National Patient Safety Alert

Steroid Emergency Card to support early recognition and treatment of adrenal crisis in adults

Date of issue:	13 August 2020	Reference no:	NatPSA/2020/005/NHSPS

This alert is for action by: Acute trusts, private providers/independent treatment centres providing NHS care, ambulance trusts, mental health trusts, community trusts, general practice and community pharmacists.

This is a safety critical and complex National Patient Safety Alert. Implementation should be co-ordinated by an executive lead (or equivalent role in organisations without executive boards).

Explanation of identified safety issue:

All patients with primary adrenal insufficiency, such as those with Addison's disease, congenital adrenal hyperplasia, and hypothalamo-pituitary damage from tumours or surgery, are steroid dependent.

Some patients who take oral, inhaled or topical steroids for other medical conditions may develop secondary adrenal insufficiency and be steroid dependent; new guidance[1,2,3] clarifies which patients may become steroid dependent.

Omission of steroids for patients with adrenal insufficiency can lead to adrenal crisis; a medical emergency which if left untreated can be fatal. Patients with adrenal insufficiency require higher doses of steroids if they become acutely ill or are subject to major body stressors, such as from trauma or surgery,[1,2] to prevent an adrenal crisis.

A search of the National Reporting and Learning System (NRLS) for a recent two-year period identified four deaths, four patients admitted to critical care, and around 320 other incidents describing issues with steroid replacement therapy for patients with adrenal insufficiency or emergency treatment for adrenal crisis. While substantial resources[4-7] exist, specialist clinicians and patients have told us that some clinical staff are not aware of the risk of adrenal crisis or the correct clinical response should one occur.

An example reads:
'Patient admitted after a fall at home sustaining a fractured shaft of femur. Usually on steroid replacement after pituitary tumour resected 40 years ago. No steroids administered [for 2 days] … Shortly after vomited and aspirated, cardiac arrest and death.'

Recently published national guidance[1,2] promotes a new patient-held Steroid Emergency Card[3] to be issued by prescribers. This helps healthcare staff to identify appropriate patients and gives information on the emergency treatment to start if they are acutely ill, or experience trauma, surgery or other major stressors.

Actions required

Actions to be completed as soon as possible and no later than 13 May 2021

1. All organisations that initiate steroid prescriptions should review their processes/ policies and their digital systems/software and prompts to ensure that prescribers issue a Steroid Emergency Card[a,b] to all eligible patients, as outlined in new guidance[1].

2. Prescribers undertaking standard/scheduled reviews (eg in clinics or when authorising repeat prescriptions) should review their processes/policies and their digital systems/software and prompts to ensure all eligible patients prescribed steroids have been assessed, and where necessary issue a Steroid Emergency Card[a,b].

3. Providers that treat patients with acute physical illness or trauma, or who may require emergency or elective surgical or other invasive procedures, including day patients, should review their admission/assessment/examination/clerking documentation to ensure it includes prompts to check for risk of adrenal crisis and to establish if the patient has a Steroid Emergency Card.[1,2,3]

4. Community and hospital pharmacies should ensure they can source and supply Steroid Emergency Cards,[a,b] to replace those lost by patients or which become damaged.

For further detail, resources and supporting materials see: https://www.england.nhs.uk/2020/08/steroid-emergency-card-to-support-early-recognition-and-treatment-of-adrenal-crisis-in-adults

For any enquiries about this alert contact: patientsafety.enquiries@nhs.net

Failure to take the actions required under this National Patient Safety Alert may lead to CQC taking regulatory action

Additional information:

Notes

The Emergency Steroid Card can be ordered from the usual suppliers:

a) NHS Forms at NHS Business Services Authority (NHS BSA) http://www.nhsforms.co.uk/
b) Primary Care Support England (PCSE online) https://secure.pcse.england.nhs.uk/_forms/pcsssignin.aspx

Patient safety incident data

The NRLS was searched for incidents occurring on or after 01/07/2018, and uploaded by 28/07/2020, containing the key words Addison or adrenal, including misspellings. All incidents reported as death, severe harm or moderate harm and random samples of 100 low harm and 100 no harm incidents were reviewed to identify reports describing issues with steroid replacement therapy for patients with adrenal insufficiency or emergency treatment for adrenal crisis. Four deaths were identified, and four patients required admission to critical care. Applying review findings to the total numbers of incidents with these keywords indicated that around 320 incidents would have been found if all no harm and low harm incidents in this period had been reviewed. Identified themes were:

- failure to implement, or inadequate peri-operative plans for, increased steroid doses
- inadequate admission and discharge medicines reconciliation practices
- prescription omission for usual steroid doses, sick day rules
- omitted or delayed administration of prescribed doses, including ward stock unavailability and alternative administration routes when patients are nil by mouth
- delayed/absent recognition and treatment of adrenal crisis by emergency services and departments and inappropriate 999/111 response categorisation leading to treatment delays.

References and resources

1) Society for Endocrinology Clinical Committee and the Royal College of Physicians Patient Safety Committee (2020) *Guidance for the prevention and emergency management of patients with adrenal insufficiency* https://www.rcpjournals.org/content/clinmedicine/20/4/371
2) Association of Anaesthetists, The Royal College of Physicians, Society for Endocrinology (2020) *Guidelines for the management of glucocorticoids during the peri-operative period for patients with adrenal insufficiency* https://onlinelibrary.wiley.com/doi/full/10.1111/anae.14963
3) Society for Endocrinology *Adrenal Crisis Information* *https://www.endocrinology.org/adrenal-crisis*
4) National Institute for Health and Care Excellence (2016) *Addison's disease. NICE Clinical Knowledge Summary* https://cks.nice.org.uk/addisons-disease#!topicsummary
5) Specialist Pharmacy Service (2017) *Reducing harm from missed or omitted and delayed medicines in hospital. Tools to support local implementation* https://www.sps.nhs.uk/articles/npsa-rapid-response-report-reducing-harm-from-omitted-and-delayed-medicines-in-hospital-a-tool-to-support-local-implementation/
6) Information and resources tailored for emergency departments, ambulance personnel, endocrine specialists, general medical and surgical staff, ward staff, GP's, practice nurses and pharmacists https://www.endocrinology.org/; https://www.pituitary.org.uk/, https://www.addisonsdisease.org.uk/
7) Joint Royal Colleges Ambulance Liaison Committee, Association of Ambulance Chief Executives (2019) *JRCALC Clinical Guidelines 2019*. Bridgwater https://www.jrcalc.org.uk/guidelines/

Stakeholder engagement

- Royal College of General Practitioners, Royal College of Physicians and Society for Endocrinology
- Addison's Disease Self-Help Group/The Pituitary Foundation
- National Patient Safety Response Advisory Panel (for a list of members and organisations represented on the panel see https://improvement.nhs.uk/resources/patient-safety-alerts/)

Advice for Central Alerting System (CAS) officers and risk managers

This is a safety critical and complex National Patient Safety Alert. In response to CHT/2019/001 your organisation should have developed new processes to ensure appropriate oversight and co-ordination of all National Patient Safety Alerts. CAS officers should send this Alert to the executive lead nominated in their new process to coordinate implementation of safety critical and complex National Patient Safety Alerts.