Improving Bronchiolitis Management and Prevention

Applying the 2014 AAP Guidelines

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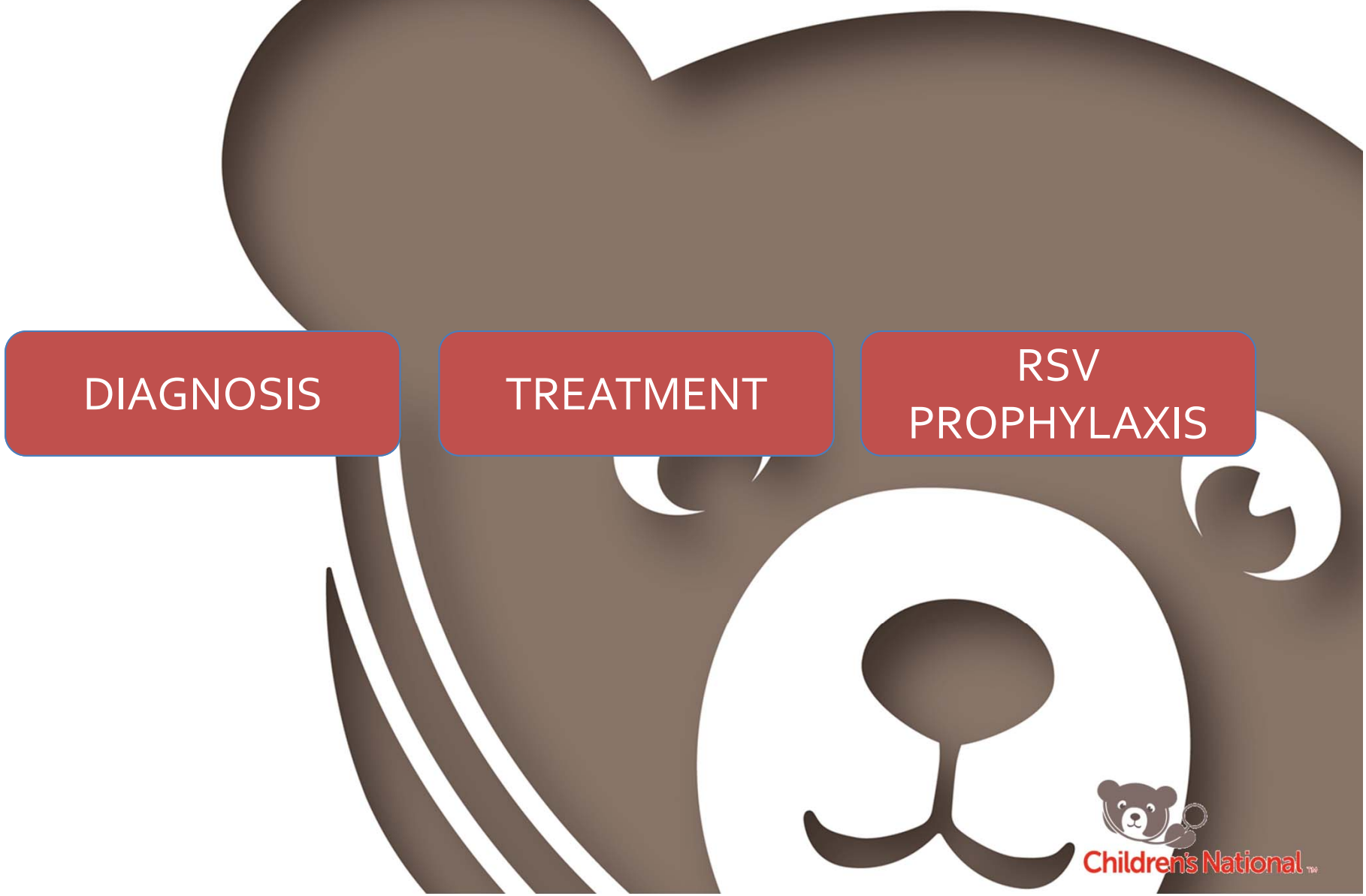
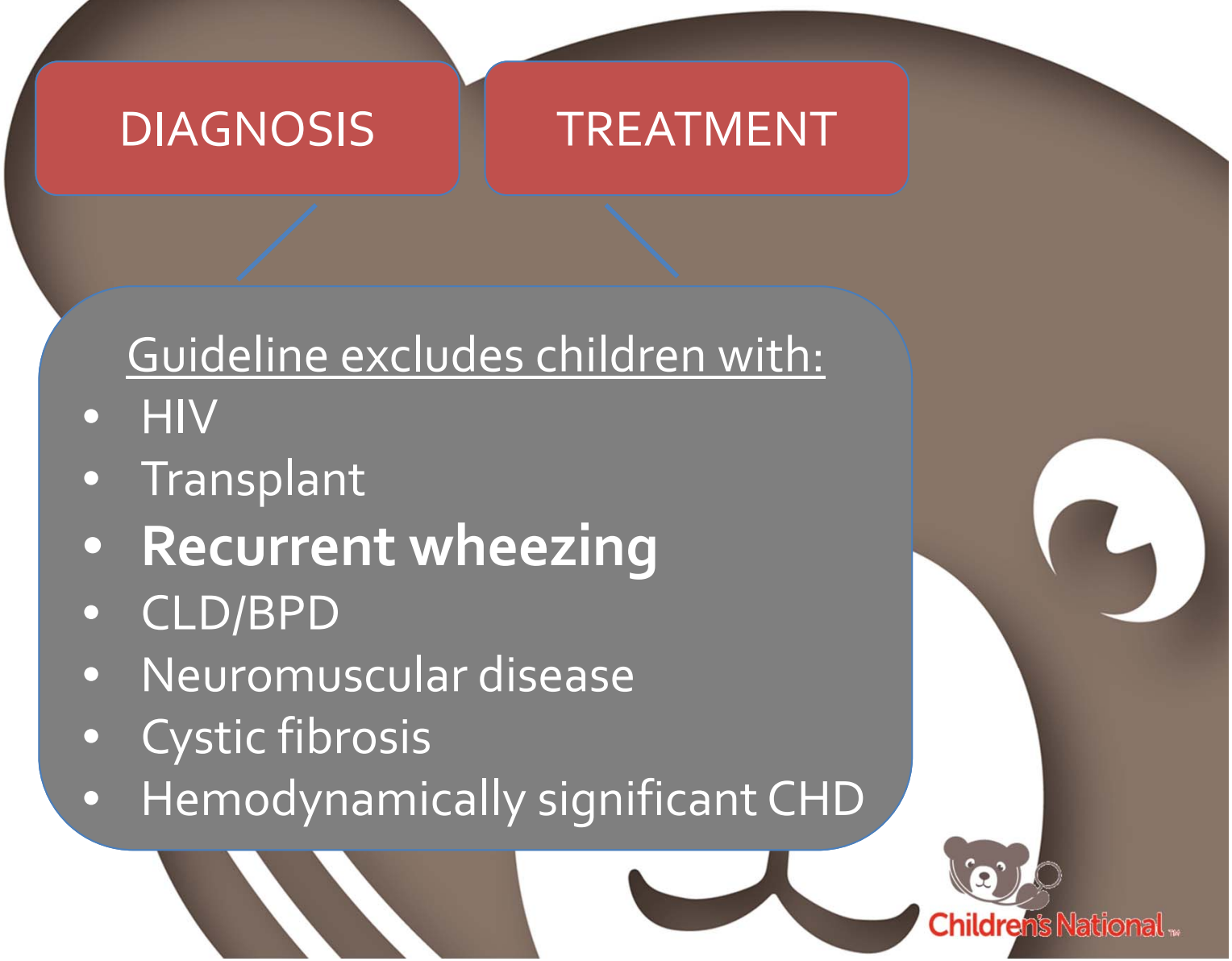
No Disclosures

REVIEW: 2014 AAP GUIDELINES



2014 AAP GUIDELINES (1 – 23 months)



DIAGNOSIS: 2014 AAP Guidelines

Diagnosis based on history and exam	Strong
Do NOT test for RSV or other viruses	
Consider risk factors for severe disease: • Age less than 12 weeks • History of prematurity • Underlying cardiopulmonary disease • Immunodeficiency	Moderate
Radiographic and laboratory studies not routinely indicated	

TREATMENT: 2014 AAP Guidelines	
NO -- Trial of bronchodilators (albuterol)	Strong
NO -- Racemic epinephrine	
NO -- Systemic steroids	
NO -- Antibacterials UNLESS bacterial infection is strongly suspected or present	
YES -- Hydration (NG > IVF for poor PO)	
NO -- Hypertonic nebulized saline in the ED	Moderate
NO -- Chest physiotherapy	
YES – Hypertonic nebulized saline if hospitalized	Weak
OPTIONAL -- Continuous pulse oximetry for SaO_2 > 90%	
OPTIONAL -- Supplemental oxygen for SaO_2 > 90%	

Changes from 2006 Bronchiolitis Guidelines

- Diagnosis
  - Focus on history and physical
  - NO testing for RSV or other viral infections
- Treatment
  - No trial of albuterol
  - Supportive care – fluids and oxygen

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RSV PROPHYLAXIS: 2014 AAP Guidelines

For infants ≤ 28 weeks for **age < 12 mo**	S

For infants **age < 12 months** IF
• Impaired clearance of secretions
  • Pulmonary or neuromuscular disease
• Cardiac disease
  • cyanotic congenital heart disease
  • congestive heart failure or cardiomyopathy on medications
  • moderate-severe pulmonary hypertension
• Chronic Lung Disease of Prematurity
  • < 32 weeks GA + > 21% FiO2 postnatal 28 days+
For infants **age < 24 months** IF
• CLD + requiring oxygen, diuretics, steroids and/or bronchodilators within 6 months of RSV season
• severe immunodeficiency
	Moderate

Maximum 5 monthly doses during RSV season	

Changes from 2012 RSV Prophylaxis Guidelines

- RSV Prophylaxis is limited to selected patients
  - No prophylaxis for:
    - Children born at 29+ weeks gestation unless they have other qualifying factors
    - Children ages 12-23 months with cardiac risk factors
  - More specific definition of chronic lung disease of prematurity
  - Recommendation to discontinue RSV prophylaxis series for children admitted with RSV bronchiolitis

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CASES

June 3, 2015

Case 1 : Monday morning at your practice….

- 9 wk old ex 31 wk
- 3 days of symptoms
- afebrile
- breastfeeding and taking formula with some difficulty due to congestion
- normal urine output
- no smoke exposure
- older sibling in pre-K
- appropriate weight gain

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Case 1 : Exam

- alert and tachypneic
- T 36.5 HR 160 RR 65 pulse ox 95%
- nasal congestion, rhinorrhea, moist mucous membranes
- diffuse inspiratory and expiratory rales and scattered wheezing, mild subcostal retractions, no nasal flaring
- normal cardiac exam and capillary refill

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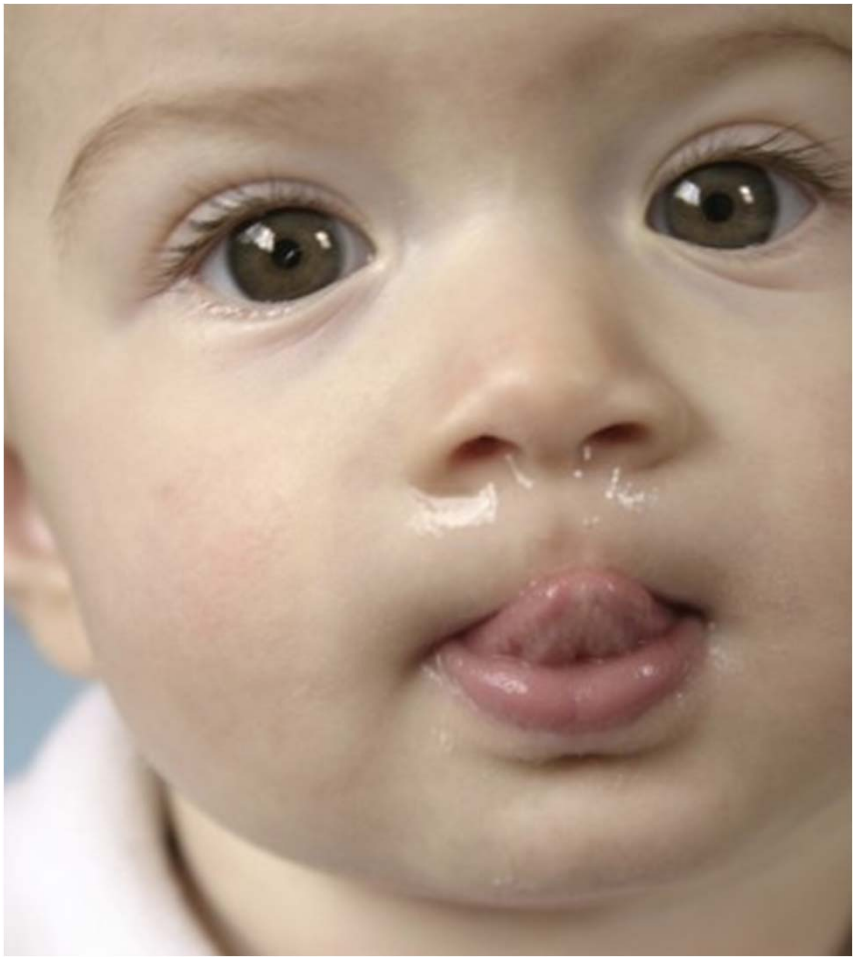
Case 1: Discuss with your neighbor…

- Should this baby be receiving prophylaxis against RSV infection?
- Does he have risk factors for more severe illness?
- What is your disposition for him?
- Would your disposition change if he was
  - full term?
  - 4 months old?

Case 2: Friday evening in the ED

- 9 mo FT baby girl
- 1 day of rhinorrhea
- Tm = 101
- Coughing today and vomiting



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Case 2: Exam

- alert, tachypneic
- RR 70 P150 T38.6 BP 80/65 Sat 92%
- normal cardiac exam with no hepatosplenomegaly
- mild retractions, mild belly breathing
- good aeration bilaterally with diffuse expiratory crunchy rales

Case 2: Discuss with your neighbor…

- Do you want to send an RSV swab or viral panel?
- Do you want to obtain any imaging? labs?
- What is your disposition for her?
  - Treatment? albuterol, racemic epi? oxygen?
  - Admission?
- Would you try albuterol if…
  - she had a history of wheezing three times before?
  - Personal or family history of atopy?
  - lung exam was diffuse end expiratory wheezing, no rales?

Albuterol

- "a small subset of children with bronchiolitis may have reversible airway obstruction secondary to smooth muscle contraction…"
- Given high rate of atopy in our population, do we see more albuterol responders? Should we use trial it?
- How many jittery babies are worth a baby with retractions?
- Also guideline technically does not apply to infants with "recurrent wheezing"

Case 2 continued: Hospital course…

- Child was hospitalized: fluids + intermittent hypertonic saline nebs
- Day 5 of illness:
  - intermittent pulse oximetry 91% on RA
  - RR 55
  - feeding well with good wet diapers
  - no nebs x 24 hours

Case 2: Discuss with your neighbor…

- Is this child ready to go home?
- When do you want to see her for follow-up?
- If the mother calls your office after discharge reporting infant is still coughing what would you recommend?

Food for thought

- Do our practices provide a cohesive and coherent model of care for children and families that traverse these different care settings?

- How can we collaborate to establish a stable approach for bronchiolitis, based on evidence, that is consistent and reliable in the eyes of our families as they entrust in us the care of their sick infant?

Future Directions

- Evaluation of adherence to guidelines and outcomes
- Telemedicine for follow-up visits
- Routine use of ultrasound for diagnosis
- Hypertonic saline for outpatient treatment
- Home on oxygen