidelines". He lists several medical issues which suggest that the man's diabetes was not managed as well as it could have been. These include the Hba1c and blood sugar levels, the raised level of albumin/creatinine, diabetic retinopathy and a history of infections (which included an episode of right epididymo-orchitis in September 2011). In light of this we make the following recommendation:

The Head of Healthcare should ensure that the care of prisoners with diabetes is appropriate for their condition and managed in line with NICE guidelines.

Management of the norovirus outbreak

69. The Clinical Services Manager contacted the Health Protection Unit on 23 February 2012; to report that that there had been eight recent cases of gastroenteritis (sickness and diarrhoea), believed to be norovirus, in the prison. A meeting was called by the prison the next day attended by Health Protection Unit, representatives from NHS Cambridgeshire and the local authority Environmental Health team.

70. During the meeting information and advice was given as to how to control and prevent the spread of the virus. The prison was advised that anyone reporting symptoms should be isolated in their cells for next 48 hours, with meals being delivered to the cell door.

71. Healthcare kept a record on a spreadsheet to monitor the outbreak. The spreadsheet detailed when the person first reported symptoms and what their current symptoms were. Healthcare staff visited the affected prisoners daily and the spreadsheet and medical records were updated accordingly.

72. There were 91 cases reported in total between 21 February, and 8 March. The outbreak started in C and H wings, closely followed by F, B, D and A wings and spread to the YOI wings on 26 February. The last case of the norovirus was resolved on 13 March 2012.

73. It appeared that the norovirus outbreak was largely managed by the nurses. The locum GP confirmed at interview that he was not involved in the management of the outbreak and was not asked to review any affected patients.

74. The Clinical Services Manager explained that nurses were asked to check the affected prisoners to see what symptoms they had. He said that nurses were not advised to carry out any additional checks on prisoners with chronic conditions such as diabetes, explaining that they were "left to use their own clinical training to manage the affected prisoners".

75. The Consultant in Communicable Disease Control of the Norfolk, Suffolk and Cambridgeshire Health Protection Unit sent his report (entitled "Incident report: Outbreak of gastroenteritis at HMP Littlehey") to the clinical reviewer on 20 June. The clinical reviewer commented that "the report highlighted that the proportion of prisoners affected by the virus was in keeping with rates seen in other settings, e.g. care homes". The reviewer was of the opinion that although the outbreak was managed satisfactorily, "there was a spread between wings and the measures taken to control the infection were not fully successful initially".

76. Although the outbreak was eventually managed successfully, it appears that the emphasis was on how to contain and stop the spread of the virus rather than managing individuals and their particular circumstances and vulnerabilities, such as the man and others with chronic conditions. In response to his death, the Consultant sent an email to the Clinical Services Manager on 29 February saying "I would advise ensuring that anyone with co-morbidities [the presence of one or more illnesses in addition to a primary illness or disorder] is looked after closely to ensure they have adequate fluid intake and to look out for exacerbation of existing conditions". In the man's case, he was suffering from norovirus in addition to diabetes, but the primary illness did not seem to be taken into consideration. We make the following recommendation,

The Head of Healthcare should ensure that, when there is an outbreak of a communicable disease, the particular vulnerabilities of prisoners with existing illnesses and underling health conditions are identified and taken into account in their management.

The management of the man's diabetes during the norovirus outbreak

77. Littlehey's records show that the man first developed diarrhoea and vomiting on the evening of 25 February 2012. The following morning he was seen by a HCA, who spoke to him to confirm his symptoms. She noted on his computerised medical record "diarrhoea and vomiting. Seen by healthcare staff this morning symptoms on-going. Review tomorrow".

78. He was then reviewed every morning by a nurse from healthcare. However, it is not clear who visited the man on 27 February. Littlehey's records suggest that he was seen by the HCA but she told the investigator that all norovirus checks were carried out by nurses. (She explained that she had only assisted on 26 February (a Sunday) because it was the weekend and there were fewer staff on duty.) She did not see him that day and only entered the information into his record. The nurses on duty the morning of 27 February were the diabetes nurse and another nurse. The diabetes nurse explained at interview that the names of the prisoners affected were listed on a white board in the wing duty offices and in healthcare, and a spreadsheet was produced for each wing. She said that she did carry out norovirus checks and had attended D wing during the outbreak but said that despite being the diabetic nurse she was unaware that the man was unwell until the day he died.

79. Nurse A said that she carried out the check on the man on 28 February and an officer supports this account. However, there is no entry in his computerised medical record to show this. It is important that accurate records are made and we make the following recommendation:

The Head of Healthcare should ensure that accurate notes of all healthcare contacts with patients are recorded by the assessing clinician and not entered by a third party.

80. On 29 February, Nurse A visited the man at approximately 8.45am. She noticed he looked unwell but she had not brought any medical equipment with her. She explained to him that she would return later that morning to check his blood sugar and pressure. After the diabetes nurse informed her that she was unable to check on him, she returned to the wing where she found him unresponsive.

81. Nurse A said that apart from her normal nursing training she had not had any training in the care of patients with diabetes. During the time he had sickness and diarrhoea from the norovirus no one checked the man's blood sugar levels of asked him if he had checked them. Diabetes is a common illness among prisoners, and it is important that all medical staff have sufficient understanding about the care such prisoners require so as to provide appropriate advice and treatment and to be able to recognise when there is a need to escalate concerns to doctors or other specialists. We make the following recommendation:

The Head of Healthcare should ensure that healthcare staff have the appropriate skills and training to identify concerns about the health of prisoners with diabetes and make appropriate referrals.

82. The clinical reviewer established that Nurse A, the diabetes nurse, and the Clinical Services Manager were all unaware of diabetes 'sick-day rules' which he explained are important guidelines that are usually given to diabetics, especially those on insulin, to enable them to manage their diabetes safely if they become ill, for example if they are unable to eat or suffer from diarrhoea or vomiting. Littlehey has a diabetic policy entitled "Protocol for diabetic clinic". However, this does not detail specifically what advice should be given to prisoners if they become unwell. The reviewer asked the diabetes nurse if, had she known that he was unwell, she would have given him any specific instructions or a care plan to help him cope with diarrhoea and vomiting. She said that she would not. We make the following recommendation:

The Head of Healthcare should revise the 'Protocol for Diabetic Clinic' to include guidance on managing prisoners outside the clinic including self-management, self-monitoring and recording of blood sugars, and management of diabetes during any period of illness.

83. After raising the alarm, Nurse A was joined by a SO, who assisted with resuscitation attempts. He said that he was unaware that the man was

diabetic. He explained that during the norovirus outbreak prison staff saw the prisoners during unlock in the morning, when they brought their meals to their door and at lock up in the evening. They were not required to make a record of any observations made during these checks and were not informed by healthcare of anyone for whom extra checks were required.

84. Although personal medical information is confidential, in many cases it will be apparent to prison officers in any event when prisoners have conditions like diabetes as they are issued with blood sugar meters and hypodermic needles and attend clinics. Many prisoners would agree to this information being shared as part of an overall package of care. We believe that the Head of Healthcare and the Governor should aim to ensure that important information is shared with prison officers so they can identify prisoners who might be at risk of deteriorating health or have particular vulnerabilities. We make the following recommendation:

The Governor and the Head of Healthcare should ensure that a protocol is agreed to enable important medical information to be shared with prison officers to allow them to identify prisoners who might be at risk of deteriorating health.

85. The clinical reviewer concluded:

> "I am of the opinion that the man's care during the outbreak was less than adequate. Although he managed his own diabetes, he was confined to his cell during the outbreak and was only visited by healthcare staff. [They] did not look objectively for any deterioration in his diabetes by monitoring his blood sugar levels, hydration status and urine for ketone production. Had he seen a clinician … who had appropriate knowledge of how to manage diabetes, he may have been monitored more closely and thus admitted to hospital".

86. The pathologist noted in the post mortem report that "death was very likely caused by a combination of sub optimally controlled [uncontrolled] diabetes combined with norovirus infection with vomiting and diarrhoea. Both of these conditions could lead to ketoacidosis. The level of ketoacidosis was high and in my opinion was the direct cause of death".

The Emergency Response

87. When the locum GP arrived at the man's cell, he was apparently unable to find a pulse and told the SO to stop CPR as he thought the man had died. The doctor did not conduct any CPR. He explained at interview that despite being told by Nurse A that the man might be in a diabetic coma, he had not tested his blood sugar levels because he "didn't think about that". He stated he did not necessarily suspect a diabetic coma because he could not smell ketones in the mouth caused by the process of ketoacidosis. (Ketoacidosis occurs in people who have type 1 diabetes in the absence of insulin. This results in fat break down with the production of ketones. The accumulation of ketones makes the person unwell and requires treatment with fluids and insulin in hospital. If no

treatment is given the person becomes progressively unwell, drowsy, unconscious and leads to death.)

88. The doctor and the Clinical Services Manager brought an emergency bag to the wing, but not a defibrillator. No emergency code was used to alert staff to the urgency of the situation or to give them an indication of what equipment might be required. The doctor did not use any medical equipment before the man was pronounced dead and only asked the Clinical Services Manager to collect the defibrillator so he could establish an ECG trace (heart trace) for his records. While the availability of a defibrillator might not have helped the man, it could prove crucial in other circumstances. We make the following recommendation:

The Head of Healthcare should ensure that emergency codes are used to alert staff to the nature of an incident and to help ensure that appropriate equipment, such as a defibrillator, is brought.

89. When the paramedic arrived, he challenged the doctor's decision to pronounce the man dead. At interview the paramedic explained that if he had dealt with the man in the community, or arrived before the doctor certified death, he would have recommended that CPR be continued and that advanced life support (ALS) techniques be used. (ALS would entail CPR including ventilation (use of an airway) with oxygen and defibrillation where appropriate.) He explained that he would then check for 'reversible causes' such as drugs use or hypoglycaemia (low blood sugar) and, if found, he would look to treat these himself, or take the patient to hospital.

90. Despite being challenged by the paramedic, the doctor stood by his decision to certify death. The Clinical Services Manager (who is also a trained nurse and was present) told the investigator that he believed that the doctor 'very quickly arrived at the conclusion to stop'.

91. The clinical reviewer is of opinion that at the time of resuscitation the doctor did not adequately assess the man's condition. He commented that,

> "[The doctor] did not consider that [the man] was in a diabetic coma and [did not] obtain a blood sugar to see if it were abnormal. Diabetic comas can be caused by high or low sugars. A low sugar can be corrected by injecting glucose or the administration of the drug glycagon which causes a rise in the blood sugar. A high sugar level would have suggested that he may have had a ketoacidotic state, and although that would have been difficult to correct in a prison cell, may have led to a continuation of resuscitation".

92. The clinical reviewer highlighted that the Resuscitation Guidelines 2010 produced by the Resuscitation Council (UK) say that 'potential causes or aggravating factors for which specific treatment exists must be sought during any cardiac arrest'. The reviewer thought that the doctor should have obtained an ECG before certifying death "as some heart rhythms, e.g. ventricular fibrillation (abnormal heart rhythm) may be corrected using the defibrillator".

93. However, the clinical reviewer also commented in his report that "given the evidence I have seen I am of the opinion that by the time the doctor arrived in the cell it is highly unlikely that he would have been able to save the life of the man, even if he had obtained a blood sugar level or an ECG".

94. If the doctor was employed at Littlehey, we would have at least have asked the Head of Healthcare to ensure that he reviewed the doctor's management of patients during medical emergencies. However, the doctor was a locum doctor and no longer works at the prison. In light of this the clinical reviewer has contacted the doctor's 'Responsible Officer' to make him aware of this serious incident and setting out his concerns as to how the event was handled. ('Responsible Officers' (ROs) are senior doctors who ensure doctors are appraised annually. If there are concerns below the level where referral to the General Medical Council is considered necessary, ROs investigate, identify the cause and take the appropriate action to ensure the doctor is of an appropriate standard.) However, we consider there is a need to ensure that the PCT fully understands the concerns and takes appropriate action.

The Governor and the Head of Healthcare should draw the PCT's attention to the concerns about the doctor's actions during the emergency so that the PCT can ensure that appropriate action is taken.

Use of cell bells

95. The investigator met prisoners from the same wing as the man. Prisoner A, who lived two doors from him, explained that he normally attended bible class with him and was concerned when he became unwell. He commented that when he could, he looked through the viewing panel of his cell to speak to him and see how he was. He explained that the last time he saw him he looked very pale. He said he heard him press his cell bell on two occasions on the morning he died.

96. The investigator asked the SO about the emergency cell bell system. He said that he was not aware of the cell bell going off that morning. He explained that the cell bell system is outside his office and, when a bell goes off he or an officer responds. The system only shows the landing, and not the cell, where the bell has been pressed so the officer has to go to the landing to identify the cell in question and turn the alarm off. Unfortunately the system does not record when a cell bell was pressed or how long it took for a response. It is not therefore possible to corroborate whether the man rang his bell and whether and how long it took staff to respond.

CONCLUSION

97. The man had type 1 diabetes when he first came into prison in 2011. This was not monitored as well as it should have been while he was at Littlehey.

98. On 25 February 2012, he developed diarrhoea and vomiting during an outbreak of norovirus. During his illness he was confined to his cell as part of the outbreak control measures. He was visited daily by healthcare staff who asked how he was generally, but failed to assess his diabetes and thus did not notice his deteriorating health.

99. On the day the man died he was visited by Nurse A, who noted that he was still very unwell and decided to assess him in more detail later in the morning. However, he was found collapsed before that assessment was made. The doctor attended his cell and, according to other witnesses, pronounced his death before making a thorough assessment to establish if there were any reversible medical problems.

100. The clinical reviewer was of the opinion that the man's care during the outbreak was less than adequate. The reviewer commented that "had he seen a clinician, either a General Medical Practitioner or nurse in the community, who had appropriate knowledge of how to manage diabetes, he may have been monitored more closely and thus admitted to hospital".

101. We make eight recommendations as a result of this investigation. These include recommendations about the management of diabetes, the management of outbreaks of communicable diseases and the response to emergencies.

RECOMMENDATIONS

1. The Head of Healthcare should ensure that the care of prisoners with diabetes is appropriate for their condition and managed in line with NICE guidelines.

   The National Offender Management Service responded with,

   Agreed - Following consultation with the NHS Cambridgeshire Medical Director (visiting the establishment, September 2012) a root and branch review of the management of diabetes in line with NICE guidance, will be undertaken in collaboration with the new medical provider, the Cambridge Access Centre. **Target date for completion December 2012**

2. The Head of Healthcare should ensure that, when there is an outbreak of a communicable disease, the particular vulnerabilities of prisoners with existing illnesses and underling health conditions are identified and taken into account in their management.

   The National Offender Management Service responded with,

   Agreed - Following consultation with the NHS Cambridgeshire Medical Director (visiting the establishment, September 2012) a root and branch review of the management of an outbreak of a communicable disease, will be undertaken in collaboration with the new medical provider, the Cambridge Access Centre. **Target date for completion December 2012**

3. The Head of Healthcare should ensure that accurate notes of all healthcare contacts with patients are recorded by the assessing clinician and not entered by a third party.

   The National Offender Management Service responded with,

   Agreed - The correct entry of clinical notes has been re-enforced to all staff and will be subject to robust audit after 3 months. **Target date for completion December 2012**

4. The Head of Healthcare should ensure that healthcare staff have the appropriate skills and training to identify concerns about the health of prisoners with diabetes and make appropriate referrals.

   The National Offender Management Service responded with,

   Agreed - Specialist training in Diabetes management will be sourced and delivered to clinical staff. **Target date for completion November 2012**

5. The Head of Healthcare should revise the ‘Protocol for Diabetic Clinic’ to include guidance on managing prisoners outside the clinic including self-management, self-monitoring and recording of blood sugars, and management of diabetes during any period of illness.

The National Offender Management Service responded with,

Agreed - A group of key stakeholders across the establishment will review and update current information sharing structures, ensuring appropriate confidentiality. **Target date for completion December 2012**

6. The Governor and the Head of Healthcare should ensure that a protocol is agreed to enable important medical information to be shared with prison officers to allow them to identify prisoners who might be at risk of deteriorating health.

   The National Offender Management Service responded with,

   Agreed - Following consultation with the NHS Cambridgeshire Medical Director (visiting the establishment, September 2012) a root and branch review of the management of diabetes in line with NICE guidance, will be undertaken in collaboration with the new medical provider, the Cambridge Access Centre. **Target date for completion December 2012**

7. The Head of Healthcare should ensure that emergency codes are used to alert staff to the nature of an incident and to help ensure that appropriate equipment, such as a defibrillator, is brought.

   The National Offender Management Service responded with,

   Agreed - Emergency codes are already in place, but will be re-enforced through a notice to staff. Nine Automatic External Defibrillators are now in place in key residential/operational areas. **Target date for completion October 2012**

8. The Governor and the Head of Healthcare should draw the PCT's attention to the concerns about the doctor's actions during the emergency so that the PCT can ensure that appropriate action is taken.

   The National Offender Management Service responded with,

   Agreed - The PCT have contacted the Responsible Officer of the doctor's local PCT who will deal with performance in accordance with local and national guidance.