Respiratory syncytial virus (RSV) is the most common pathogen in lower respiratory tract infections in infants.1 Approximately 2 million children younger than 5 years require medical attention and 57,000 are hospitalized owing to RSV in the United States annually.2 The single most important RSV risk factor is age,3 with more than 80% of hospitalizations occurring in infants younger than 6 months.1,4 Other risk factors such as chronic lung disease have been identified, but given their low prevalence, their contribution to the overall disease burden is small.3,5

Currently, palivizumab (Synagis) is available for immunoprophylaxis of RSV hospitalizations. To address high prophylaxis cost, the American Academy of Pediatrics (AAP) Committee on Infectious Diseases limits palivizumab prophylaxis to specific high-risk groups and age ranges during the RSV season.

In optimizing these prophylaxis strategies, there is a continuing debate about the relative importance of risk factors such as heart disease6 and various stages of prematurity.7-9 The risk of moderate-preterm infants has especially received attention because they constitute about 9% of all births in the United States and are thus the largest target group for prophylaxis.10

Prior to its 2009 update, the AAP recommended that prophylaxis be offered to moderate-preterm infants without co-morbidities who were younger than 6 months at the beginning of the RSV season and had at least 2 of 5 qualifying risk factors.11 Infants who met the criteria were allowed to con-
tinue prophylaxis throughout the RSV season.12 In 2009, the
guidelines were changed, limiting the total number of palivi-
zumab doses to 3 or until age 90 days, whichever comes first.12
The 2009 guidelines continue to require at least 1 additional
risk factor to meet criteria for immunoprophylaxis, but they
reduce the qualifying risk factors to presence of siblings
younger than 5 years or day care attendance. This was done
in an effort to simplify recommendations and to give greatest
weight to age.13 The change in the AAP guidelines effectively
restricts prophylaxis in moderate-preterm infants from up to
age 12 months (assuming a 6-month RSV season) to age 3
months.

Arguments against guideline modifications include lack of
demonstrated efficacy of 3 doses and the fact that RSV sea-
sons typically last a median of 21 weeks,14 leaving this high-
risk group uncovered throughout most of a season.15 In reply,
the Committee on Infectious Diseases stated that the modifi-
cations were implemented to balance the cost-benefit ratio and
that the removed risk factors lacked consistent evidence, while
chronological age was well supported.16 Neither the commit-
tee nor our literature search was able to identify primary evi-
dence establishing the age by when moderate-preterm in-
fants have developed lung function and immunologic response
similar to their term counterparts.

The primary objective of this study was to determine the
chronological age at which moderate-preterm infants’ risk of
RSV hospitalization is approximately equal to the risk ob-
served in term infants at age 1 month, suggesting a loss of high-
risk status and thereby establishing an appropriate epidemi-
ologically supported age threshold for palivizumab prophylaxis.
We chose the RSV hospitalization incidence at age 1 month as
a reference because risk decreases rapidly with increasing age,
leaving the youngest term infants as the group with the high-
est RSV risk that currently is not included in prophylaxis rec-
ommendations.

Methods

Study Design and Population
We conducted a retrospective cohort study comparing the age-
specific RSV hospitalization risk of moderate-preterm infants
aged 1 through 12 months with those of term infants at age 1
month. The study cohort was established from the Medicaid
Analytic eXtract (MAX) files for Medicaid fee-for-service ben-
eficiaries for Florida and Texas from January 1, 1999, to De-
cember 31, 2004. The MAX database includes demographic
data, monthly information on Medicaid eligibility, all claims
for inpatient and outpatient services with detail on diagno-
ses and procedures, and all claims for pharmacy services. De-
pending on the state, Medicaid covers up to half of all chil-
dren in the United States, with 1.1 million children in Florida
and 2.5 million children in Texas.17

We matched MAX data with birth and death certificate data
using social security numbers and dates of birth to obtain ges-
tational age. When based on all vital statistics records, match-
ing proportions in Florida and Texas for the group of infants
with a gestational age of 32 to 34 weeks were 55% and 60%,
respectively. Infants with a gestational age greater than 37
weeks had match rates of 52% in Florida and 58% in Texas.

This study was approved by the institutional review and
privacy boards of the University of Florida, the Centers for
Medicare and Medicaid Services, and the Florida and Texas De-
partments of Health with a waiver of informed consent and
Health Insurance Portability and Accountability Act of 1996 au-
thorization.

Inclusion and Exclusion Criteria
The study population consisted of all infants born between
January 1, 1999, and February 29, 2004. All infants were re-
quired to start Medicaid eligibility during their birth month and
to retain continuous eligibility until at least 1 of the 4 core RSV
season months, November through February. Because RSV sea-
son length differs, we limited the season to the 4 months that
have been consistently in the core season in both states and
throughout all study years according to Centers for Disease Con-
tral and Prevention surveillance data and our own analysis of
RSV hospitalization rates.18,19

We included only 2 strata for comparison: moderate-
preterm infants with gestational ages from 32 to 34 weeks, in
accordance with the AAP guidelines, and term infants (37-41
weeks’ gestational age).20 Gestational age in the birth certifi-
cates was calculated by subtracting the date of birth from the
date of the last normal menses on birth certificates.

Because the current guidelines require presence of 1 ad-
tional risk factor, we restricted our study cohort to preterm
and term infants with siblings. We established the presence of
a sibling younger than 5 years using the date of the last live birth
or plurality variable on the birth certificate. We further ex-
cluded infants with other AAP indications for palivizumab pro-
phylaxis, including chronic lung disease, congenital heart dis-
ease, cystic fibrosis, and immunodeficiency. As described
previously, these indications were operationalized in conjunc-
tion with the AAP definition using respective diagnoses from
inpatient and outpatient visits and pharmacy dispensing data.3

Infants entered the cohort at the beginning of the RSV sea-
son and after they had been in ambulatory care for a mini-
mum of 30 days. The latter criterion was used to ensure com-
plete information on palivizumab immunoprophylaxis because
inpatient drug administration is not ascertainable from capi-
tated hospital charges. We followed infants until the end of the
study-defined RSV season, their first birthday, non-RSV hos-
pitalization, loss of Medicaid eligibility, or death, whichever
occurred first. If hospitalized for any reason, infants were al-
lowed to reenter the cohort after 30 days in ambulatory care.
Infants could also reenter the cohort for a second season as long
as the season started before their first birthday. For computa-
tional efficiency, follow-up was segmented into 2-week blocks.

RSV Incidence
For each 2-week period of patient follow-up, we ascertained
RSV hospitalizations using inpatient claims with primary or sec-
ondary diagnoses for RSV-related pneumonia (International
Classification of Diseases, Ninth Revision, Clinical Modifica-
tion code 480.1), RSV bronchiolitis (code 466.11), or other RSV
infections (code 079.6).

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Research  Original Investigation

Age Thresholds for RSV Immunoprophylaxis

Table 1. Characteristics of Study Cohort

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Florida (n = 155,511)</th>
<th>Texas (n = 368,666)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term</td>
<td>Preterm</td>
<td>Term</td>
</tr>
<tr>
<td>Female</td>
<td>42,579 (49.5)</td>
<td>114,3 (49.4)</td>
</tr>
<tr>
<td>RSV hospitalizations</td>
<td>1,246 (1.5)</td>
<td>71 (3.1)</td>
</tr>
<tr>
<td>Palivizumab use</td>
<td>102 (0.1)</td>
<td>461 (19.9)</td>
</tr>
<tr>
<td>Multiple birth</td>
<td>625 (0.7)</td>
<td>303 (13.1)</td>
</tr>
<tr>
<td>White</td>
<td>31,467 (36.6)</td>
<td>748 (32.3)</td>
</tr>
<tr>
<td>Age at index, mean (SD), mo</td>
<td>3.2 (2.7)</td>
<td>3.5 (2.7)</td>
</tr>
</tbody>
</table>

Covariates
In concordance with palivizumab dosing guidelines, we considered infants to be receiving prophylaxis for 30 days following a palivizumab-related procedure date or prescription fill date (Current Procedural Terminology or Healthcare Common Procedure Coding System codes 90378, C9003, X7439, 1095X, and 1086X or National Drug Codes 6057441101, 60574411201, 60574411301, and 60574411401). If palivizumab exposure was determined from a prescription drug claim, we required presence of an office visit claim within 10 days to ensure administration.3 We assigned palivizumab exposure to a particular 2-week period of follow-up if at least 7 days were covered by a particular claim. We used the first day of each 2-week period to assign season month and infant age. Owing to sample size constraints, it was necessary to collapse the MAX data race indicator into a nonwhite vs white binary variable.

Statistical Analysis
Separately for Florida and Texas, we developed age trend proportional odds models within a discrete time survival analysis framework22 to characterize the effect of age on RSV hospitalization risk in term and moderate-preterm infants. In addition to term status and time-dependent covariates for age, calendar month, and palivizumab exposure status, we included several baseline covariates to adjust for confounding: sex, race, multiple birth, and RSV season. We equated the moderate-preterm age curve function for RSV hospitalization risk from our fitted model with the corresponding age curve function in term infants evaluated at age 1 month and solved for the preterm age with the same level of risk.

To estimate 95% CIs for our preterm age estimates, we generated 1000 bootstrap samples22 of the original data set and refitted the original age trend regression model to obtain a sample of 1000 age estimates. We then used the 2.5 and 97.5 percentiles from this sample to define an empirical 95% bootstrap CI.22 Further details on the analytical methods are provided in the eAppendix and eReferences in the Supplement.

Finally, to estimate the effect of misclassification of RSV hospitalization on our age estimates, we conducted several sensitivity analyses nesting our age trend risk models within a misclassified outcomes modeling framework.29 Specifically, we assumed that some RSV hospitalizations were misclassified as lower respiratory tract infections because testing for RSV was not done or because respective hospital charges did not assign an RSV-related diagnosis code. We defined several scenarios in which this presumed false-negative rate for RSV hospitalization was set to a prespecified level, either nondifferentially (ie, across the entire study cohort) or differentially within strata of interest. For differential misclassification, we included scenarios in which false-negative rates for RSV hospitalization were set lower in moderate-preterm infants because they were more likely to be tested for RSV than term infants.24,25 In other scenarios, false-negative rates were set lower for younger infants (aged ≤6 months), again owing to more frequent testing for RSV infection compared with older infants (aged >6 months).24,25

All analyses were conducted with SAS version 9.2 statistical software (SAS Institute, Inc) and graphs were created with R version 2.15.0 statistical software (R Foundation).

Results
The Florida and Texas data sets included 566,694 infants, of whom 247,566 had siblings (40.8% in Florida and 47.5% in Texas). These cohorts with siblings included 2.7% and 2.4% moderate-preterm infants, respectively. Moderate-preterm infants had higher rates of palivizumab use, had more RSV hospitalizations, and were more often born as multiplets (Table 1). Palivizumab use was similar between Florida and Texas, with 19.9% and 18.2% of moderate-preterm infants receiving prophylaxis, respectively. The proportion of infants with RSV hospitalizations was slightly larger for Texas (3.1% in moderate-preterm infants and 1.5% in term infants in Florida vs 4.5% and 2.5%, respectively, in Texas), which is consistent with published literature.18,26,27

With a total of 1322 RSV hospitalizations in Florida, the seasonal incidence rates were 6.2 and 13.5 per 100 patient-years for term and moderate-preterm infants with siblings, respectively. Texas had 4000 RSV hospitalizations and incidence rates of 9.4 and 17.7 per 100 patient-years for term and moderate-preterm infants, respectively. Preterm status doubled the risk for RSV hospitalization in both Florida (odds ratio = 2.41; 95% CI, 1.85-3.12) and Texas (odds ratio = 1.94; 95% CI, 1.64-2.30) (Table 2). Consistent with published literature, boys had a higher RSV hospitalization risk in both states.3,28-30 Palivizumab use reduced the odds of RSV hospitalization in Texas to a magnitude similar to clinical trials, but the 95% CIs in Florida were wide owing to a smaller sample size. As expected,
Table 2. Adjusted Odds Ratios for Respiratory Syncytial Virus Hospitalization in Florida and Texas

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Florida</th>
<th>Texas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR (95% CI) P Value</td>
<td>OR (95% CI) P Value</td>
</tr>
<tr>
<td>Preterm vs term</td>
<td>2.41 (1.85-3.12) &lt;.001</td>
<td>1.94 (1.64-2.30) &lt;.001</td>
</tr>
<tr>
<td>Age, mo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 (Reference)</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>3</td>
<td>0.53 (0.41-0.69) &lt;.001</td>
<td>0.63 (0.53-0.74) &lt;.001</td>
</tr>
<tr>
<td>6</td>
<td>0.27 (0.21-0.34) &lt;.001</td>
<td>0.43 (0.37-0.51) &lt;.001</td>
</tr>
<tr>
<td>9</td>
<td>0.16 (0.12-0.21) &lt;.001</td>
<td>0.26 (0.22-0.32) &lt;.001</td>
</tr>
<tr>
<td>12</td>
<td>0.18 (0.12-0.28) &lt;.001</td>
<td>0.27 (0.21-0.35) &lt;.001</td>
</tr>
<tr>
<td>Male vs female</td>
<td>1.24 (1.12-1.39) &lt;.001</td>
<td>1.26 (1.19-1.34) &lt;.001</td>
</tr>
<tr>
<td>Nonwhite vs white</td>
<td>0.88 (0.79-0.99) .03</td>
<td>0.79 (0.74-0.85) &lt;.001</td>
</tr>
<tr>
<td>Multiple birth</td>
<td>1.09 (0.69-1.73) .70</td>
<td>1.48 (1.19-1.85) &lt;.001</td>
</tr>
<tr>
<td>Palivizumab vs no</td>
<td>0.81 (0.42-1.58) .54</td>
<td>0.45 (0.26-0.78) .005</td>
</tr>
<tr>
<td>palivizumab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>1 (Reference) NA</td>
<td>1 (Reference) NA</td>
</tr>
<tr>
<td>December</td>
<td>1.02 (0.83-1.24) .86</td>
<td>2.12 (1.82-2.45) &lt;.001</td>
</tr>
<tr>
<td>January</td>
<td>0.76 (0.61-0.95) .01</td>
<td>3.12 (2.67-3.65) &lt;.001</td>
</tr>
<tr>
<td>February</td>
<td>0.70 (0.48-1.02) .07</td>
<td>5.25 (3.94-6.99) &lt;.001</td>
</tr>
<tr>
<td>RSV season</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>1 (Reference) NA</td>
<td>1 (Reference) NA</td>
</tr>
<tr>
<td>2000</td>
<td>1.61 (1.35-1.92) &lt;.001</td>
<td>1.11 (1.01-1.22) .02</td>
</tr>
<tr>
<td>2001</td>
<td>1.18 (0.98-1.43) .08</td>
<td>0.89 (0.81-0.98) .02</td>
</tr>
<tr>
<td>2002</td>
<td>1.12 (0.93-1.35) .22</td>
<td>0.84 (0.77-0.93) &lt;.001</td>
</tr>
<tr>
<td>2003</td>
<td>0.97 (0.81-1.16) .72</td>
<td>0.70 (0.62-0.79) &lt;.001</td>
</tr>
</tbody>
</table>

Abbreviations: NA, not applicable; OR, odds ratio; RSV, respiratory syncytial virus.

Figure. Age Effect on Seasonal Respiratory Syncytial Virus Hospitalization Rates in Term and Preterm Infants

Respiratory syncytial virus (RSV) hospitalization rates and 95% CIs averaged across covariates (sex, race, plurality, palivizumab use, season months, and seasons) for infants from Florida (A) and Texas (B) with siblings, estimated from the discrete survival model. The risk level for 1-month-old term infants (horizontal gray reference lines) is shown, and the estimated age (with 95% CI [black horizontal error bars]) at which the risk for moderate-preterm infants has decreased to the risk level for 1-month-old term infants is indicated (vertical reference lines) (ages 4.2 months in Florida [A] and 4.5 months in Texas [B]).
we observed a pronounced decreasing age trend in RSV hospitalization risk relative to 1-month-old infants.

The Figure shows incidence curves derived from our multivariate model averaged across the 5 study seasons, sex, singletons and multifetuses, race, and palivizumab use. Preterm infants’ risk of RSV hospitalization was similar to 1-month-old term infants at ages 4.2 months (95% CI, 2.5-5.7) in Florida and 4.5 months (95% CI, 2.8-6.4) in Texas. The difference between these age thresholds was not statistically significant. In 1-month-old term infants in Florida, the seasonal incidence rate for RSV hospitalization was 12.6 (95% CI, 10.1-15.8) per 100 patient-years in comparison with the preterm risk of 30.1 (95% CI, 21.4-42.4) per 100 patient-years. At age 4 months, the risk for preterm infants had decreased to 13.1 (95% CI, 10.0-17.2) per 100 patient-years. In Texas, RSV hospitalization risks for term and preterm infants at age 1 month were 17.4 (95% CI, 14.8-20.4) and 33.5 (95% CI, 26.6-42.2) per 100 patient-years, respectively. The risk in preterm infants at age 4 months had decreased to 18.3 (95% CI, 15.4-21.7) per 100 patient-years.

Finally, potentially missed RSV hospitalizations owing to lack of testing or to incorrect International Classification of Diseases, Ninth Revision, Clinical Modification coding showed little effect on age threshold estimates even if differential mislabeling by term status or age was considered (Table 3). For example, under the assumption that 20% of all RSV hospitalizations were missed for preterm infants and 30% were missed for term infants, age threshold estimates changed only slightly to 4.39 and 4.48 months in Florida and Texas, respectively.

### Discussion

To our knowledge, this is the first cohort study that addresses the age-dependent risk of RSV hospitalization for moderate-preterm infants in comparison with their term counterparts. Prior evidence on a prophylaxis age threshold is based on the FLIP and FLIP-2 studies, both prospective cohort studies of moderate-preterm infants that used an arbitrary 10-week age cutoff to examine the effect of age on RSV hospitalization risk.\(^\text{28,29,34-36}\) These studies report a 3- to 4-fold increased RSV risk for premature infants younger than 10 weeks compared with those aged 11 to 26 weeks before the start of the RSV season.

Our findings support the 2009 decision to restrict palivizumab prophylaxis to lower age thresholds. Assuming a 30-day effectiveness, palivizumab administration at age 3 months would be expected to provide coverage until the estimated 4.2- or 4.5-month age threshold. While the magnitude of risk difference from healthy infants needed to justify prophylaxis is debatable, cost-benefit considerations preclude palivizumab use beyond an age at which preterm infants outgrow their increased risk for RSV hospitalization. Given the steep decrease in RSV hospitalization in preterm infants, numbers needed to treat will increase accordingly and thus greatly affect economic considerations.

We restricted our comparison to infants with siblings to resemble the guidelines and allow for an equitable scenario of reimbursement policies. Term infants without other indications that would qualify as risk factors are never considered eligible for immunoprophylaxis regardless of exposure to RSV carriers; thus, those at highest (but accepted) risk ought to be used to determine when preterm infants exceed the risk. Clinically, it is important to note that sibling status doubled the RSV hospitalization risk of both term and preterm infants (Florida: odds ratio = 1.81; 95% CI, 1.54-2.13; and Texas: odds ratio = 2.00; 95% CI, 1.69-2.37), emphasizing the importance of hygiene and other means of avoiding transmission.

Our findings correspond to previous reports on age effects of RSV risk. At age 6 months, our model estimates a 60% to 70% decrease in risk compared with 1-month-old moderate-preterm infants, which approximates the age effect reported.

---

**Table 3. Sensitivity Analysis for Effect of Missed Respiratory Syncytial Virus Hospitalizations on Age Threshold Estimates**

<table>
<thead>
<tr>
<th>Type of Assumed Missingness</th>
<th>Hospitalization Missed, %</th>
<th>Term Status</th>
<th>Age, mo</th>
<th>Preterm Age Estimate at Which Risk Approaches Risk for 1-mo-Old Term Infants, mo</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Entire Cohort</td>
<td>Preterm</td>
<td>≤6</td>
<td>&gt;6</td>
</tr>
<tr>
<td>Nondifferential</td>
<td>0</td>
<td>Equal</td>
<td>Equal</td>
<td>4.20</td>
</tr>
<tr>
<td>Nondifferential</td>
<td>25</td>
<td>Equal</td>
<td>Equal</td>
<td>4.38</td>
</tr>
<tr>
<td>Nondifferential</td>
<td>75</td>
<td>Equal</td>
<td>Equal</td>
<td>4.37</td>
</tr>
<tr>
<td>Differential</td>
<td>20</td>
<td>30</td>
<td>Equal</td>
<td>4.39</td>
</tr>
<tr>
<td>Differential</td>
<td>70</td>
<td>80</td>
<td>Equal</td>
<td>4.38</td>
</tr>
<tr>
<td>Differential</td>
<td>Equal</td>
<td>20</td>
<td>30</td>
<td>4.38</td>
</tr>
<tr>
<td>Differential</td>
<td>Equal</td>
<td>70</td>
<td>80</td>
<td>4.37</td>
</tr>
<tr>
<td>Differential</td>
<td>20</td>
<td>30</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Differential</td>
<td>70</td>
<td>80</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Differential</td>
<td>70</td>
<td>80</td>
<td>70</td>
<td>80</td>
</tr>
</tbody>
</table>

*Age thresholds were estimated from the discrete survival model with varying assumptions of missed respiratory syncytial virus hospitalizations. If 75% of all hospitalizations were missed, the estimated age threshold at which moderate-preterm infants reach the respiratory syncytial virus hospitalization risk of 1-month-old term infants increased to 4.37 months in Florida and 4.47 months in Texas. If more hospitalizations were missed in term children, similar minimal increases in age thresholds are observed.*
in the FLIP studies. An analysis of the National Hospital Discharge Survey estimated the annual RSV hospitalization rate for the same study years at approximately 5% for infants younger than 3 months compared with approximately 3.5% for infants at ages 3 to 6 months, again of similar magnitude as the general age effects in our study. Of note, our incidence estimates are higher because they were restricted to the RSV season and presence of siblings.

The strengths of this study include its massive sample representing infants of 2 large states. Despite pronounced differences in RSV epidemiology in Florida and Texas, estimated age thresholds were very similar, supporting the generalizability of our results. We maximized the accuracy of gestational age estimates by linkage to birth certificates. We excluded all other AAP indications for palivizumab prophylaxis and adjusted for known RSV hospitalization risk factors that were available in the MAX claims database. Finally, we were able to ascertain and adjust for palivizumab prophylaxis, which further validated our analysis as effectiveness estimates supported successful adjustment for confounding.

Our definition of siblings captured children born to the same mother but may not have accurately identified children who live in the same household. However, presence of siblings as measured in our study was a significant risk factor in our analysis of RSV hospitalization risk, replicating previous findings in which this information was obtained via parent interview. Furthermore, with the study’s focus on presence of siblings in both comparison groups, it is unlikely that misclassification would have occurred differentially. We were unable to obtain information on day care attendance, but the probability for attendance by 1-month-old term infants as well as preterm infants in the age range relevant to our analysis may be low and thus have little effect on this analysis.

While the AAP currently does not consider risk factors other than siblings and day care attendance, multifactorial risk scores to identify high-risk moderate-preterm infants have been suggested. If the rapidly changing age effect is appropriately captured in such models, they might present a viable alternative to the currently used fixed age thresholds and aid in optimizing palivizumab use. However, following the same rationale as used in our study, preterm infants identified to be at high risk should be compared with term infants with the same risk factors (such as smoking household members) to determine equitable age thresholds for prophylaxis.

This study was conducted in Medicaid enrollees who are at higher risk for RSV hospitalization, but the relative comparison between term and preterm infants should not be affected as demonstrated with the stratification between Florida and Texas. Thus, while the age threshold should be similar across infant populations, the exact RSV incidence rates for term and preterm infants at various ages may be different and may result in different estimates of numbers needed to treat. Finally, previous studies have found that Medicaid records, although inferior to hospital-based medical records, do not maintain gross diagnostic errors, but clinical detail may be lost. Importantly, testing for RSV as well as respective coding of the pathogen in hospital billing may not always occur, resulting in an underestimate of RSV hospitalization risk. We tested for the effect of missed RSV hospitalization if occurring at random or preferentially in preterm or younger infants. All scenarios resulted in estimates within the 95% CIs of the original age threshold, suggesting little effect of misclassification within the range of tested scenarios.

Conclusions

Age has a strong effect on RSV hospitalization risk in both term and preterm infants. The age at which moderate-preterm infants showed RSV hospitalization risk similar to their healthy term counterparts supports the AAP’s decision to lower the age threshold for RSV immunoprophylaxis. Further studies are warranted to confirm our findings and investigate the age-dependent risk of RSV hospitalization in other RSV risk groups.

REFERENCES