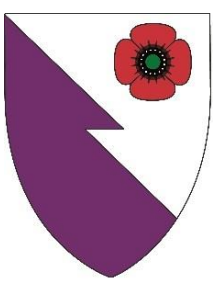
The Royal College of Emergency Medicine

Best Practice Guideline

Management of Investigation Results in the Emergency Department



Revised: May 2020

Summary of Recommendations

Patients should be kept informed in a sensitive and appropriate manner of the findings of investigation results, the actions taken as a result, and in a manner that is in keeping with the principles of Duty of Candour.

All Emergency Departments should have a 'Standard Operating Procedure' for the handling of investigation results (radiological and non-radiological) that covers the following issues for those patients under the care of the Emergency Department, or discharged from the Emergency Department:

a. The process of review and action taken should be identifiable and traceable, and completed in a timely fashion. This should be 'real-time' for time critical investigation results, and within 72 hours for non-urgent results.

b. Responsibility for review and actions resulting from the results / report review should be clearly defined and recorded, to ensure consistency, as should the processes for referral and handover of this responsibility

c. The systems in place for referral, follow up and further action required

d. The process of review, and action taken as a result should be recorded in an auditable manner, preferably utilising electronic sign-off of results. The record should be available to all members of the clinical team to avoid duplication of activity.

e. Mechanisms for informing the patient of the action taken.

For patients who are admitted under a non-ED team, then the responsibility for reviewing and subsequent actions arising from radiology reports rests with the team caring for that patient or the discharging team.

There must be programmed activity (as Direct Clinical Care) available within Consultant job plans for reviewing investigation results (radiological and non-radiological).

PATHOLOGY

All results of non-radiological investigations performed in the Emergency Department must be reviewed and acted upon by a clinician, in the context of the relevant clinical scenario, generally in 'real-time'.

RADIOLOGY

All reports of abnormal radiological investigations requested by the Emergency Department team must be reviewed by a clinician, taking the clinical scenario into account, and necessary actions that may be required.

Patients in whom an investigation was requested whilst in the Emergency Department but at the time was in the care of a specialty team, then follow-up of any abnormal result should be by that specialty team. The processes for this must be robust to avoid failure to action (see examples below).

The Emergency Department and the Radiology Departments are encouraged to hold regular meetings to review requesting protocols, timeliness of reporting and volumes and trends of requests particularly regarding non-plain film X-rays.

Scope

This guideline seeks to provide guidance for Emergency Departments in how they manage normal and abnormal radiology and pathology results.

Reason for development

The management of abnormal radiology and pathology results in the Emergency Department is a source of concern for many Emergency Medicine clinicians. Concerns are often related the provision of appropriate 'safety nets' in the event of an initially unrecognised abnormality, but also ensuring effectiveness of these 'safety nets'. There are also concerns about the degree of responsibility the Emergency Department and individual clinicians have to patients who have either been under their care (sometimes nominally).

Introduction

The Emergency Department (ED) is a high-volume requestor of both pathology and radiology. These requests maybe made by numerous grades of doctors, nurses and advanced care providers for patients in the emergency department. Most of these patients will initially be under the care of the ED, however referrals to in-patient specialty teams are often diverted to the ED for a number of reasons e.g. the ED acting as single point of entry to the hospital for any episode of urgent or emergency care, or patient diversion to the ED due to lack of in-patient specialty capacity.

The majority of EDs 'front load' pathology and to a lesser extent radiology requests in an effort to improve patient flow through the department and ultimately the hospital, if required. The 'front loading' of these tests may be done by clinicians undertaking a Rapid Assessment and Treatment model, but equally they may be done by nursing staff as part of an initial extended triage process, using predetermined 'order sets'. In this setting the ED is not necessarily requesting tests that will immediately influence patient management in the ED, but is acting in the best interests of the patient with regard to their whole journey through the hospital; the ED is acting on behalf of the whole hospital. These 'order sets' may not be specifically recorded in the patient record.

Most systems return the result of the test to the requester and/or the responsible clinician for review and checking. Generally the requesting clinician has responsibility for reviewing and acting upon results (which may include instructing another clinician to act on results). The General Medical Council in its guidance states in explanatory guidelines that when working in multidisciplinary teams organisations should ensure clarity over roles and accountability [1] ensuring that patient safety is paramount, and complying with the 'Duties of a doctor' [2]. Similarly, the act of delegating assessment of a patient, or referring a patient, also has specific guidance [3].

Most pathology and radiology requests are now performed electronically with the individual requestor being identified as well as the responsible individual consultant. In the ED it is not unusual to find that one particular ED consultant's name is used generically whether they have been involved in the patient's care or not. Guidance from the Academy of Royal Medical Colleges [4] has suggested that for admitted patients being discharged

back to primary care the individual requesting consultant has ultimate responsibility for acting on any requests and the subsequent reports that are in her/his name. The same guidance places a responsibility on the discharging team to communicate effectively with the primary care team to ensure outstanding test results are not missed. The guidance does not explicit reference the differences between the Emergency Department setting and the ward and General Practice settings.

There is increasing pressure for Emergency Departments to, not only have safe systems in place to ensure that no fracture or abnormal result is missed but also to be able to provide assurance (often electronically) with regard to all reports (pathology, radiology) having been seen, irrespective of whether the result / report is abnormal or not; this is can be very time consuming.

Whilst there are many benefits to electronic requesting, not all systems are flexible enough to ensure that when a patient is referred from the Emergency Department to an in-patient specialty team that the original requestor details (the ED Consultant) are changed to that of the in-patient specialty team. Some systems also permit ascribing of requests to departments with only a historical association with a patient.

Non-radiological investigations, such as results of blood tests are quality assured by the laboratory system, and the result made available to clinicians (usually on the hospital Information Technology system). Frequently these systems highlight abnormal results, misinterpretation of the result is uncommon; of greater concern is discharging a patient without realising there is an outstanding result. Most of these systems have the functionality to incorporate a completely electronic auditable trail of the history of requesting, receipt of sample and acknowledgement of test results. Pathology results (e.g. biochemistry, haematology) tend to be reported within a 1-2 hour timeframe, whilst the patient is in the ED. Abnormal pathology results tend to be easily recognised in-view of well-defined clinical ranges and tend to be reported quickly. Exceptions to rapid reporting for pathology for commonly ordered ED pathology tests include urine, blood and swab cultures results.

Radiology results (e.g. X-rays) require clinician interpretation and can be subject to misinterpretation by the clinician (e.g. missed fracture) and this is particularly important when in-experienced clinicians are being relied upon to interpret X-rays. 'Hot reporting' of some types (e.g. appendicular skeleton) X-ray films 09-17:00 Monday to Friday by trained radiologists or radiographers is the norm in some departments, but not all and the reporting of other types of X-ray films e.g. Chest X-rays are often not part of his process. The result is that a radiology report could be available whilst the patient is still in the ED, within 10 minutes of having had the X-ray taken or it could be 10 days before the report is available. Those ED patients having specialist radiological investigations e.g. CT scans whilst in the ED, generally tend to have a report available either whilst the patient remains in the ED or whilst the patient is being cared for by an in-patient specialty team.

Pathology reports tend to arrive in 'real time' whilst radiology reports have the potential to arrive both in 'real time' via 'Hot Reporting' mechanisms but also some days later (after the patient has been discharged or admitted) and these reports might either be verbal, written or via email and may involve an element of duplication. A further level of complexity may

be added by reports being sent to the location (e.g. ED) that the patient was in when they had their investigation rather to the requesting consultant (e.g. a stroke physician).

Lastly, Radiology reports can have addenda added (often by Radiology Consultant review) after the patient has been discharged. Often these are significant findings that require immediate action (common examples include small subarachnoid bleed, cervical spine fractures), significant findings requiring urgent action (common examples are lung tumours, bowel wall abnormalities), and 'incidental' findings requiring non-urgent action (for example adrenal adenomas, small lung nodules).

Recommendations

Emergency departments should have clear standard operating procedures (SOPs) for how they deal with investigation results; both pathology and radiology (appendix 2 – example). There needs to be clear governance processes around how normal and abnormal results are dealt with, aiming to prioritise abnormal results and their potential to impact on going patient care. Given the high volume of tests performed by the Emergency department then reviewing these results / reports will require significant and often senior resource. It is important that patients are kept informed of the results of the investigations; when these are unexpected it is important that this is done sensitively and in a manner that is in keeping with the principles of Duty of Candour. Anecdotal experience suggests that for a medium sized ED, this equates to about 4 hours work per day. As this involves named patient record, it is Direct Clinical Care (non-patient facing), and needs to have provision in the senior team work plans.

It is important that the review process is not taken as sole evidence that action has been taken, there needs to be an auditable record of actions resulting from review of investigation results. Individual Emergency Departments should highlight any areas of risk they have regarding their systems and processes for review of investigation results (e.g. place on the risk register) arising from lack of resource (e.g. staff, fit for purpose IT systems). For the purposes of dealing with investigation results the ED Consultant team should see themselves all as one body and any request in an individual ED consultant's name should generally be treated as a request by them all.

In general, for patients the ED discharges the ED must take responsibility for the checking of reports and acting on any abnormal or missed findings. For those patients the ED refers to in-patient teams and in whom the reports are produced more than 4hrs after being seen, the responsibility for follow-up and acting on the result in general rests with the admitting or discharging team rather than the requesting ED team. In general, it is not reasonable to expect the ED team to be reviewing patients or their notes whilst they are in-patients to see if abnormal results / reports have ben acted upon. However the ED team should be mindful of any potential circumstances in which patient care may be compromised because the report / result is sent to the requestor rather than the discharging team and be prepared to mitigate against this, rather than exclusively apply the principle that the discharging team should retain responsibility (see vignette 3).

There is a clear distinction between routinely requesting that primary care follow-up an investigation result ordered by the ED and primary care being asked to organise non-urgent

follow-up tests that arise from their patient attending the ED either due to a known abnormality or a missed abnormality. It is part of the definition of General Practice [5] that it *'is responsible for the provision of longitudinal continuity of care as determined by the needs of the patient';* unlike Emergency Medicine which retains little responsibility for the ongoing care of patients who are registered with a GP. There are occasions when it is in the patient's best interests for their continuity of care to be managed by their primary care clinician; when this is the case, the communication between patient, primary care and the ED needs to be robust.

Pathology

The ED should make it clear in the patient record which specific tests it requests.

The Emergency Department must take responsibility for ensuring the results / reports of the patients it discharges are checked and any appropriate follow-up actions taken. A policy of not discharging home any patient until all their biochemistry / haematology results are known is a very useful 'rule of thumb' particularly for the more junior doctor working in the Emergency Department.

For those patients the Emergency Department refers to in-patient specialty teams, the ED team should facilitate safe and effective acute care by ensuring that significantly abnormal pathology results requiring urgent treatment are highlighted in real time to an appropriate member of the in-patient team; irrespective of patient location. This handover should be documented in the notes.

Tests requested by in-patient specialty teams whilst their patients are in the Emergency Department will need to be followed up by the in-patient specialty teams.

Emergency Departments should try to avoid requesting primary care teams to 'follow-up' or 'chase' the results of tests requested by the ED team. The Emergency department should manage this process by having clear guidance around which non-urgently reported tests it considers acceptable for the ED team to request e.g. in a confused elderly patient taking a urine culture before commencing antibiotics may be appropriate even with the knowledge that this is not going to affect initial ED management, however in a non-confused symptomatic patient a urine culture is unlikely to be necessary [6]. Other specific tests to consider include swab results and that may be non-time critical tests e.g. Mast Cell Tryptase, thyroid function tests, cholesterol levels, that may be useful/needed but do not affect immediate care in the ED. The ED should avoid requesting that primary care teams arrange further investigations, instead a suggestion of consideration of a further management options which might include further investigations and or other specialty team input. Emergency department discharge summaries can be useful for highlighting abnormal test results which do not require immediate treatment but which might require monitoring or follow-up.

Radiology

A policy of not discharging ED patients home until the radiology 'Hot Report' is known is often a useful guide for more junior doctors to follow, however this service may be non-existent or limited e.g. in the 'out of hours' period.

As described above the issue of radiology reports in particular being produced quite some time after the patient has either been discharged or admitted is of considerable concern. Emergency departments should have local agreements with clearly defined standards that all ED requested radiology will be formally reported. The emergency department should commit to reviewing all abnormal radiology reports within a given time frame e.g. 72hr. Given the potential for ED requested radiology reports to only become available after a patient has been admitted and then subsequently discharged by another in-patient specialty team, the Emergency Department should ensure mechanisms are in place to be able to forward any abnormal reports to the discharging team; especially if there are concerns that these could have been 'missed', ensuring a clear audit trail.

Few Emergency Departments have access to outpatient clinics and national guidance around communication of diagnostic tests to primary care focuses on those patients discharged from hospital wards without any specific mention of Emergency Departments [4]. Whilst it is entirely appropriate that the ED follows up a patient with a 'missed fracture'; for non-urgent conditions it is reasonable to ask primary care to take on the responsibility of organising any further non-specialist tests that arise as a result of their patient attending an emergency department.

Systems that allow the reporting radiologist, who first identifies the need for further radiological investigation, to arrange the required investigation and inform the patient and their primary care team are likely to provide faster patient centred care and minimise the risk of delayed or missed diagnosis; this is encouraged by the Royal College of Radiologists [7]. Reporting systems that standardise reports (e.g. Normal, abnormal, likely normal) are also to be encouraged on the basis it allows clinicians to focus their time more effectively on truly managing 'missed' abnormalities.

Emergency departments and Radiology departments should work together to define when immediate (often verbal) reports from a radiologist are required e.g. investigation based – initial review of a Trauma 'pan scan', condition based – ensuring requestor has identified a cervical spine fracture. The suggested categories for fail safe alerts are shown in box 1[8]. The criteria for these alerts and their method(s) of communication and to whom should also be agreed.

Regular meetings between the Emergency Department and Radiology teams are to be encouraged. These meetings should focus on areas of mutual interest such as: performance against review of reports, performance against reporting targets (including time to report), clinical governance surrounding reporting and review of reports, patient pathways and access, and review requesting protocols. These meetings will permit analysis of trends in requesting to help highlight any unnecessary requests as well as highlighting any issues around delayed reports leading to negligence claims.

Box 1. Suggested Categories for Fail Safe Alerts [9]

Critical and Urgent

Where emergency action is required as soon as possible, or medical evaluation is required within 24 hours

Significant, important, unexpected and actionable

Cases where the reporting radiologist feels that the findings are important and a fail-safe alert should be added to the normal communication method to ensure they are acted upon.

Case Vignettes

Pathology

Case vignette 1. The lab phone through the result of an urgent U&E request which shows a potassium at 5.8mmol/L as well as creatinine kinase level of 2500 Units/litre. The ED admin assistant who took the telephone call from the lab informs the ED SHO who originally saw the patient before referring him to the medical team.

The ED team should ensure any necessary urgent treatments are commenced if the patient is still in the ED as well as letting the medical team know about the highly significant blood result even if the patient is no longer in the ED.

Case vignette 2. The ED consultant is reviewing the notes of a patient who had a headache and who he referred to the medical team 1 week ago. He notes that the admitting team have 'added-on' several additional blood tests to the original blood tests that were requested by the ED, these additional tests include anti-cardiolipin, beta-2 glycoprotein I (β2GPI).

If the ED team are notified about these results, they should forward the report to the admitting specialty team. The ED team may also wish to highlight to the admitting team that the result is outstanding and they may not automatically be informed of the result given the initial request was under the name of an ED consultant, they will actively have to look out for it.

Radiology

Case vignette 3. A chest X-ray report (ED requested) arrives in the ED 7 days after a patient attended the ED and who was subsequently admitted under the care of the medical team. The report notes consolidation consistent with infection but also highlights a suspicious nodule which was not commented on by the ED clinician. The medical team discharged the patient home after 3 days and also appear not to have spotted the suspicious nodule. The radiology report recommends a follow-up CT scan.

This finding is clearly both significant and urgent and whilst the patient was referred to an in-patient specialty team, it appears that they too have potentially missed a significant finding. In some hospitals the radiology team would ensure that this case is taken to their next MDT

they hold with the respiratory team and arrange any necessary further imaging and be clear that this is what they are arranging when reporting the scan. If this is not the case the ED team may have to decide, depending on local factors, which is the quickest, most pragmatic and safe way to ensure that not only does the patient get the further imaging that is required but that they are also kept informed. It may be that the most appropriate action is for the ED to contact the patient and organise the scan as well as keeping the GP informed. However, it should be recognised that the ED is only taking on the role of the requestor in-order to ensure the patient gets the appropriate follow-up test in a timely manner; it is unlikely that the ED will be the most appropriate clinical team to provide follow-up care; this will likely have to be a specialist in-patient team or MDT and appropriate referral should be made.

Another option may be to send this report to the discharging team but this might result in delay (and ideally would require further reassurance that the admitting team have acknowledged the report and acted upon it), depending on what local processes are in place. Given the significant and urgent nature of the finding and the need to arrange further hospital-based imaging then asking the GP to sort this out seems less than ideal.

Some centres have very successfully implemented a system whereby the reporting radiologist arranges any necessary follow-up films / scans and the case is automatically sent to the respiratory MDT meeting co-ordinated by a respiratory ANP. This effectively removes the need for the ED team to get involved.

Case vignette 4. A patient attends the ED with chest pain, and among the investigations performed is an X-ray (XR) of their chest. The patient is diagnosed with a chest infection and discharged on antibiotics. The formal radiology report states '…the appearances are consistent with infection; a repeat XR in 6 weeks after a course of treatment is advised to ensure resolution.'

This is neither highly significant nor urgent and despite the ED requesting the original investigation it is appropriate for this to be undertaken by primary care and the ED should request the GP to arrange this. If, in a similar scenario, the patient had been admitted to an in-patient specialty and the report returned to the ED then the radiology report should be forwarded to the admitting team for action on the basis that the ED is unlikely to know whether the 6 week follow-up film has been arranged or not by them prior to the patients discharge. Some centres have automated the process initiated by the reporting radiologist, to reduce redundant activity and risk of failure of process.

Case vignette 5. Following an attendance of a multiply-injured patient, a radiology report is received by the ordering clinician with an addendum. The patient has been admitted under the trauma services, but the trauma 'pan-scan' report addendum states '…a moderately enlarged sub-pleural lymph node is noted. In a low risk patient a follow up scan in 1 year is indicated.'

This is neither highly significant nor urgent and despite the ED requesting the original investigation it is appropriate for this to be undertaken by primary care and the ED should request the GP to arrange this and the patient should be informed.

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First published July 2017.

Acknowledgements

Review

Usually within three years or sooner if important information becomes available.

Conflicts of Interest

None.

Disclaimers

RCEM recognises that patients, their situations, Emergency Departments and staff all vary. This guideline cannot cover all possible scenarios. The ultimate responsibility for the interpretation and application of this guideline, the use of current information and a patient's overall care and wellbeing resides with the treating clinician.

Research Recommendations

None.

Audit standards

There should be a documentation and audit system in place within a system of clinical governance.

Key words for search

Investigation results, Emergency Department, Radiology

Appendix 1

Methodology

Where possible, appropriate evidence has been sought and appraised using standard appraisal methods. High quality evidence is not always available to inform recommendations. Best Practice Guidelines rely heavily on the consensus of senior emergency physicians and invited experts.

Evidence Levels

1. Evidence from at least one systematic review of multiple well designed randomised control trials
2. Evidence from at least one published properly designed randomised control trials of appropriate size and setting
3. Evidence from well designed trials without randomisation, single group pre/post, cohort, time series or matched case control studies
4. Evidence from well designed non experimental studies from more than one centre or research group
5. Opinions, respected authority, clinical evidence, descriptive studies or consensus reports.

Appendix 2 – Example Abnormal Radiology SOP

STANDARD OPERATING PROCEDURE FOR ENDORSEMENT OF RESULTS - V3 SaM/TB March 2020

- This SOP aim to standardise the clinical responses to radiology and pathology reports in the best interests of our patients to ensure that the process is safe, timely and robust.
- This SOP is guidance only and does not cover all eventualities- individual Consultant discretion is advocated.
- All results are to be endorsed within **5 days of report.**
- Endorsement activity is to be incorporated into direct clinical time (DCC) 7 days a week.
- An audit trail for appraisal purposes can be generated
- ***Endorsement will be the daily responsibility (including weekends when possible) of the duty ED Consultant during times designated by the Consultant body on both sites. Outside these times, endorsement will be incorporated as clinical pressures allow.***

VERSION 2 April 2015 LF, Review as required

Radiology Report/ Problem	Proposed Action
Missed fracture 1. No change to clinical pathway 2. Change to clinical pathway	 No action- Consultant discretion- EPR narrative to describe reasoning OR letter to GP, consideration copy to patient Phone call to patient by clinician, reception number given to patient to make appointment for NPC. If no contact possible, letter to patient with copy to GP. Notification to doctor with copy to mentor.
Repeat X-ray 6/52	Letter to GP with copy of ED discharge summary and radiology report whether the patient is discharged by ED or admitted by IP team.
Microbiology results 1. No change to clinical pathway (sensitive) 2. Change to clinical pathway (not sensitive)	*Microbiology endorses and reviews all positive blood cultures and therefore these can be auto endorsed.* For all other results cross check sensitivities with EPR dc summary: No action Phone call to patient to see GP/ return to ED & phone call to GP
MDT fax referral-" *this does not constitute a referral"*	Letter to GP, copy to relevant speciality

CXR abnormality – including lung nodule (not rpt cxr 6/52) 1. Current in-patient 2. Discharged patient	Send to in-patient lead consultant through EPR. Contact in-patient Consultant/ SpR to ensure FU. Letter to GP for consideration of appropriate FU through 2 week wait process. Admin to call to GP practice to ensure FU
Patient does not have registered GP, does not live within Oxfordshire/ Visitor/ Out of Area	Letter direct to patient
Report consistent with NAI	Review of patient notes mandatory, ensure "safeguarding" alert activated on EPR
No Fixed Abode	Look for mobile contact, pragmatic solution as presents. If the patient is Oxfordshire based, letter to Luther Street may well be reasonable.
Scaphoid X-rays taken, no FU	Horton – next day NPC JR – to be plugged into the JR scaphoid pathway. Letter to patient and note in Scaphoid book with date of initial XR.
Radiological 2WW findings and Incidentalomas 1. Current in-patient 2. ED discharged patient	1. Send to lead consultant of in-patient speciality. Call to inpatient team 2. Admin phone call to GP surgery to make aware, letter to GP with copy report and d/c summary Clinician to call patient with result and plan
Lung nodule on CT chest (new) incidental finding – this is for CT findings only, all CXR 'nodules' should be referred on 2WW pathway	Referral to lung nodule clinic directly from ED, letter to patient and GP

Bibliography

1. General Medical Council (UK). Accountability in multi-disciplinary and multi-agency mental health teams. https://www.gmc-uk.org/-/media/documents/accountability-in-multi-disciplinary-teams_pdf-76825556.pdf Accessed 16th September 2019

2. General Medical Council (UK). Good Medical Practice (2013) Manchester, General Medical Council, 2013 ISBN: 978-0-0901458-60-5 https://www.gmc-uk.org/-/media/documents/good-medical-practice---english-1215_pdf-51527435.pdf?la=en Accessed 16th September 2019

3. General Medical Council (UK). Delegation and referral. https://www.gmc-uk.org/-/media/documents/delegation-and-referral_pdf-58834134.pdf?la=en Accessed 16th September 2019

4. Standards for the communication of patient diagnostic test results on discharge from hospital. NHS England, Supported by Academy Medical Royal Colleges. March 2016. https://improvement.nhs.uk/resources/standards-communication-patient-diagnostic-test-results-discharge-hospital/ Accessed 16th September 2019

5. The European Definition of General Practice / Family Medicine WONCA Europe 2005 edition. https://www.rcgp.org.uk/policy/rcgp-policy-areas/european-definition-of-general-practice-and-family-medicine.aspx Accessed 16th September 2019

6. Royal College Emergency Medicine. Reducing redundant activity in the acute setting. London: The Royal College of Emergency Medicine, 2015. https://www.rcem.ac.uk/docs/College%20Guidelines/5r.%20Reducing%20redundant%20activity%20in%20the%20acute%20setting%20(December%202015).pdf Accessed 16th September 2019

7. The Royal College of Radiologists. *Standards for interpretation and reporting of imaging investigations, second edition.* London: The Royal College of Radiologists, 2018 https://www.rcr.ac.uk/system/files/publication/field_publication_files/bfcr181_standards_for_interpretation_reporting.pdf Accessed 16th September 2019

8. The Royal College of Radiologists. *Standards for the communication of radiological reports and fail-safe alert notification.* London: The Royal College of Radiologists, 2016 https://www.rcr.ac.uk/publication/standards-communication-radiological-reports-and-fail-safe-alert-notification Accessed 16th September 2019

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Registered Charity number 1122689

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