

COVID-19 dexamethasone and hyperglycaemia: diabetes de-escalation guidance

Taken from PCDS statement – in association with ABCD and Diabetes UK

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Version:	1.0
Lead Director/ Chief of Service:	Emma Bingham
Ratified at:	Diabetes MDT
Pharmaceutical dosing advice and formulary compliance checked by:	Elizabeth Jenkins 25/02/21
Date issued:	March 2021
Review date:	August 2021
Key words:	COVID, Dexamethasone, Diabetes
<p>This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt contact a senior colleague or expert. Caution is advised when using guidelines after the review date. This guideline is for use in Frimley Health NHS Foundation Trust hospitals only. Any use outside this location will not be supported by the Trust and will be at the risk of the individual using it.</p>	

What is Dexamethasone?

Dexamethasone is a corticosteroid with predominant glucocorticoid (and minimal mineralocorticoid) effect. It has a long half-life and is proven to be of benefit in patients requiring oxygen with COVID-19 (ref: RECOVERY)

Corticosteroids	Dose	Half-life
Dexamethasone	6 – 12 mg	36 - 72 hrs
Prednisolone	40 – 80 mg	12 - 36 hrs
Hydrocortisone	160 – 320 mg	6 - 12 hrs

Why does it matter?

Corticosteroid can cause hyperglycaemia, both in those with pre-existing diabetes and in those at risk of diabetes. COVID-19 also induces hyperglycaemia in many patients. COVID-19 infection coupled with corticosteroid treatments are causing an increase in hyperglycaemia and use of insulin. Some patients appear to have high insulin requirements during illness, which may continue beyond the cessation of their corticosteroid treatment.

What happens when Dexamethasone is stopped?

Usually when corticosteroids are stopped blood glucose levels return to their pre COVID state. For some this may take up to a couple of weeks, is unpredictable and is often rapid, running the risk of sudden severe hypoglycaemia. Therefore stopping additional (steroid-related) diabetes medications on cessation of corticosteroids is recommended in most cases, except for those with pre-existing suboptimal glycaemic control (HbA1c ≥ 68 mmol/mol).

For this reason, measurement of HbA1c on admission is recommended to define discharge strategy.

On discharge:

COVID-19 Diabetes De-escalation is designed to help teams define discharge care plan and follow-up. This is a guide and clinical judgement is needed.

On discharge, provide patients with:

- Dexamethasone for COVID-19 letter (Appendix 1) to ensure they are aware of osmotic symptoms and have direct access to clinical advice if required.
- Local hypoglycaemia guidance or 'having a hypo' guidance by Diabetes UK
- Diabetes team contact details

COVID-19 Diabetes De-escalation

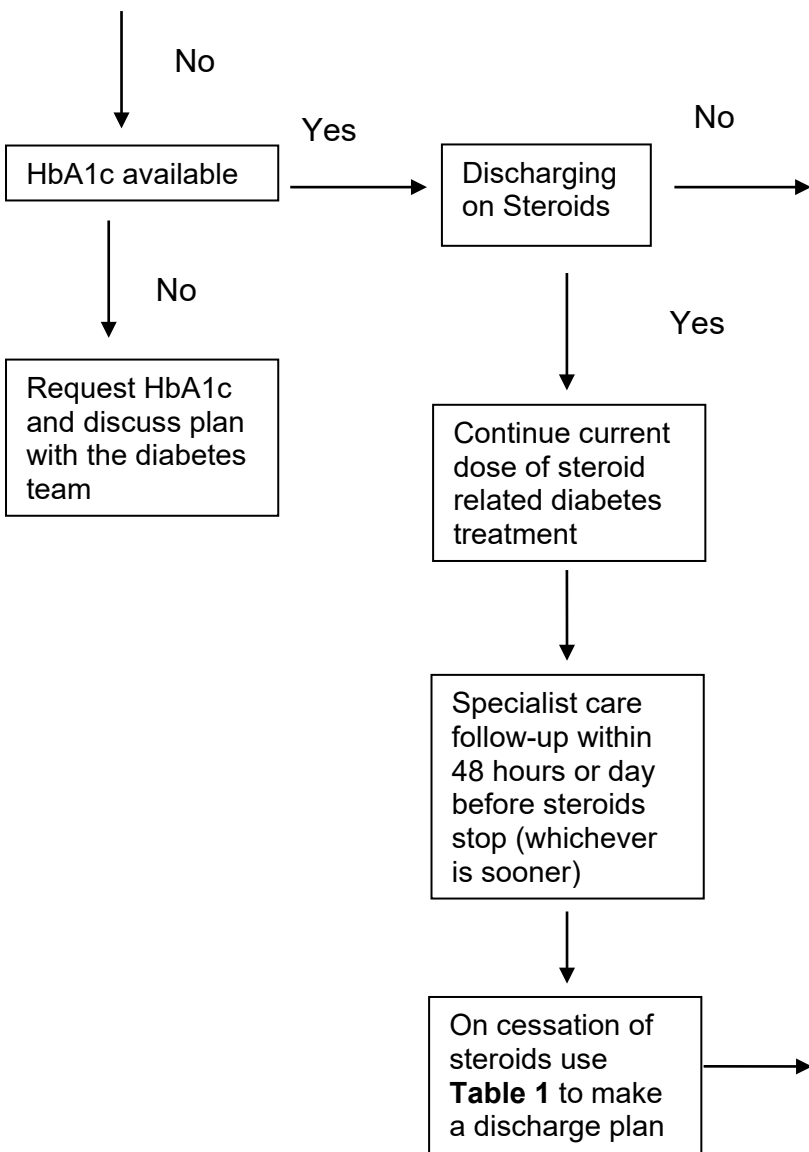
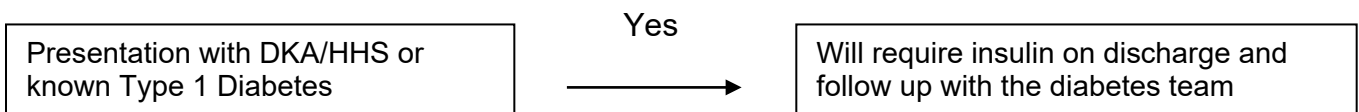


Table 1- Type 2 and newly diagnosed Diabetes discharge care plan				
HbA1c on admission	Glucose monitoring on discharge	Continue steroid related diabetes treatment	Immediate follow up	Long-term follow up
<48mmol/mol	No	No	<ul style="list-style-type: none"> Not required Give patient covid and dexamethasone leaflet 	GP follow-up <ul style="list-style-type: none"> Codes patient as 'drug induced hyperglycaemia' Repeat HbA1c at 3 and 6 months Manage according to local guidelines
49-68mmol/mol	Yes, twice daily	No – Return to pre admission diabetes medication (unless contraindicated)	<ul style="list-style-type: none"> Specialist support continued, for titration of medication post discharge in the first 1-2 weeks and then return to GP care Give patient covid and dexamethasone leaflet 	Diabetes Specialist Nurse follow-up <ul style="list-style-type: none"> Optimisation of diabetes control prior to returning to GP care Repeat HbA1c at 3 and 6 months
>69mmol/mol	Yes, four times per day	Yes - and/or consider additional alternative medication to optimise diabetes control	<ul style="list-style-type: none"> Diabetes Specialist Nurse support continued, for titration of medication post until control is optimised Give patient covid and dexamethasone leaflet 	Diabetes Specialist Nurse follow-up <ul style="list-style-type: none"> Optimisation of diabetes control prior to returning to GP care Repeat HbA1c at 3 and 6 months

Appendix 1 - Patient Information

Dexamethasone for Covid-19

During your stay, you have been given a corticosteroid called Dexamethasone for Covid-19. Evidence from recent trials shows it can save the lives of some patients. It is generally believed to be safe. The length of the treatment is short and even at high doses it is not associated with serious side effects.

A potential side effect is high blood glucose levels (hyperglycaemia). Blood glucose will return to normal levels after you finish taking it. In some cases (particularly if you have pre-existing risk factors for type 2 diabetes), the high glucose levels may persist longer. Previously undiagnosed diabetes may also be found by taking the steroids.

If you do not have pre-existing diabetes

Dexamethasone may not cause any long-term effects. However, after discharge from hospital the steroid-induced hyperglycaemia effects can last up to 36 hours and beyond. Once discharged, if you experience symptoms of high blood glucose levels including:

- increased urination (peeing)
- increased thirst
- weight loss (sudden onset)
- increased tiredness and lack of energy
- fungal infection (thrush)

Please contact your GP surgery, to discuss this further and arrange a blood test. It will generally be taken 3 months after your discharge from hospital, to check that glucose levels have returned to normal.

If you have pre-existing diabetes

Your usual diabetes medication may need to be increased – as the effects can last 36 hours or more after discharge once Dexamethasone has stopped.

The stress of Covid-19 on your body can also increase blood glucose levels. If your blood glucose levels remain higher than 15 mmol/l, please contact the Diabetes Specialist nurses on the number below.

If discharged on insulin or treatment has changed during your stay, this may lead to hypoglycaemia (low blood glucose levels) after Dexamethasone has stopped - usually after 36 hours and you recovering from Covid-19.

If blood glucose levels are lower than 4 mmol/l, adjustments to medication may be needed.

Treat the hypo with 15-20 grams of rapid acting carbohydrate, e.g. 5-6 Dextrose sweets or 200mls Lucozade or a glass of fruit juice. Repeat the blood glucose level in 15-20 minutes and as long as it is above 4 mmol/l have a small snack or your next meal if it is due.

If this happens more than once, please contact the Diabetes Specialist nurses on the number below.

Blood glucose monitoring at home

If you needed insulin in hospital and blood glucose levels on discharge remain elevated (above 15 mmol/l), you will need to be given a blood glucose meter.

If you weren't shown how to use it, please contact your GP or the Diabetes Specialist nurses on the number below.

If your blood glucose levels are higher than 18 mmol/l, contact the Diabetes Specialist nurses on the number below.

If your blood glucose levels are always 4-12 mmol/l fasting and before meals and you are not on any medication for the diabetes, you can stop monitoring.

Diabetes Specialist nurses helpline number:

Frimley Park Hospital

01276 604701

Wexham Park Hospital

07776225313