Supplementary Online Content


eFigure 1. Imaging protocol. The top row shows the anterior midclavicular line, the middle row shows the lateral midaxillary line, and the bottom row shows the posterior paraspinal line. Shown are probes in transverse and parasagittal planes in anterior (top row) and posterior (bottom row) lung fields and in transverse and coronal planes (middle row) in lateral lung fields.

eFigure 2. Follow-up and outcomes.

eFigure 3. Operator error. A combination of spleen and air in the stomach may be mistaken for lung consolidation and air bronchogram (thick arrow). Attention should be paid to the left diaphragm or transition of the pleural line to the spleen to avoid this error. A-lines and horizontal artifacts due to reverberation of ultrasonography waves denote normal lung (thin vertical arrows in B).

eFigure 4. Potential operator error. Normal appearance of the thymus with faint hyperechoic stippling that may be mistaken for lung consolidation when imaging the anterior chest.

This supplementary material has been provided by the authors to give readers additional information about their work.

The file format is MPEG-4 with audio voiceover. The first segment of the video demonstrates the ultrasonography protocol of the chest in 6 anatomic areas, with sagittal and transverse views obtained of each anatomic area. In the second segment, ultrasonography videos of normal healthy lungs with the sonographic finding of A-lines and pneumonia with the finding of lung consolidation and sonographic air bronchograms are compared side by side in sagittal and transverse views. The third video segment invites the viewer to identify pneumonia on ultrasonography in a 4-year-old girl. The fourth and final video segment demonstrates the point-of-care diagnosis of pneumonia in an 8-year-old girl in the emergency department.
eFigure 1: Top Row - Anterior Midclavicular Line, Middle Row - Lateral Midaxillary Line, Bottom Row - Posterior Paraspinal Line. Probes in transverse (columns A & D) and parasagittal planes (columns B & C) in anterior and posterior lung fields, and in transverse and coronal plane (middle row) in lateral lung fields.
**eFigure 2: Follow-up and Outcomes**

- **N = 200 Patients Enrolled**
- **Lost to Follow-up N = 13**
  - Discharge Diagnoses
    - 2 - Bronchiolitis
    - 11 - Viral Syndrome
- **N = 187 Patients with Follow-up Data**
  - (2-3 Weeks After ED D/C)

**ED Treatment with Antibiotics**

- **Yes = 53**
  - PNA = 48 (Dx by CXR or US)
    - US >1 cm PNA = 36
    - US ≤1 cm PNA = 12
  - PMD Tx w/ Abx = 9
    - Clinical PNA* = 3
    - Unspecified Fever = 1
    - Acute Otitis Media = 5
- **No = 134**
- **Discharged = 154**
- **Admitted = 33**
  - Repeat ED Visits = 5
    - D/C = 5***/Admit = 0
    - All Persistent Fever
    - No Dx of PNA
  - Admitted PNA = 18
    - US >1 cm PNA = 15
    - US ≤1 cm PNA = 3
  - Admitted Other Dx = 15
    - Asthma Exacerbation or Other = 5
    - Influenza A = 5
    - Neonatal Fever/Sepsis = 3
    - RSV Bronchiolitis = 2

* No Repeat Imaging
** No Repeat Imaging except for 1 out of 5 (CXR normal)
No Hospital Admissions after ED Discharge
No Patient Deaths

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eFigure 3: Operator Error -- Combination of spleen and air in stomach may be mistaken for lung consolidation and air bronchogram (Thick Arrow). Attention should be paid to left diaphragm or transition of pleural line to spleen to avoid this error. A-Lines, horizontal artifacts due to reverberation of ultrasound waves denote normal lung (Thin Vertical Arrows, Panel B).
eFigure 4: Potential Operator Error - Normal appearance of Thymus with faint hyperechoic stippling that may be mistaken for lung consolidation when scanning anterior chest.