Residents’ Perceptions on the Influence of Order Sets on their Learning

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PHYSICIAN ORDERS
FOR
ASTHMA IN THE
EMERGENCY DEPARTMENT

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Weight: __________ kg  Height: __________ cm  Allergies: __________________________

Initial on all lines applicable

Start “Asthma Critical Pathway in the Emergency Department” if not already done as per asthma medical directive

DOSE GUIDELINES FOR SALBUTAMOL

Salbutamol (Ventolin) MDI (Metered Dose Inhaler) 100 mcg/puff by spacer:
Less than 6 kg = 2 puffs  17 - 24 kg = 6 puffs  Greater than 34 kg = 10 puffs
6 - 16 kg = 4 puffs  25 - 34 kg = 8 puffs

Salbutamol (Ventolin®) Nebule by inhalation:
Between 3 - 6 kg = ½ of a 1.25 mg nebule (with 2 mL of Normal Saline)
Between 6 - 12 kg = 1.25 mg nebule
Between 12 - 20 kg = 2.5 mg nebule
Greater than 20 kg = 5 mg nebule

MEDICATIONS:

For PRAM (Pediatric Respiratory Assessment Measure) Score of 1 - 3 (mild)
_____ Salbutamol (Ventolin®) MDI _______ puffs q1h x 3 doses PRN (if not already given as per
medical directive) then continue q___________ and q___________ PRN

For PRAM Score of 4 - 7 (moderate)
_____ Salbutamol (Ventolin®) MDI _______ puffs q20 min x 3 doses (if not already given as per
medical directive) then continue q___________ and q___________ PRN

_____ Prednisolone (PediaSpray®) _______ mg (2 mg/kg/dose, MAX 50 mg/dose) PO x 1 dose (if
prednisolone or prednisone not already given as per medical directive)

OR  _____ Prednisone _______ mg (2 mg/kg/dose, MAX 50 mg/dose) PO x 1 dose (if prednisolone or
prednisone not already given as per medical directive)

For PRAM score of 8 - 12 (severe)

_____ Salbutamol (Ventolin®) MDI _______ puffs q15 min x 3 doses (if not already given as per
medical directive) then continue q___________ and q___________ PRN

_____ Prednisolone (PediaSpray®) _______ mg (2 mg/kg/dose, MAX 50 mg/dose) PO x 1 dose (if
prednisolone or prednisone not already given as per medical directive)

OR  _____ Prednisone _______ mg (2 mg/kg/dose, MAX 50 mg/dose) PO x 1 dose (if prednisolone or
prednisone not already given as per medical directive)
Positive Impacts of Order Sets

- Improve adherence to evidence based guidelines
- Improve treatment outcomes
- Reduce healthcare costs
- Reduce medical error
How Do Order Sets Influence Resident Learning?
Background Evidence

- 63% of internal medicine residents had increased comfort managing palliative care symptoms post order set introduction (Jarabek et al)
- No difference in residents’ order writing ability for CF and COPD post order set introduction (Yu et al)
- No difference in medical students’ ability to write pneumonia orders (Knight et al)
Why Is This Important?

- Could the ability to use an order set be mistaken for competency?
Objectives

• Identify residents’ attitudes towards order sets
• Reflect on residents’ experiences using order sets in the ED
• Explore residents’ views on the perceived influence order set on their learning throughout residency
Data Collection

- Semi structured interview guide
- Residents PGY 2-5
  > Emergency Medicine
  > Pediatrics
Methodology

Grounded theory  Content Analysis
Results

• 16 residents
  > 8 pediatric residents
  > 8 emergency medicine residents

• Mean pediatric emergency rotations: 3.1
The increasing use of order sets has changed how residents learn during clinical rotations.

**POSITIVE**
- Reduced Cognitive Burden
- Framework for Teaching and Learning

**NEGATIVE**
- Decreased Critical Thinking
- Unfamiliar with Evidence Behind Orders
- Lack of Feedback

**Attitudes towards order sets**

**Experiences with order sets**

**Order Sets Influence on Learning**
Positive Influences

• Reduced Cognitive Burden
• Framework for Teaching and Learning
Negative Influences

- Decreased Critical Thinking
- Unfamiliar with Evidence Behind Orders
- Lack of Feedback
Conclusions

• Order sets have changed how residents learn in the clinical environment
What’s Next?

- How can this influence be measured using other methodological approaches?
- How do we overcome these negative influences?
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