

Southern Health

- | | |
|---|--|
| <input type="checkbox"/> Dandenong Hospital | <input type="checkbox"/> Monash Medical Centre - Clayton |
| <input type="checkbox"/> Kingston Centre | <input type="checkbox"/> Monash Medical Centre - Moorabbin |
| <input type="checkbox"/> Jessie McPherson | <input type="checkbox"/> Community Health Services |
| <input type="checkbox"/> Casey Hospital | <input type="checkbox"/> Cranbourne Integrated Care Centre |

Unit Record Number:

Surname

Given Name

D.O.B. Age Sex

Affix Patient Identification Label

CROUP CLINICAL PATH FOR CHILDREN

NB: Not for use in patients with pre-existing upper airway abnormalities

This Clinical Pathway is designed to assist clinicians by providing a framework of expected care, and should not replace clinical judgement.

DIAGNOSIS

- | | |
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| <p>The diagnosis of croup is clinical.
A diagnosis of croup is likely if a child presents with</p> <ul style="list-style-type: none"> • abrupt onset of barking cough, and • inspiratory stridor, and • hoarseness; <p>particularly if these symptoms are preceded by symptoms of a mild upper respiratory tract infection.</p> | <p>Consider diagnoses other than croup in a child who also has any one of</p> <ul style="list-style-type: none"> • expiratory wheeze or aphonia • toxic appearance or high-grade fever • drooling, difficulty swallowing, anxiety • prolonged, or recurrent stridor • poor response to treatment • age less than 3 months. |
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ASSESSMENT OF DEGREE OF AIRWAY OBSTRUCTION

Mild	Moderate	Severe	Life Threatening
<ul style="list-style-type: none"> • Normal mental state • No stridor or only when distressed • No or subtle accessory muscle use, tracheal tug or chest wall retraction • Normal heart rate • Able to talk and/or feed 	<ul style="list-style-type: none"> • Anxious, tired • Stridor at rest • Minor accessory muscle use, tracheal tug or chest wall retraction • Increased heart rate[#] • Some limitation of ability to talk and/or feed • Oxygen saturation 92-95%* 	<ul style="list-style-type: none"> • Agitated, exhausted • Marked accessory muscle use, tracheal tug or chest wall retraction • Markedly increased heart rate[#] • Too breathless to talk and/or feed • Increased respiratory rate[#] • Oxygen saturation <92%* • Extreme pallor • Low muscle tone 	<ul style="list-style-type: none"> • Confused, drowsy • Maximal accessory muscle use, tracheal tug or chest wall retraction or exhaustion • Poor respiratory effort • Silent chest • Cyanosis*

N.B. If patient has signs or symptoms across categories, always treat according to their most severe features.

*Decreased oxygen saturation is a late sign of severity. Oxygenation may be maintained even in severe croup.

Take special care with children who have relevant comorbidities or chronic illnesses, and consult appropriate specialist clinicians.

INITIAL TREATMENT

<ul style="list-style-type: none"> • Consider oral prednisolone 1 mg/kg • Allow the child to adopt the position that they find most comfortable. • Provide parent information • Discharge if stable or reassess after 1 hour if any concern <p>Assess mental state, stridor, accessory muscle use, tracheal tug, chest wall retraction and respiratory rate.</p>	<ul style="list-style-type: none"> • Oral prednisolone 1 mg/kg • Allow the child to adopt the position that they find most comfortable. • Provide parent information • Reassess within 1 hour 	<ul style="list-style-type: none"> • Consult senior paediatric or emergency clinician • Provide oxygen • Nebulise four 1ml vials (a total of 4mls) of 1:1000 adrenaline • Oral prednisolone 1 mg/kg OR IM dexamethasone 0.60 mg/kg • Allow the child to adopt the position that they find most comfortable. • Provide parent information • Reassess within 5 minutes <p>Assess mental state, stridor, accessory muscle use, tracheal tug, chest wall retraction and respiratory rate.</p>	<ul style="list-style-type: none"> • Consult Intensive Care Unit • Provide oxygen • Nebulise four 1ml vials (a total of 4mls) of 1:1000 adrenaline • Oral prednisolone 1 mg/kg OR IM dexamethasone 0.60 mg/kg • Allow the child to adopt the position that they find most comfortable. • Provide parent information • Reassess within 5 minutes
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RESPONSE TO TREATMENT

RESPONDING	NOT RESPONDING
<ul style="list-style-type: none"> • Discharge when child has no signs of moderate or severe croup and is clinically well • Provide patient information, including reasons to return • Fax or post letter to GP • Discharge 	<ul style="list-style-type: none"> • Reconsider diagnosis • Consult senior paediatric or emergency clinician • Treat as per Initial Treatment for degree of airway obstruction - DO NOT give an additional dose of prednisolone if one has already been given

RESPONSE TO TREATMENT

RESPONDING	NOT RESPONDING
<ul style="list-style-type: none"> • Observe for at least 3 hours after administration of adrenaline • Discharge when child has no signs of moderate or severe croup and is clinically well • Provide patient information, including reasons to return • Fax or post letter to GP • Discharge 	<ul style="list-style-type: none"> • Reconsider diagnosis • Arrange High Dependency Unit/Intensive Care Unit transfer • Provide oxygen • In consultation with senior clinician consider a repeat dose of adrenaline

Based on the Southern Health Evidence-Based Guideline for the Management of Croup in Children 2005

Normal parameters for Paediatric Vital Signs are given in the Guidelines

LEAVE THIS PATH IF:

- Child has life-threatening croup
- Child is transferred to the Intensive Care Unit or plan of care has deviated significantly from the care described in this pathway.

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DISCHARGE CRITERIA	Date	Time	Name/initial
• No signs of moderate or severe croup			
• At least 3 hours observation if given adrenaline			
• Parents/carer comfortable with child's condition, discharge instructions and time			

DISCHARGE CHECKLIST All sections must be completed prior to discharge

Medical		Date	Time	Name/initial
Education	• Explanation given about croup			
	• Symptoms and signs of airway obstruction explained			
	• Explanation given of when to return to GP or ED			
	• Medications explained			
	• Medical certificate completed <input type="checkbox"/> Yes <input type="checkbox"/> Not required			
Discharge	• Immunisations up-to-date? <input type="checkbox"/> No – ordered <input type="checkbox"/> No – letter to GP <input type="checkbox"/> Yes <input type="checkbox"/> Other (specify)			
	• QUIT information given? <input type="checkbox"/> No – no smokers <input type="checkbox"/> No – not wanted <input type="checkbox"/> Yes <input type="checkbox"/> Other (specify) Quitline: 131848			
	• GP identified for patient (online list www.healthforkids.net.au) <input type="checkbox"/> Yes <input type="checkbox"/> Not required			
	• Follow up arranged: <input type="checkbox"/> Paediatrician <input type="checkbox"/> GP <input type="checkbox"/> Outpatients <input type="checkbox"/> Other (specify)			
	• Letter to GP <input type="checkbox"/> Faxed <input type="checkbox"/> Posted			
	• Letter to Paediatrician Name: Address: <input type="checkbox"/> Not required <input type="checkbox"/> Faxed <input type="checkbox"/> Posted Fax No:			
Nursing		Date	Time	Name/initial
	• Croup information brochure given			
	• Discharge Risk Screen completed (ED Nursing Assessment Sheet)			
	• Discharge Checklist completed (MRE21)			

ADMISSION DETAILS Complete if patient requires admission to inpatient bed

<input type="checkbox"/> Patient requires admission	Doctor's Name	Signature
<input type="checkbox"/> Bed Bureau, AO or NUM contacted	<input type="checkbox"/> Ward Contacted	Person spoken to:
<input type="checkbox"/> No signs of severe or life-threatening croup		
Name	Signature	Date
		Time
		am/pm

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REVIEW <input type="checkbox"/> ED <input type="checkbox"/> Ward	
Medical	Assessment
	Assessment of severity of airway obstruction <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Life threatening → Leave path
	<input type="checkbox"/> All discharge criteria met (see page 2) → Complete discharge planning on page 2 and discharge
	<input type="checkbox"/> Responding but not ready for discharge → Write up new treatment plan. If admission required, complete details on page 2
	<input type="checkbox"/> Not responding → Discuss with senior clinician. Reconsider diagnosis and leave path, or write up new treatment plan below. If severe and not responding, arrange HDU/ICU transfer. If admission required, complete details on page 2
	Plan
<ul style="list-style-type: none"> Consider prednisolone if not previously ordered Consider oxygen if saturations < 95% Consider nebulised adrenaline if patient has signs of severe airway obstruction - four 1ml vials (a total of 4mls) of 1:1000 adrenaline 	
Treatment explained to patient/parent <input type="checkbox"/> Yes <input type="checkbox"/> No	
Interpreter used <input type="checkbox"/> Yes <input type="checkbox"/> No	
Next medical review am/pm <i>Within: 1 hr (severe), 2-4 hrs (moderate), 8 hrs (mild)</i>	
Name (print) Signature	
Date Time am/pm	

Nursing	<input type="checkbox"/> Plan of care explained
Nursing	<input type="checkbox"/> Medications given as ordered
Nursing	<input type="checkbox"/> Observations completed - Severe: at least every 15 mins, Mild or moderate: mental & respiratory state hourly, heart rate 4 hourly
Nursing	<input type="checkbox"/> Hydration status assessed and managed
Nursing	<input type="checkbox"/> Other (specify):
Nursing	Name (print) Signature
Nursing	Date Time am/pm

REVIEW <input type="checkbox"/> ED <input type="checkbox"/> Ward	
Medical	Assessment
	Assessment of severity of airway obstruction <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Life threatening → Leave path
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Name (print) Signature	
Date Time am/pm	

Nursing	<input type="checkbox"/> Plan of care explained
Nursing	<input type="checkbox"/> Medications given as ordered
Nursing	<input type="checkbox"/> Observations completed - Severe: at least every 15 mins, Mild or moderate: mental & respiratory state hourly, heart rate 4 hourly
Nursing	<input type="checkbox"/> Hydration status assessed and managed
Nursing	<input type="checkbox"/> Other (specify):
Nursing	Name (print) Signature
Nursing	Date Time am/pm

GROUP CLINICAL PATHWAY

MRJ83

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Dear Doctor

Your patient presented on: ____/____/____ and was discharged on: ____/____/____

Clinical setting

- | | | |
|--|---|--|
| <input type="checkbox"/> Monash Medical Centre | <input type="checkbox"/> Dandenong Hospital | <input type="checkbox"/> Casey Hospital |
| <input type="checkbox"/> Emergency Department | <input type="checkbox"/> Ward _____ | <input type="checkbox"/> Intensive Care Unit |

Consultant _____

Diagnosis

- Croup
- Other _____

Degree of airway obstruction

- Mild Moderate Severe Life threatening

Treatment

- Nil
- Nebulised adrenaline
- Oral prednisolone 1 mg/kg
- Intramuscular dexamethasone 0.60 mg/kg
- Oxygen
- Other _____

Follow up appointment

- None required
- With you in _____ days or if condition deteriorates or fails to improve significantly within 48 hours. Alternatively they can return to the Emergency Department.
- With Dr _____ in _____ weeks
- In Paediatric Outpatient Clinic in _____ weeks
- In Paediatric Rapid Review Clinic at Monash Medical Centre on _____

Immunisation

- Up-to-date for age
- Not up-to-date for age. Immunisations due _____

Other Comments

Name (print) _____

Signature _____

Date _____

- | | |
|---|--|
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Croup Clinical Path Feedback

We want this clinical path to be as useful and easy to use as possible so please give us your feedback!

Compared to your previous practice, did using this clinical path:

- | | |
|---|---|
| 1. | 2. |
| <input type="checkbox"/> Save lots of time | <input type="checkbox"/> Substantially improve patient care |
| <input type="checkbox"/> Save a little bit of time | <input type="checkbox"/> Slightly improve patient care |
| <input type="checkbox"/> Take about the same amount of time | <input type="checkbox"/> Have no impact on patient care |
| <input type="checkbox"/> Take a little more time | <input type="checkbox"/> Slightly worsen patient care |
| <input type="checkbox"/> Take a lot more time | <input type="checkbox"/> Substantially worsen patient care |

Why? _____

Why? _____

Compared to your previous practice, did using this clinical path:

- | | |
|---|---|
| 3. | 4. |
| <input type="checkbox"/> Make your work a lot more straightforward | <input type="checkbox"/> Make it much easier to find the information you need |
| <input type="checkbox"/> Make your work a little more straightforward | <input type="checkbox"/> Have no impact on ease of finding information you |
| <input type="checkbox"/> Have no effect on your work | <input type="checkbox"/> Make it slightly easier to find the information you need |
| <input type="checkbox"/> Make your work a little more difficult | <input type="checkbox"/> Make it slightly harder to find the information you need |
| <input type="checkbox"/> Make your work a lot more difficult | <input type="checkbox"/> Make it much harder to find the information you need |

Why? _____

Why? _____

5. What sections of this clinical path are not needed and could be removed?

Description of Section	Page Number

6. What could be added to this clinical path to make it easier or more effective to use?

Description	Page Number

Please use the back of this page for other comments about how we can improve this clinical path.

This form will be collected when the path is audited.

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Other comments about this Clinical Path

What did you like about it?

What didn't you like about it?

Other thoughts or suggestions?