Investigation of a complaint against the Belfast Health & Social Care Trust

Report Reference: 202400242

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The Role of the Ombudsman

The Northern Ireland Public Services Ombudsman (NIPSO) provides a free, independent and impartial service for investigating complaints about public service providers in Northern Ireland.

The role of the Ombudsman is set out in the Public Services Ombudsman Act (Northern Ireland) 2016 (the 2016 Act). The Ombudsman can normally only accept a complaint after the complaints process of the public service provider has been exhausted.

The Ombudsman may investigate complaints about maladministration on the part of listed authorities, and on the merits of a decision taken by health and social care bodies, general health care providers and independent providers of health and social care. The purpose of an investigation is to ascertain if the matters alleged in the complaint properly warrant investigation and are in substance true.

Maladministration is not defined in the legislation, but is generally taken to include decisions made following improper consideration, action or inaction; delay; failure to follow procedures or the law; misleading or inaccurate statements; bias; or inadequate record keeping.

The Ombudsman must also consider whether maladministration has resulted in an injustice. Injustice is also not defined in legislation but can include upset, inconvenience, or frustration. A remedy may be recommended where injustice is found as a consequence of the failings identified in a report.

Reporting in the Public Interest

This report is published pursuant to section 44 of the 2016 Act which allows the Ombudsman to publish an investigation report when it is in the public interest to do so.

The Ombudsman has taken into account the interests of the person aggrieved and other persons prior to publishing this report.

TABLE OF CONTENTS

Page

Case Reference: 202400242
Listed Authority: Belfast Health and Social Care Trust

SUMMARY

The complaint was about care and treatment the Belfast Health and Social Care Trust (the Trust) provided to the complainant, a lady of 80 years of age, on 23 August 2023 when she had a CT Coronary Angiogram.

The investigation established the Trust failed to provide appropriate aftercare to the complainant after she experienced extravasation during the procedure. That is, the dye which is injected into the vein leaking into the surrounding tissue and potentially causing *'pain, stinging, swelling, pins and needles or altered sensation in the arm/hand and skin colour changing or blistering of the affected area.'* It was unclear from the records how long the patient was monitored after this incident, as it was not recorded, but was clearly less than the minimum hour required by the guidance. Further the Trust did not provide the complainant with reassurance and explanation of what had happened.

The investigation also established that the Trust failed to document how the Radiographer became aware that extravasation occurred during the procedure and disparity between the Datix record and the Radiographer record. Indeed, the Datix report made no reference to the complainant calling out in pain or experiencing discomfort. I considered this disparity and lack of clarity regarding how the Radiographer became aware that the complainant was in pain and that extravasation had occurred a service failure. I made further recommendations to bring about service improvement and to prevent future recurrence and asked the Trust to provide this Office with evidence of its compliance with these recommendations.

The Trust accepted the findings and recommendations of my report.

THE COMPLAINT

1. This complaint was about care and treatment Belfast Health and Social Care Trust (the Trust) provided to the patient on 23 August 2023 when she had a CT Coronary Angiogram[1].

Background

2. The complainant's Consultant Cardiologist referred her to the Trust on 3 May 2023 for a CT Coronary Angiogram as a result of intermittent chest heaviness. This procedure took place on 23 August 2023. The Radiology Registrar administered beta blockers[2] to the complainant before the procedure to lower her heart rate.

3. During the procedure the complainant suffered significant pain in the area where the cannula was inserted. The pain the complainant experienced was a result of extravasation[3]. This occurs when the contrast media dye ends up in the surrounding tissue rather than into the vein. A volume of contrast in the tissue can cause pain or tightening around the area where the cannula is inserted.

4. The Radiographer removed the first cannula after the complainant reported feeling pain and massaged her arm. The Radiology inserted a second cannula, and the procedure continued.

Issue of complaint

5. I accepted the following issue of complaint for investigation:

Whether the care and treatment the Trust provided to the complainant on 23 August 2023 was appropriate and in accordance with relevant standards. In particular this will include:

- **Medication administered before the procedure**
- **Pain experienced during the procedure**
- **Removal of first cannula**
- **Dosage of contrast dye administered**
- **Aftercare**

[1] An imaging test that looks at the arteries that supply blood to the heart. It uses a powerful x-ray machine to make images of the heart and its blood vessels. The test is used to diagnose many different heart conditions.
[2] Used to manage abnormal heart rhythms by slowing down the heart.
[3] The leaking of fluid or medication into extravascular tissue from a peripheral intravenous cannula

INVESTIGATION METHODOLOGY

6. In order to investigate this complaint, the Investigating Officer obtained from the Trust all relevant documentation together with its comments on the issues the complainant raised.

Independent Professional Advice Sought

7. After further consideration of the issues, I obtained independent professional advice from the following independent professional advisor(s) (IPA):

- A Radiology Consultant with 25 years' experience (R IPA); and
- A Radiographer with 25 years' experience (RG IPA).

I enclose the clinical advice received at Appendix two to this report. I will address the key elements of this advice in the analysis and findings sections.

8. The information and advice which informed the findings and conclusions are included within the body of this report. The IPAs provided 'advice'. However, how I weighed this advice, within the context of this particular complaint, is a matter for my discretion.

Relevant Standards and Guidance

9. In order to investigate complaints, I must establish a clear understanding of the standards, both of general application and those specific to the circumstances of the case. I also refer to relevant regulatory, professional, and statutory guidance.

The general standards are the Ombudsman's Principles[4]:

- The Principles of Good Administration

10. The specific standards and guidance referred to are those which applied at the time the events occurred. These governed the exercise of the administrative functions and professional judgement of those individuals whose actions are the subject of this complaint.

[4] These principles were established through the collective experience of the public services ombudsmen affiliated to the Ombudsman Association.

The specific standards and guidance relevant to this complaint are:

- The Belfast Health and Social Care Trust Procedure for Managing Extravasation, November 2021 (BHSCT Extravasation guidance);
- The Royal College of Radiologists Standard of Practice of computer tomography coronary angiography, December 2014 (RCR CTCA Guidance);
- The National Institute for Health and Care Excellence, British National Formulary Soft Tissue Disorders (Extravasation) guidance, undated (Soft Tissue guidance); and
- The Health and Care Professions Council Standards of Proficiency (for Radiographers), March 2022 (HCPC Standards of Proficiency).

I enclose relevant sections of the guidance considered at Appendix three to this report.

11. I did not include all information obtained in the course of the investigation in this report. However, I am satisfied I took into account everything I considered relevant and important in reaching my findings.

12. A draft copy of this report was shared with the complainant and the Trust for comment on factual accuracy and the reasonableness of the findings and recommendations. All comments received were fully considered.

THE INVESTIGATION

Whether the care and treatment the Trust provided to the complainant on 23 August 2023 was appropriate and in accordance with relevant standards.

Medication administered before the procedure

Detail of Complaint

13. The complainant said she already took beta blocker medication prior to the procedure. She believed the additional medication administered before the procedure may have contributed to the negative complications she suffered.

Trust response to investigation enquiries

14. The Trust usually prescribes or increases beta blockers prior to attending for cardiac CT[5]. In some cases, and dependent on the patient, this will not always lower the heart rate to the required rate. Therefore, an experienced Consultant Radiologist may administer further beta blockers if the heart rate is not at the required rate.

Relevant Trust records

15. The Trust provided this Office with a copy of the Cardiac Information leaflet.

Analysis and Findings

16. The Trust's Cardiac CT Patient Information Leaflet states '*We may also administer additional beta blocker medication when you are on the CT table. This is given intravenously by the consultant radiologist supervising the list. This is only required if your heart rate remains higher than is ideal for scanning. It is a fast acting medication which lowers your heart rate temporarily during the CT.'*

17. Standard four of the RCR CTCA Guidance, states that clinicians should administer '*heart rate-controlling drugs'* so that the '*patient's heart rate is <65 beats per minute during the scan.'* The records document that at 14.00, before the scan, the complainant's heart rate was 83.

18. The IPA advised that based on this measurement, the Trust *'appropriately administered'* a beta blocker to further lower the complainant's heart rate. I accept this advice and consider the Trust's actions in line with the RCR CTCA guidance. I have therefore not identified a failure in care and treatment. On this basis I do not uphold this element of complaint.

Pain experienced during the procedure

Detail of Complaint

19. The complainant said that early in the procedure, she suffered significant pain in the area where the CT Team inserted the cannula. She explained the Radiographer did not attend to her when she first felt the pain. The complainant said it was only on the onset of a second such pain that staff reacted. Both the Trust and the complainant accepted the extravasation caused the pain.

[5] A scan that takes images taken of the heart and coronary arteries

Trust's response to investigation enquiries

20. The Trust stated the pain the complainant experienced was as a result of extravasation. This is when the contrast media (dye) ends up in the surrounding tissue rather than the vein. There are a number of reasons why this could happen. For example, a vein can collapse prior to or during the injection, or the cannula moves. The CT team on the day followed the appropriate procedure when managing the extravasation of contrast.

Relevant Trust records

21. The Trust provided this office with a copy of the medical records for the procedure together with an incident form completed after the procedure.

Analysis and Findings

22. The BHSCT Extravasation Guidance states during the procedure '*Occasionally the injection may leak out from the vein into the tissues under the skin i.e. Extravasate. This can cause pain, stinging, swelling, pins and needles or altered sensation in the arm/hand and skin colour changing or blistering of the affected area.'*

23. The RG IPA advised that in accordance with the RCR CTCA Guidance, the CT Team should have used saline to test the '*patency*' of the cannula. I note in this case, the Registrar documented that the CT Team administered saline prior to the contrast. The RG IPA advised therefore, the injector information provided appropriately fit the guidance from the RCR CTCA Guidance. I accept this advice and consider the CT Team appropriately tested the patency of the cannula prior to administering the contrast. I note the Datix incident report form detailing the event stated the complainant did not experience any discomfort when staff administered the saline.

24. However, the complainant said that when she first experienced pain, staff did not attend to her. It was only on the onset of a second such pain that staff reacted. I note when the complainant submitted her complaint to the Trust, she said there was '*no one present'* for her to report it to at that time. This suggests the complainant could not report her first instance of pain because there was no one to report it to. The Datix incident report stated the Radiographer was not with the complainant as the CT was bolus tracked[6]. This may account for there not being a staff member present at that time.

[6] A radiographer is not usually present during bolus administration in radiotherapy because their primary role is focused on imaging and treatment planning.

25. The Datix incident report stated that as staff were not with the complainant, they asked her to '*call out'* if she experienced discomfort. The report did not document that the patient called out to report pain or discomfort. In fact, the report stated the patient's arms remained in the same position from when the team administered saline until after the procedure completed. It also stated the patient did not report any discomfort. I consider this at odds with the Radiologist's documented summary of the incident that stated, '*initial pain settled quickly'*, as this strongly suggests the patient did report pain.

26. I find it concerning that the Datix report did not outline how the Radiographer came to realise that extravasation had occurred; whether it followed a report from the patient, or whether the Radiographer themselves discovered it. I consider the absence of this information in the record a service failure. I am satisfied this failure did not cause the complainant to sustain an injustice. However, it prevents me from establishing if staff appropriately responded to the complainant's reports of pain. I would ask the Trust to ensure its staff create and retain appropriate records when extravasation occurs.

Removal of first cannula

Detail of Complaint

27. The complainant said a nurse removed the first cannula after she reported feeling pain and massaged her arm. The complainant believed this may have made the outcome worse.

Trust's response to investigation enquiries

28. The Trust stated the Radiographer removed the cannula, as it was no longer functional. They then applied a cold compress and massaged the arm to dispense the contrast to reduce the pain the complainant experienced. This was in line with the Trust's procedure for Managing Extravasation.

Relevant Trust records

29. The Trust provided this office with a copy of the Radiology Registrar's contemporaneous record of the procedure.

Analysis and Findings

30. The BHSCT Extravasation Guidance outlines the steps staff should immediately take on establishing extravasation. I outline these steps in Appendix three to this report.

The record provided by the Registrar states, '*cold compress applied, arm elevated and area massaged, initial pain settled quickly with the above steps.'* The complainant also said the Radiographer massaged her arm. The RG IPA advised that based on this record, '*staff took all action stated in the policy*.' I accept this advice.

31. Having reviewed all relevant evidence, including the RG IPA's advice and Trust's Extravasation guidance, I am satisfied that massaging the complainant's arm following the extravasation was appropriate and in accordance with relevant guidance. On this basis I have not identified a failure in treatment and care and therefore, do not uphold this element of complaint.

Dosage of contrast dye administered

Detail of Complaint

32. The complainant said after the procedure the CT Team hurried her outside to a waiting area where a male member of staff said to her that the '*Doctor pushed more through'*. The complainant was concerned this meant the doctor may have delivered more contrast dye than appropriate and this is what caused her pain.

Trust's response to investigation enquiries

33. The Trust stated the Radiology Registrar attended following failed contrast administration on the initial CT scan. The CT Team noted the cannula was initially working and flushed with normal saline and 30ml IV metoprolol[7]. An automated pump injector delivers the contrast, and the Radiographer uses the pump to flush a few millilitres through the cannula to check it is working prior to the bolus injection.

34. The Trust stated the Radiology Registrar visualised that some contrast was on the initial tracking slices (first images acquired). This indicated that the CT Team had correctly placed the cannula at some point during the injection (probably at the start of the injection). This became displaced and extravasation occurred.

[7] Used alone or in combination to treat high blood pressure.

Relevant Trust records

35. The Trust provided this office with a copy of the medical records for the procedure together with the incident report form.

Analysis and Findings

36. I viewed the RCR CTCA Guidance and note it displays a table advising contrast volume should be administered in the range of 60mls to 100mls (copy of table included in Appendix 3).

37. I reviewed the Trust incident report form and note it states, '*planned volume [80mls].'* The incident report form also states '*swelling observed, cold to touch. It was thought that the [NaCl flush [8]& IV contrast] had tissued. Approximately [40mls].'*

38. The R IPA advised the dosage of contrast dye administered to the complainant was 80mls, as per the RCR standards for CTCA advising range of 60mls – 100mls. He further advised, '*The amount of dye used is the recommended amount but caused pain on this occasion because of the extravasation*.'

39. Having reviewed all the relevant evidence to include the R IPA advice, I am satisfied the CT Team administered the correct dosage of contrast to the complainant and this was in accordance with relevant guidance. On this basis I did not identify a failure in care and treatment, therefore, I do not uphold this element of complaint.

Aftercare

Detail of Complaint

40. The complainant said the CT Team provided no reasonable duty of care to her. Staff gave no indication of what had happened beyond providing her with a leaflet about extravasation and suggesting she visit the Accident and Emergency department. The complainant stated that the CT Team effectively left her to her own devices with no reasonable aftercare.

[8] Used to clean out an intravenous catheter, which helps to prevent blockage and removes any medicine left in the catheter.

Trust's response to investigation enquiries

41. The Trust stated the CT Team provides aftercare advice to all patients who experience extravasation during their CT examinations. The Radiology Registrar reviewed the patient after the CT Team identified the extravasation,

Relevant Trust records

42. The Trust provided this office with a copy of the patient information leaflet.

Analysis and Findings

43. The Trust Cardiac Patient Information Leaflet states '*On completion of the examination you will be monitored for 30 minutes for any side effects or reactions to the contrast media such as itching, swelling, rash or difficulty breathing. Otherwise there is no special type of care required. The venflon will be removed before leaving the department.'* The BHSCT Extravasation Guidance lists the steps staff should follow after the procedure (details on the steps included in Appendix 3).

44. I viewed the complainant's medical records, in particular the review completed by the Registrar. It states '*Patient given information leaflet regarding contrast extravasation. Advised to continue with cold compress/massage/elevation. If worsening pain or skin breakdown to seek medical attention – GP/ED.'* The incident report form states, '*aftercare sheet given to patient.'*

45. The R IPA referred to the steps from the BHSCT Extravasation guidance. He advised the Trust complied with all except two steps detailed in the guidance. I consider these below.

46. The guidance states, '*The patient should be made comfortable and reassured by staff.'* The R IPA advised that to meet this requirement, '*staff should have told the complainant extravasation occurred because her vein had collapsed and verbal advice should have been offered to the complainant reiterating the content of written information provided*.' The RG IPA also advised the Radiographer could have '*better reassured'* the complainant.

47. The records evidence the Trust provided the complainant with the patient information leaflet and advice about the use of a cold compress. However, there is no evidence to suggest the Trust explained what went wrong and the impact this could have on

the complainant. In the absence of this evidence, I cannot be satisfied the Trust met the requirement outlined in its guidance.

48. The HCPC Standards of Proficiency require radiographers to '*provide appropriate information and support for service users throughout their diagnostic imaging examinations.'* I do not consider the Radiographer met this requirement in this case. I consider this a failure in the complainant's care and treatment.

49. The guidance also states, '*Outpatient should stay in the department for at least 1 hour after the injection to ensure there are no further complications*.' I note the records document that staff administered metoprolol at 14:40. The R IPA advised staff would have administered the contrast after this. The records further document that staff completed discharge observations at 15:10. However, both the R IPA and RG IPA advised the records do not document what time the patient left the department. In the absence of this documentary evidence, I cannot be satisfied the CT Team observed the complainant for the full hour as the Trust's guidance requires. It instead suggests the complainant was only observed for approximately 30 minutes. I consider this also represents a failure in the complainant's care and treatment. On this basis, I uphold this element of the complaint.

50. I consider the failures identified caused the complainant to sustain the injustice of distress and uncertainty about the care and treatment she received, and the complications and side effects associated with the procedure. It is clear that the complainant had just come through a distressing and painful experience and understandably felt worried. I consider the lack of an explanation at that time caused the complainant to sustain the injustice of a loss of opportunity to have reassurance that the actions taken were appropriate. I am confident that had the CT Team better explained to the complainant what went wrong and why it happened, it may have alleviated her worry somewhat.

Observation

51. I note the R IPA and RG IPA observed in their advice that the patient information leaflet does not outline the risk of extravasation and suggested the Trust review this. The R IPA also observed the use of the term '*Venflon'* in the leaflet and suggested using the term '*cannula'* instead. On this basis, I encourage the Trust to reflect on the IPAs' observations in its practice going forward.

CONCLUSION

52. I received a complaint about the care and treatment the complainant received from the Trust on 23 August 2023 when she had a CT Coronary Angiogram.

53. I partially uphold the complaint for the reasons outlined in this report. I found the Trust did not explain to the complainant why she experienced pain during the procedure. I also found the Trust did not observe the complainant for a full hour after the procedure as required by its guidance. The investigation further identified the Trust did not document how the Radiographer became aware that extravasation occurred. I consider this a service failure.

54. I recognise the failures caused the complainant to sustain the injustice as outlined in the report.

Recommendations

55. I recommend the Trust provides to the complainant a written apology in accordance with NIPSO's 'Guidance on issuing an apology' (July 2019), for the injustice caused as a result of the failures identified within **one month** of the date of this report.

56. I further recommend for service improvement and to prevent future recurrence the Trust:

- Brings the contents of this report and its findings to the attention of all relevant staff who carried out and assisted in this procedure.
- Provides training to relevant staff on:
  - The importance of explaining extravasation to patients and providing them with reassurance if this occurs.
  - The requirement to create and retain appropriate records when extravasation occurs.
  - The importance of observing patients for the full one hour after completion of the procedure, as required by the Trust's guidance.

- I recommend the Trust implements the above recommendations and provide me with an update within three months from the date of my final report. The Trust should support its implementation with evidence to confirm it took appropriate action.

MARGARET KELLY **July 2025**
Ombudsman

Appendix 1 - PRINCIPLES OF GOOD ADMINISTRATION

Good administration by public service providers means:

1. Getting it right

- Acting in accordance with the law and relevant guidance, with regard for the rights of those concerned.
- Acting in accordance with the public body's policy and guidance (published or internal).
- Taking proper account of established good practice.
- Providing effective services, using appropriately trained and competent staff.
- Taking reasonable decisions, based on all relevant considerations.

2. Being customer focused

- Ensuring people can access services easily.
- Informing customers what they can expect and what the public body expects of them.
- Keeping to its commitments, including any published service standards.
- Dealing with people helpfully, promptly and sensitively, bearing in mind their individual circumstances.
- Responding to customers' needs flexibly, including, where appropriate, co-ordinating a response with other service providers.

3. Being open and accountable

- Being open and clear about policies and procedures and ensuring that information, and any advice provided, is clear, accurate and complete.
- Stating its criteria for decision making and giving reasons for decisions
- Handling information properly and appropriately.
- Keeping proper and appropriate records.
- Taking responsibility for its actions.

4. Acting fairly and proportionately

- Treating people impartially, with respect and courtesy.
- Treating people without unlawful discrimination or prejudice, and ensuring no conflict of interests.
- Dealing with people and issues objectively and consistently.

- Ensuring that decisions and actions are proportionate, appropriate and fair.

5. Putting things right

- Acknowledging mistakes and apologising where appropriate.
- Putting mistakes right quickly and effectively.
- Providing clear and timely information on how and when to appeal or complain.
- Operating an effective complaints procedure, which includes offering a fair and appropriate remedy when a complaint is upheld.

6. Seeking continuous improvement

- Reviewing policies and procedures regularly to ensure they are effective.
- Asking for feedback and using it to improve services and performance.
- Ensuring that the public body learns lessons from complaints and uses these to improve services and performance.