THE PLEDGE

“We, the signatory physicians and advance practice providers, are committed to providing care that is evidence based, nonduplicative, free from harm, and truly necessary. We therefore pledge not to order chest x-rays, respiratory viral tests, or bronchodilators for the routine care of our patients (aged 1 month to <24 months) presenting with history and physical exam findings consistent with acute viral bronchiolitis.”

Implementation was aided by a project slogan, REST is Best: reduce unnecessary interventions, educate the team about AAP guidelines and families on expectations for care, suction and support, and time is improvement. Have patience!
SUPPLEMENTAL TABLE 4 Study Definitions

Inclusion criteria
- Patients with any diagnosis of bronchiolitis between the ages of 1 mo and 24 mo
- Discharged between December 2013 and April 2016

Exclusion criteria
- Patients with floor-to-ICU transfer during index admission
- Patients admitted to ICU from ED index

Population definitions
- Includes visits meeting at least 1 of the following ICD-9 diagnosis codes:
  - 466.1 (acute bronchiolitis)
  - 466.11 (acute bronchiolitis because of RSV)
  - 466.19 (acute bronchiolitis because of other infectious organisms)
  - 480.1 (pneumonia because of RSV)
- Includes visits meeting at least 1 of the following ICD-10 diagnosis codes:
  - J21.0 (acute bronchiolitis because of RSV)
  - J21.1 (acute bronchiolitis because of human metapneumovirus)
  - J21.8 (acute bronchiolitis because of other specified organisms)
  - J21.9 (acute bronchiolitis, unspecified)
  - B97.4 (RSV as the cause of diseases classified elsewhere)
  - J12.1 (RSV pneumonia)

Key data elements
- Radiographs, including the following orders:
  - CXR 1 view
  - CXR 2 view
  - CXR 3 view
- RVT, including the following orders:
  - Respiratory viral DFA
  - RSV direct test (EIA)
  - RSV immunoassay
  - Respiratory viral DFA with backup PCR
  - Respiratory pathogen PCR panel
  - Respiratory viral DFA with PCR and culture
- Bronchodilators, including the following generic medications:
  - Albuterol
  - Albuterol sulfate
  - Ipratropium-albuterol
  - Levalbuterol
  - Terbutaline sulfate (excludes route of injection)
- Racepinephrine
- Antibiotics, including the following:
  - Amoxicillin
  - Amoxicillin-pot clavulanate
  - Ampicillin
  - Amoxicillin-sulbactam
  - Azithromycin
  - Cefdinir
  - Cefotaxime
  - Ceftriaxone
  - Cefuroxime
  - Cephalexin
  - Clindamycin
  - Sulfamethoxazole-trimethoprim

DFA, direct fluorescent antibody; EIA, enzyme-linked immunosorbent; ICD-9, International Classification of Diseases, Ninth Revision; ICD-10, International Classification of Diseases, 10th Revision; RSV, respiratory syncytial virus.
SUPPLEMENTAL TABLE 5 Provider Pledge Participation by Provider Type and Location of Practice

<table>
<thead>
<tr>
<th>Provider Type</th>
<th>No. Signatures</th>
<th>No. Providers in Category</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pediatric emergency medicine physicians</td>
<td>32</td>
<td>46</td>
<td>69</td>
</tr>
<tr>
<td>UC pediatricians</td>
<td>19</td>
<td>27</td>
<td>70</td>
</tr>
<tr>
<td>ED and/or UC advanced-practice providers</td>
<td>18</td>
<td>56</td>
<td>32</td>
</tr>
<tr>
<td>Hospitalist physicians</td>
<td>15</td>
<td>30</td>
<td>83</td>
</tr>
<tr>
<td>Hospitalist advanced-practice providers</td>
<td>4</td>
<td>8</td>
<td>50</td>
</tr>
<tr>
<td>Pediatric residents</td>
<td>54</td>
<td>94</td>
<td>57</td>
</tr>
</tbody>
</table>

Percent of providers by location and provider type who signed the provider pledge to reduce unnecessary use in bronchiolitis during the intervention season.

SUPPLEMENTAL FIGURE 4

During the current bronchiolitis season (December through February), you have cared for a total of 20 patients with bronchiolitis. You ordered bronchodilators for 25% of these patient visits. The graphs indicate how these percentages rank among your peers. Shown is a sample of the provider-level data that each clinician received by e-mail in January 2016 and March 2016 comparing their individual performances to their deidentified peers for bronchodilator, CXR, and RVT use.
SUPPLEMENTAL FIGURE 5
A portion of the Tableau project dashboard. The dashboard was refreshed daily and was accessible to members of the project team from the hospital Intranet. Filters (right) allowed individual team members to stratify the data by clinical unit, date range, payer, provider, and other important criteria. CPAP, continuous positive airway pressure.
SUPPLEMENTAL FIGURE 6

P charts show the percent of ED and/or UC patients who received each resource. A, Percentage of patients discharged from the ED and/or UC receiving a bronchodilator (P chart). B, Percentage of patients discharged from the ED and/or UC receiving an RVT (P chart). C, Percentage of patients discharged from the ED and/or UC receiving a CXR (P chart). Baseline control limits were initially extended into the intervention phase. When special cause variation indicated improvement, the limits were recalculated. Special cause rules were applied: (top) single point outside LCL at February 21, 2016; (middle) no special cause; and (bottom) shift of 8 consecutive points below the centerline beginning at December 13, 2015. CCG, clinical care guideline; LCL, lower control limit; UCL, upper control limit.