

1 **Supplementary Figure 1. Annualized rates of fracture related hospitalizations per 100,000**  
2 **children <18 years, United States, 1997-2013**

3  
4 **Legend:** Annualized rates of hospitalization for fractures among children <18 years, 1997-2013.  
5 The dashed- line represents the years of introduction for the 7-valent and 13-valent  
6 pneumococcal conjugate vaccine in 2000 and 2010, respectively. Periods were defined  
7 excluding these years of PCV introduction: Pre-PCV7 (1997-1999), Early-PCV7 (2001-2005),  
8 Late-PCV7 (2006-2009) and Post-PCV13 (2011-2013). The solid red line represents a 5-knot  
9 spline of the trend of fracture related hospitalizations during the study period, 1997-2013.  
10

11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27

28 **Supplementary Table 1. Annualized rates of parapneumonic empyema related**  
 29 **hospitalizations per 100,000 children <18 years by likely causative organism, PCV period**  
 30 **and age group, United States (1997-2013)**

| Age and Causative Organism | Hospitalization rate per 100,000 persons |                        |                       |                        | Relative Rate (95% CI) <sup>1</sup> |                          |
|----------------------------|--|------------------------|-----------------------|------------------------|-------------------------------------|--------------------------|
|                            | Pre-PCV7 (1997-1999)                     | Early-PCV7 (2001-2005) | Late-PCV7 (2006-2009) | Post-PCV13 (2011-2013) | Post-PCV13 to Late-PCV7             | Post-PCV13 to Pre-PCV7   |
| <b>&lt;2</b>               |  |                        |                       |                        |                                     |                          |
| Pneumococcal               | 1.7                                      | 1.2                    | 1.5                   | 0.5                    | <b>0.36 (0.30, 0.42)</b>            | <b>0.32 (0.28, 0.38)</b> |
| Streptococcal              | 0.6                                      | 0.5                    | 0.5                   | 0.5                    | 0.84 (0.53, 1.33)                   | 0.78 (0.49, 1.23)        |
| Staphylococcal             | 0.8                                      | 1.6                    | 1.7                   | 1.8                    | 1.01 (0.68, 1.50)                   | 2.25 (0.82, 6.14)        |
| Unspecified                | 1.8                                      | 2.4                    | 2.3                   | 1.0                    | <b>0.41 (0.35, 0.49)</b>            | <b>0.53 (0.42, 0.65)</b> |
| <b>2-4</b>                 |  |                        |                       |                        |                                     |                          |
| Pneumococcal               | 1.4                                      | 1.9                    | 2.3                   | 0.8                    | <b>0.36 (0.31, 0.41)</b>            | <b>0.58 (0.46, 0.75)</b> |
| Streptococcal              | 0.3                                      | 0.7                    | 0.7                   | 0.4                    | <b>0.55 (0.41, 0.73)</b>            | 1.10 (0.56, 2.16)        |
| Staphylococcal             | 0.1                                      | 0.4                    | 0.6                   | 0.3                    | <b>0.54 (0.40, 0.73)</b>            | 2.51 (0.31, 20.29)       |
| Unspecified                | 2.0                                      | 4.9                    | 4.6                   | 2.4                    | <b>0.52 (0.44, 0.62)</b>            | 1.22 (0.83, 1.80)        |
| <b>5-17</b>                |  |                        |                       |                        |                                     |                          |
| Pneumococcal               | 0.4                                      | 0.3                    | 0.4                   | 0.2                    | <b>0.56 (0.46, 0.69)</b>            | <b>0.52 (0.44, 0.63)</b> |
| Streptococcal              | 0.1                                      | 0.2                    | 0.2                   | 0.2                    | 0.82 (0.59, 1.15)                   | 1.37 (0.73, 2.59)        |
| Staphylococcal             | 0.1                                      | 0.1                    | 0.2                   | 0.1                    | <b>0.67 (0.50, 0.89)</b>            | 1.83 (0.70, 4.82)        |
| Unspecified                | 0.7                                      | 1.1                    | 1.4                   | 0.8                    | <b>0.58 (0.49, 0.68)</b>            | 1.12 (0.83, 1.52)        |

31 <sup>1</sup>Statistical significance was assessed at the 5% level using the 95% confidence interval (interval  
 32 including 1.0 was considered non-significant at the 5% level). Statistically significant findings  
 33 are indicated with bold text.

34  
 35  
 36  
 37  
 38

39

40