Adrenal suppression (AS)

CANADIAN PAEDIATRIC SURVEILLANCE PROGRAM
2305 St. Laurent Blvd.
Ottawa, ON K1G 4J8
Tel: 613-526-9397, ext. 239
Fax: 613-526-3332
cpsp@cps.ca
www.cps.ca/cpsp

REPORTING INFORMATION
(To be completed by the CPSP Senior Coordinator)

Report number:	
Month of reporting:	
Province:	
Today's date:	

Please complete the following sections for the case identified above.
Strict confidentiality of information will be assured.

CASE DEFINITION FOR ADRENAL SUPPRESSION

Report any new patient less than 18 years of age treated with any form of glucocorticoid (GC) therapy with evidence of adrenal suppression (AS) defined as:

- Adrenal crisis, an acute critical illness out of proportion in severity to the current illness and manifested by any of the following:
  - hypotension/shock
  - decreased level of consciousness/lethargy
  - unexplained hypoglycaemia or hyponatremia
  - seizure
  - death

  OR
- Symptomatic* adrenal insufficiency with supportive biochemical evidence

* Signs/symptoms can include anorexia, weakness, fatigue, lethargy, fever, gastrointestinal symptoms (nausea, vomiting, constipation, diarrhea, abdominal pain), morning headache, hypoglycemia, myalgia, arthralgia, psychiatric symptoms, and growth failure.

Exclusion criteria

Adrenal insufficiency unrelated to GC therapy, including adrenocorticotropic hormone (ACTH) deficiency due to hypothalamic or pituitary gland abnormalities, and primary adrenal disorders, such as:

- Congenital adrenal hyperplasia
- Autoimmune adrenalitis or polyglandular syndromes
- Adrenal hypoplasia congenita
- ACTH resistance syndromes
- Metabolic disorders (adrenoleukodystrophy, peroxisome biogenesis disorders, cholesterol metabolism, mitochondrial disorders)
- Infectious disorders (sepsis, tuberculosis, fungal infections, viral infections)
- Infiltrative/destructive causes (hemorrhage, amyloidosis, sarcoidosis, metastases)
- Drugs inhibiting steroid biosynthesis (e.g., ketoconazole, etomidate, suramin, aminoglutethimide, metyrapone)

Month first seen _____

SECTION 1 – DEMOGRAPHIC INFORMATION

1.1 Date of birth: _____ /_____ /_____ 1.2 Sex: Male ___ Female ___
DD MM YYYY

1.3 Province/Territory of residence: _____

1.4 Ethnicity (check all that apply):

First Nations ___ Innu ___ Inuit ___ Métis ___ Asian ___ Black ___ Caucasian ___

Latin American ___ Middle Eastern ___ Other (specify) _____

Unknown ___

SECTION 2 – UNDERLYING CONDITION

2.1 Condition requiring GC therapy: Asthma ___ Malignancy ___ Nephrotic syndrome ___
Inflammatory bowel disorder ___ Arthritis ___ Vasculitis ___ Other (specify) _____

2.2 Other medications (excluding GCs): _____

	Yes	No	Unknown
2.3 Did the underlying condition cause a decrease in physical activity?	___	___	___
2.4 Did the GC therapy cause a decrease in physical activity?	___	___	___
2.5 Did the patient experience a weight gain on GC therapy?	___	___	___

SECTION 3 – PAST GLUCOCORTICOID (GC) THERAPY

3.1 For **each type of** GC used in the patient's treatment over the past year, please provide the following information:

GC type (e.g., prednisone, fluticasone)	**Route** (e.g., oral, inhaler with nebulizer)	**Dose*** (mg/m^2,mg/kg or mcg)	**Time(s) given** (e.g., AM only; morning and evening, PM only)	**Duration** (e.g., x days, months, years)	**End date** DD / MM / YYYY

*** If multiple GC doses, please provide as much detail as possible.**

3.2 Last GC dose prior to presentation with AS: Time _____ Date _____ /_____ /_____
DD MM YYYY

3.3 Total duration of **past** GC therapy: ___ days ___ weeks ___ months ___ years (indicate # of days, wks, etc.)

SECTION 4 – PRESENTATION OF ADRENAL SUPPRESSION

4.1 Patient seen for AS in (check all that apply): office/clinic ___ emergency department ___
inpatient ward/unit ___ neonatal ICU ___ paediatric ICU ___

4.2 Clinical presentation of adrenal insufficiency: Adrenal crisis ___ Symptomatic adrenal insufficiency ___

4.3 Date of presentation: _____ /_____ /_____
DD MM YYYY

4.4 Height: ____ cm Weight ____ kg

4.5 Symptoms and signs at presentation

Symptom/sign	**Yes**	**No**	**Unknown**	**Improvement after treatment with GC?**	
				Yes	**No**
Hypotension/shock					
Decreased level of consciousness					
Unexplained hypoglycemia					
Unexplained hyponatremia					
Seizure					
Growth failure					

Non-specific symptoms, **check all that apply**:
weakness ___ fatigue ___ lethargy ___ anorexia ___ nausea ___ vomiting ___ abdominal pain ___
myalgia ___ arthralgia ___ other (specify) _____

4.6 General investigations at presentation

Investigation	**Result (units)**	**Normal value (units)**	**Not done**	**Unknown**
Glucose				
Sodium				
Potassium				
Other, **specify:**				

SECTION 5 – ADRENAL INVESTIGATIONS

5.1 Adrenal investigations at presentation

Investigation	**Date**	**Time** (e.g., 8:00 am)	**Results** (units)	**Normal value**	**Date, time and dose of last GC** (mg/m^2 or mg/kg) prior to venipuncture	**Not done**
Cortisol	___ /___ /_____ DD MM YYYY				___ /___ /_____ Time _____ DD MM YYYY Type (HC/Dex) _____ Dose _____	
ACTH	___ /___ /_____ DD MM YYYY				___ /___ /_____ Time _____ DD MM YYYY Type (HC/Dex) _____ Dose _____	

5.2 ACTH stimulation test

5.2.1 Dose of cosyntropin given _____

5.2.2 Peak cortisol response: value _____ units _____

5.2.3 Time of peak cortisol response _____ (e.g., 30 minutes)

5.3 Other cortisol measurement:

Specify type (e.g., 24-hour urinary): _____ value _____ units _____ normal value _____

SECTION 6 – MANAGEMENT OF ADRENAL SUPPRESSION

	Yes	**No**	**Unknown**
6.1 Treatment with GCs? (If no, skip to 6.2)	___	___	___
If yes specify:			
6.1.1 Was cortisol level drawn **prior** to treatment with GC at presentation?	___	___	___
6.1.2 Time between presentation and first dose _____			
6.1.3 Type _____ dose _____ (mg/kg or mg/m^2) frequency _____			
6.1.4 Was increased dosing for stress prescribed?	___	___	___
6.1.5 Duration of GC therapy _____ (days/weeks/months)			
6.2 Other treatment:	___	___	___
If yes, specify (e.g., IV fluid therapy) _____			
6.3 Referral to/consultation with paediatric endocrinologist?	___	___	___

SECTION 7 – OUTCOME

7.1 Hospital stay: Total number of days _____ Days in intensive care unit _____ Still in hospital ____

7.2 Medical complications, please specify: _____

7.3 Discharged home ___ Lost to follow-up ___ Deceased ___

If deceased, please specify cause of death _____

SECTION 8 – EVIDENCE OF NON-GC RELATED ADRENAL INSUFFICIENCY

8.1 Hyperpigmentation: Yes ___ No ___ Unknown ___

Other (specify) _____

___ **I agree to be contacted by the research team for further information.**

___ **I do not wish to be contacted by the research team for further information.**

(OVER)

SECTION 6 – REPORTING PHYSICIAN

First name_____ Surname_____

Address_____

City_____ Province_____ Postal code_____

Telephone number_____ Fax number_____

E-mail_____ Date completed_____

Thank you for completing this form.

(AS 2010-04)