Appendix

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

## Acknowledgement

The following are excerpts from the comprehensive guidance issued jointly from the Society for Endocrinology, Specialist Pharmacy Services (NHS England) and the British Association of Dermatologists[1] which can be accessed here. It is recommended you refer to this full document.

## Who should get the new Steroid Emergency Card?

ALL individuals with primary Adrenal Insufficiency (AI) and those with hypothalamo-pituitary damage who are steroid dependent should be provided with the new card.

Several individuals on exogenous steroids whether oral, topical or inhaled may also need the new Steroid Emergency Card. This is a complex area given the different types and wide ranging use of steroids in everyday clinical practice.

The tables below provide some detail on the routes, doses and durations of steroid therapy which place individuals at risk of AI and which should prompt the issue of a Steroid Emergency Card. Individuals at risk of AI should be given cover with hydrocortisone if admitted to hospital unwell [2] or when undergoing a surgical or invasive procedure[3].

There is increased risk of AI when steroids are used across multiple routes e.g. intra-articular, oral, inhaled and topical. If there is doubt or clinical concern then a Steroid Emergency Card should be issued.

Further work may be required within each clinical specialty to determine the best approach to implementation of the card. People on steroids as part of the management of their medical condition should also seek guidance if unwell from their usual care provider for that condition e.g. cancer treatment helpline, specialist nurse.

The following routes, doses and durations of steroid therapy should prompt the issue of a Steroid Emergency Card.

*A National Patient Safety Alert: Steroid Emergency Card[6] was issued in August 2020 by NHS Improvement and NHS England.

- **Patients who have received a long-term course of glucocorticoids (i.e. 4 weeks or longer) at a dose equivalent to or higher than prednisolone 5mg (see Table 1).**

**Table 1: Long-term oral glucocorticoids (ie 4 weeks or longer)**

| Medicine | Dose (*) |
|---|---|
| Beclometasone | 625 microgram per day or more |
| Betamethasone | 750 microgram per day or more |
| Budesonide | 1.5mg per day or more (***) |
| Deflazacort | 6mg per day or more (**) |
| Dexamethasone | 500 microgram per day or more (**) |
| Hydrocortisone | 15mg per day or more (**) |
| Methylprednisolone | 4mg per day or more |
| Prednisone | 5mg per day or more |
| Prednisolone | 5mg per day or more |

(*) dose equivalent from BNF except (**) where dose reflects that described in the guideline by Simpson et al (2020)[2] and (***) based on best estimate.

- **3 or more short courses of high-dose oral glucocorticoids within the last 12 months, and for 12 months after stopping (see Table 2).**

**Table 2: Short-term oral glucocorticoids (one week course or longer and has been on long-term course within the last year or has regular need for repeated courses)**

| Medicine | Dose(*) |
|---|---|
| Beclometasone | 5mg |
| Betamethasone | 6mg per day or more |
| Budesonide | 12mg (***) |
| Deflazacort | 48mg per day or more |
| Dexamethasone | 4mg per day or more (**) |
| Hydrocortisone | 120mg per day or more (**) |
| Methylprednisolone | 32mg per day or more |
| Prednisone | 40mg per day or more |
| Prednisolone | 40mg per day or more |

(*) dose equivalent from BNF except (**) where dose reflects that given associated Guidance Simpson et al (2020)[2] and (***) based on best estimate.

- **3 or more intra-articular/intramuscular glucocorticoid injections within the last 12 months, and for 12 months after stopping.**
- **Prolonged courses of dexamethasone (>10 days) for the treatment of severe COVID-19.**

- **Inhaled steroids >1000mcg/day beclometasone or >500mcg/day fluticasone (or equivalent dose of another glucocorticoid), and for 12 months after stopping (see Table 3).**

**Table 3: Inhaled glucocorticoid doses**

| Medicine | Dose (*) |
|---|---|
| Beclometasone (as non-proprietary, Clenil, Easihaler, or Soprobec) | More than 1000 microgram per day |
| Beclometasone (as QVAR, Kelhale or Fostair) | More than 500 microgram per day (check if using combination inhaler and Maintenance and Reliever Therapy ( MART) regimen) |
| Budesonide | More than 1000 microgram per day (check if using combination inhaler and MART regimen) |
| Ciclesonide | More than 480 microgram per day |
| Fluticasone propionate | More than 500 microgram per day |
| Fluticasone furoate (as Trelegy and Relvar) | More than 200 microgram per day |
| Mometasone | More than 800 microgram per day |

(*) dose equivalent from NICE Inhaled corticosteroid doses for NICE's asthma guideline 2018 and BTS SIGN Guideline for the Management of Asthma 2019

- **Patients using nasal glucocorticoids and an inhaled glucocorticoid at doses described in Table 4.**

**Table 4: dosage thresholds for inhaled glucocorticoid administered with a nasal glucocorticoid**

| Medicine | Dose |
|---|---|
| Beclometasone (as non-proprietary, Clenil, Easihaler, or Soprobec) | 800-1000 microgram per day |
| Beclometasone (as QVAR, Kelhale or Fostair) | 400-500 microgram per day (check if using combination inhaler and MART regimen) |
| Budesonide | 800-1000 microgram per day (check if using combination inhaler and MART regimen) |
| Ciclesonide | 320-480 microgram per day |
| Fluticasone propionate | 400-500 microgram per day |
| Fluticasone furoate | 100-200 microgram per day * |
| Mometasone | 400 microgram per day |

(*) dose equivalent from NICE Inhaled corticosteroid doses for NICE's asthma guideline 2018 and BTS SIGN Guideline for the Management of Asthma 2019

- **Patients taking inhaled corticosteroids at doses described in Table 4 and any other form of glucocorticoid treatment including potent/very potent topical glucocorticoids, intra-articular injection and regular nasal glucocorticoids.**

- **Topical high-dose (>/= 200g/ week) potent or very potent glucocorticoids used across a large area of skin for 4 weeks or more, or factors increasing absorption assessed on a case by case basis, and for 12 months after stopping (see Table 5).**

**Table 5: Topical glucocorticoids – potent or very potent**

| Topical steroid treatments | Potency |
|---|---|
| Beclometasone dipropionate 0.025% | Potent |
| Betametasone dipropionate 0.05% and higher (including Dalonev, Diprosone, Dovobet, Enstilar, in combination with clotrimazole (incl Lotriderm) and salicylic acid (incl Diprosalic) | Potent |
| Betamethasone valerate 0.1% and higher [incl Audovate, Betacap, Betesil, Betnovate, Bettamousse, and in combination with clioquinol, fusidic acid ( incl Fucibet, Xemacort) or neomycin] | Potent |
| Clobetasol propionate 0.05% and higher [incl. Clarelux, ClobaDerm, Dermovate, Etrivex and in combination with neomycin and nystatin] | Very potent |
| Diflucortolone valerate 0.1% [incl Nerisone] | Potent |
| Diflucortolone valerate 0.3% [incl Nerisone Forte] | Very potent |
| Fluocinonide 0.05% [incl Metosyn] | Potent |
| Fluocinolone acetonide 0.025% [(incl. Synalar) and in combination with clioquinol (incl Synalar C)] | Potent |
| Fluticasone propionate 0.05% [incl Cutivate] | Potent |
| Hydrocortisone butyrate 0.1% [incl Locoid] | Potent |
| Mometasone 0.1% [incl Elocon] | Potent |
| Triamcinolone acetonide 0.1% [incl Aureocort] | Potent |

- **Potent or very potent topical glucocorticoids applied to the rectal or genital areas and used at high dose (more than 30g per month) for more than 4 weeks, and for 12 months after stopping.**

**Table 6: Rectal treatments which contain significant amounts of glucocorticoid**

| Formulation | Dose |
|---|---|
| Budesonide enema | contains 2mg per dose |
| Budesonide rectal foam | contains 2mg per dose |
| Prednisolone rectal solution | contains 20mg per dose |
| Prednisolone suppositories | contains 5mg per dose |

- **Drugs affecting glucocorticoid metabolism**

It is important to consider those drugs affecting glucocorticoid metabolism, most commonly those affecting the activity of the metabolising enzyme CYP3A4. This would include protease inhibitors, antifungals and some antibiotics. More detail is provided in the full guidance[1]. Clinicians should have a high degree of clinical suspicion and if in doubt, the safest option is to provide patients with the Steroid Emergency Card.

## Who should issue the new Steroid Emergency Card?

- **Prescribers**

  Ensure eligible patients are assessed and issued with a Steroid Emergency Card.

- **Community pharmacists and hospital pharmacists**

  Ensure supplies of the card are available to replace those lost by patients or which become damaged.

## How to access printed cards and digital resources

Some boards have already progressed printing of cards with their board logo. A print file for the card for use by health boards can be accessed here.

In addition, some initial supplies will be distributed direct to GPs, community pharmacies, hospital pharmacies and to health boards for onward distribution eg to clinics, out of hours.

## Should patients still receive the 'blue' steroid treatment card?

YES. Patients should still receive the 'blue' steroid treatment card.

The British National Formulary supports the provision of Steroid Emergency Cards in addition to the 'blue' steroid treatment cards to those adults at risk of adrenal crisis[4]. Work is ongoing on a UK wide basis to review the 'blue' card.

## Is there further information on 'sick day rules' advice and cover for intercurrent illness, invasive procedures and surgery?

More information can be found in the full guidance[1] here and for more endocrinology resources and information on sick day rules please go to https://www.endocrinology.org/adrenal-crisis [5].

### References and resources


1. Specialist Pharmacy Services (2021) Exogenous steroids, adrenal insufficiency and adrenal crisis – who is at risk and how should they be managed safely. https://www.endocrinology.org/media/4091/spssfe_supporting_sec_-final_10032021-1.pdf
2. Simpson et al. 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
3. Woodcock et al. 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
4. BNF https://bnf.nice.org.uk/drug/hydrocortisone.html#patientAndCarerAdvice Accessed 27.6.2021.
5. Society for Endocrinology *Adrenal Crisis Information* https://www.endocrinology.org/adrenal-crisis
6. National Patient Safety Alert: Steroid Emergency Card issued by NHS Improvement and NHS England national patient safety team, Royal College of General Practitioners, Royal College of Physicians and Society for Endocrinology. https://www.england.nhs.uk/wp-content/uploads/2020/08/NPSA-Emergency-Steroid-Card-FINAL-2.3.pdf

Steroid Emergency card | Front

# Steroid Emergency Card (Adult)

Healthcare Improvement Scotland

NHS SCOTLAND

## IMPORTANT MEDICAL INFORMATION FOR HEALTHCARE STAFF

THIS PATIENT IS PHYSICALLY DEPENDENT ON DAILY STEROID THERAPY as a critical medicine. It must be given/taken as prescribed and never omitted or discontinued. Missed doses, illness or surgery can cause adrenal crisis requiring emergency treatment.

Patients not on daily steroid therapy or with a history of steroid usage may also require emergency treatment.

Name.....

Date of Birth..... CHI Number.....

Why steroid prescribed.....

Emergency Contact.....

Size 85mm x 55mm

Steroid Emergency card | Back

When calling 999 or 111, emphasise this is a likely adrenal insufficiency/Addison's/Addisonian crisis or emergency AND describe symptoms (vomiting, diarrhoea, dehydration, injury/shock).

## EMERGENCY TREATMENT OF ADRENAL CRISIS

1) **Immediate** 100mg Hydrocortisone i.v. or i.m. injection **followed by** 24 hr continuous i.v. infusion of 200mg Hydrocortisone in Glucose 5%

   **OR** 50mg Hydrocortisone i.v. or i.m. four times daily (100mg if severely obese)

2) Rapid rehydration with Sodium Chloride 0.9%

3) Liaise with endocrinology team

For further information scan the QR code or search https://www.endocrinology.org/adrenal-crisis

Size 85mm x 55mm