Marriage before the age of 18, commonly referred to as child marriage, is widely considered a violation of human rights that threatens the health and well-being of children around the globe. The United Nations Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages, adopted in 1962, required that member countries establish a minimum age for marriage, but did not provide specific guidance on what that age should be. Nearly 20 years later, the Convention on the Elimination of All Forms of Discrimination Against Women reiterated that requirement and declared that the marriage of children "shall have no legal effect." It was not until the adoption of the Convention on the Rights of the Child in 1989–1990 that the United Nations defined a child as any person younger than 18. This definition has since been used to establish quantifiable targets for international development, including child marriage. The UN Sustainable Development Goals call for the elimination of child marriage before the year 2030, and progress toward this goal is measured by estimating the proportion of women aged 20–24 who were married before age 18.

The marriage of minors remains legal throughout the United States. All states ostensibly set the minimum age for marriage at 18, but exceptions can be granted in every state under various circumstances, most commonly parental consent and some measure of judicial approval. The earliest age at which a child can legally be married varies. The strictest laws currently in place prohibit marriage before the age of 16 or 17, but some states do not have an explicitly legislated minimum, below which marriage is prohibited without exception. Girls who marry as children in the United States achieve lower educational attainment than their peers who delay marriage. Marrying as a child also increases the risk of living in poverty in adulthood, even more so than dropping out of high school. A study based on data from the 1960, 1970 and 1980 U.S. censuses found that marriage before the age of 16 increased the risk of poverty by 31 percentage points, while dropping out of high school increased the risk by 11 points. Married girls are more likely to start having children of their own as teenagers, and give birth at shorter intervals, than women who marry later. They are at greater risk of experiencing mental health and substance abuse disorders later in life. Early marriages are also much less stable than those entered into at later ages. Marriages involving girls and boys younger than 20 have a lower probability than those involving any other age-group of remaining intact after five years; they are also reported to be less satisfying.

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Child marriage remains very common in some regions of the world, and studies from low- and middle-income countries have examined a wider range of outcomes. In these settings, child marriage is associated with limited access to contraception and more unwanted pregnancy,
Child Marriage in the United States

ranges. These estimates are an average of the prevalence of conservative Protestant traditions marrying at younger ages than were living with their spouses in 2010.26

and 33% of married boys (16,000 of 49,000) aged 15–17 a young age. Only 41% of married girls (22,000 of 54,000) who marry before age 18 form independent households at non-Hispanic white or black women.23

had a higher probability of having married as children than among women and 2% for men, and that Hispanic women on data from the 2002 National Survey of Family Growth, and 41% among 45–64-year-olds. Another study, based 8% among 18–29-year-olds to 24% among 30–44-year-olds

old girls in low-income countries,19 largely because of poor access to emergency obstetric care and underlying nutritional deficiencies. In contrast, the effect of maternal age on the risk of adverse obstetric outcomes among older adolescents in high-income countries is debated.20

Although child marriage is legally permitted throughout the United States, its prevalence in recent years and which children are at greatest risk are unclear. Prevalence among younger cohorts, which would help to establish the extent to which the practice continues in the United States, has not been examined. Some studies of early marriage in the country have included youth aged 18 and 19 and those in their early 20s.21,22 Others have used nationally representative survey samples that include respondents from broad age ranges.8,23 These estimates are an average of the prevalence of child marriage across several generations and may not accurately reflect prevalence among younger people. For example, Le Strat and colleagues reported that 9% of women aged 18 and older who responded to the 2001–2002 National Epidemiologic Survey on Alcohol and Related Conditions had married as children.8 However, the proportion rose from 8% among 18–29-year-olds to 24% among 30–44-year-olds and 41% among 45–64-year-olds. Another study, based on data from the 2002 National Survey of Family Growth, found that the probability of marriage before age 18 was 6% among women and 2% for men, and that Hispanic women had a higher probability of having married as children than non-Hispanic white or black women.23

The timing of marriage varies according to demographic characteristics, geographic region and other traits. Earlier work has shown that Hispanic women, women from disadvantaged households, and women living in the Southern United States are more likely than others to have married as children.24 Additionally, persons from Mormon and conservative Protestant traditions marry at younger ages than those from other religious backgrounds.22,23 However, census data are inconsistent with the idea that most persons who marry before age 18 form independent households at a young age. Only 41% of married girls (22,000 of 54,000) and 33% of married boys (16,000 of 49,000) aged 15–17 were living with their spouses in 2010.26

Birthplace also may be related to age at marriage. Immigrants from societies in which child marriage is normative may bring attitudes and beliefs that favor the practice with them, potentially leading to higher rates of marriage among immigrant children in the United States. However, migrant selection factors could also work in the opposite direction: The same attitudes and beliefs that drive child marriage within certain cultures may be relatively uncommon among those who emigrate. We are unaware of any quantitative studies that compare child marriage rates among native-born and immigrant children within the United States or other high-income countries. However, studies from Sweden and Canada have shown that immigrants and their children marry earlier, on average, than native-born persons.27–28

In this study, we estimated the prevalence of child marriage within the United States as a whole and within each state. We measured differences in the prevalence of child marriage by gender, race and ethnicity, and place of birth at the national level, and examined the living arrangements of married children in the country.

METHODS

Data

The American Community Survey (ACS) is a household survey conducted annually by the U.S. Census Bureau. Households from every county in the United States are selected for participation on the basis of the Census Bureau’s master address file, which lists all known living quarters in the country. Response to the survey is mandatory. Selected households are contacted through the mail and may respond by completing a paper questionnaire or via the Internet. Households that do not respond within five weeks receive a telephone call or in-person visit. Each annual sample is representative of the population of the country as a whole and the population of each state. Full details of the survey design and sampling methods are available from the Census Bureau.25

One person from each selected household, usually the owner or renter of the home, is asked to provide information on all of the individuals who usually reside there. Each person’s gender, race and ethnicity, and relationship to the household head are documented. Birthplace is also recorded, along with the year any individual not born in the country arrived in the United States. The marital status of all persons aged 15 and older is also recorded, on the basis of responses to the question “What is this person’s marital status?” Response categories are “now married,” “widowed,” “divorced,” “separated” and “never married.” The respondent is also asked how many times each person has been married and the year in which the most recent marriage took place.

ACS data from each survey year and from five-year pooled samples are publicly available from the Census Bureau and the Integrated Public Use Microdata Series.30 We used the pooled sample for 2010–2014 in order to obtain sufficient sample sizes to estimate the average prevalence of child marriage in each state over this five-year period. We restricted our sample to the 616,107 children who were 15–17 years of age at the time they were included in the survey.

Analysis

We considered all children reported to be married, separated, divorced or widowed at the time of the survey to have been married. Children who were separated, divorced or widowed were included in our estimates to capture the full
scale of child marriage in the United States and to make our estimates more comparable with those from other countries, which include children whose marriages have ended. We estimated the proportion of children who had ever been married by regressing an indicator variable for state of residence on an indicator of marital status and calculating the predicted (marginal) probability of child marriage in each state over the five-year period. All of our estimates were weighted using the pooled sampling weights provided by the Census Bureau. Standard errors associated with national-level estimates were clustered at the state level.

To assess which children are at greatest risk of marriage, we calculated prevalence by gender, race and ethnicity, and place of birth. These statistics were calculated at the national level because sample sizes were too small to produce reasonably precise estimates for each state. We regressed the characteristic of interest on a binary indicator of marital status and estimated the marginal probability of child marriage within each group. Gender was coded as male or female, and birthplace was coded by country or region. Race or ethnicity was classified as white non-Hispanic, white Hispanic, black non-Hispanic, black Hispanic, American Indian or Alaska Native, Chinese, other Asian or Pacific Islander, mixed race or other. We determined whether immigrant children were married before or after their arrival in the United States by comparing the year the child arrived in the country with the year the marriage took place.

We interpret our results in terms of the precision of our prevalence estimates and of the differences between those estimates, as reflected by 95% confidence intervals. We chose this approach, rather than conducting hypothesis testing and calculating p value estimates, because of the widespread misinterpretation of the latter. While we acknowledge that the interpretation of confidence intervals, like the interpretation of p values, requires assumptions about data generation processes and the appropriateness of statistical analyses, we feel a responsibility to avoid techniques that are particularly prone to misuse.

We estimated the weighted proportions of currently married children by their current living arrangement, which the survey assessed in terms of head of household. These weighted proportions were calculated using Stata’s survey estimation commands.

RESULTS
Approximately 6.2 of every 1,000 children included in the 2010–2014 surveys had been married. This estimate is equivalent to more than 78,400 children, given estimates of the average population of 15–17-year-olds over this time period. However, more than a quarter of ever-married children had reportedly separated (17%), divorced (6%) or been widowed (4%) before their 18th birthday.

We estimated that more than 10 of every 1,000 children in West Virginia, Hawaii and North Dakota had ever been married (Figure 1). In contrast, fewer than four of every 1,000 children living in Maine, Rhode Island and Wyoming were ever-married. Estimates from sparsely populated states, including those in which we estimated the highest prevalence, are imprecise.

An average of 6.8 of every 1,000 girls and 5.7 of every 1,000 boys had been or were married at the time of the survey (Table 1). The confidence interval surrounding the estimated difference between these figures is narrow, and the lower limit is positive, which indicates that at the 95% level, the observed data are consistent with a higher prevalence of marriage among girls.

Child marriage occurs within every racial and ethnic category captured by the ACS, but the prevalence differs markedly across groups. An estimated 5.0 of every 1,000 white non-Hispanic children had ever been married. The estimated prevalence was higher in every other group studied except those with mixed racial or ethnic backgrounds, though the confidence interval for the estimate among black Hispanic children is wide. The prevalence of marriage among American Indian or Alaska Native children and Chinese children was more than double that among white non-Hispanic children—10.3 and 14.2 per 1,000, respectively.

Immigrant children were more likely than their peers born in the country to have been married, although estimates for those from Europe and South Asia are imprecise. Prevalence averaged 5.5 per 1,000 for U.S.-born children in the sample. It was 2–4 times that level among children born in Mexico (19.6 per 1,000), the Caribbean (15.3 per 1,000), South America (15.1 per 1,000), East Asia (15.3 per 1,000) and Africa (12.4 per 1,000). It was more than four times as high among those born in Central America (22.9 per 1,000) and the Middle East (26.3 per 1,000) as among those born in the United States. More than 90% of marriages among immigrant children occurred after the children arrived in the United States.

Only 20% of the children who were reported to be currently married were living with their spouses. Of these, 65% were living in households that they or their spouses headed, 28% were living with their spouses in either their parents’ or their parents-in-law’s homes, 4% were living with other relatives and the remainder were living with nonrelatives. The vast majority of married children who were not living with their spouses were living with their parents (71%) or their parents-in-law (13%); the rest were living with other relatives (9%), with nonrelatives (3%), in households they headed (2%), or in correctional or mental health facilities (2%).

DISCUSSION
The prevalence of child marriage varies across states, but the reasons for these differences are unknown. They may be partially attributable to differences in the composition of state populations. We show that child marriage is particularly common among immigrant children and among certain racial and ethnic groups, and these groups are not evenly distributed across the country. Differences in the prevalence of poverty and concentration of certain religious groups may also contribute to state-level variation in child marriage. Variations in marriage policies across states may also play a role. The true minimum age for marriage
Child Marriage in the United States

Perspectives on Sexual and Reproductive Health

differs by state, as do the requirements for obtaining legal waivers for minors to marry. The willingness of judges or courts to grant exceptions for minors to marry may also vary. Research on the relative contribution of each of these factors would improve our understanding of child marriage in the country. Impact evaluations of child marriage laws would directly inform ongoing policy discussions.

The ACS is not an ideal data source for examining why prevalence varies by state, because it does not capture where marriages were conducted. Our estimates reflect the proportion of children residing in each state who have ever been married, but we cannot know whether the marriages occurred there. Minors have historically crossed state boundaries to marry in states where age minimums are lower, and some children may have married abroad. We found that the vast majority of marriages among immigrant children occurred after their arrival in the United States, but parents may take their children outside of the country to be wed.

Our results suggest that the social forces that lead to child marriage in the United States may differ from those in other contexts. We found that girls were more likely than boys to have married as children, consistent with patterns around the globe, but the gender gap appears to be narrower in the United States than in low-income countries. A report from the United Nations indicates that in many parts of the world, the prevalence of child marriage among girls is several times that among boys. In contrast, the prevalence of child marriage among girls in our sample was only 19% greater than that among boys (6.8 vs. 5.7 per 1000). The reasons for this difference are unclear, but certain factors that increase the risk of early marriage among girls in low-income contexts are less prominent in the United States and may narrow the gender gap. For example, in some Sub-Saharan African societies, husbands must pay a bride-price to the bride’s family before marriage; younger girls may command larger payments, fueling demand for child brides. Poorer educational and economic opportunities for girls relative to boys in some communities might also increase the likelihood of marriage for girls, who may have few other options for transitioning into adulthood. Broad access to public schooling, compulsory schooling laws and laws that prohibit gender discrimination in employment may lessen gender differences in child marriage in the United States, though these hypotheses have not been empirically tested.

Earlier research documents high levels of instability in marriages entered into at young ages, and our results highlight just how quickly some child marriages end: Nearly a quarter of the ever-married children included in our sample had separated or divorced before the age of 18. Furthermore, the vast majority of those who were married at the time of the survey were not living with their spouses. This finding could be partially attributable to laws that prohibit minors from signing contracts, including home rental or purchase agreements, or could reflect that these minors are unprepared to live independently for other reasons, either psychological or financial. However, only a small proportion of married children were living with their spouses even in joint households, such as their parents’ homes.

Low levels of cohabitation and high levels of marital dissolution among children raise additional questions about the motivation for these marriages that should be investigated. Child marriage without cohabitation may result in a very different risk profile, but it is difficult to predict how the net magnitude, direction or nature of risk may change without further knowledge of the situations that lead to these marriages or their context. For example, spouses who do not live together may have less sexual contact than others, potentially lowering the risk of pregnancy, but living apart may also influence access to and decisions about contraception that could increase that risk. Separation or divorce shortly after marriage may also influence the spectrum of risks associated with child marriage, but once again, the consequences have not been studied, and it is
part because of the unique classification of race and ethnicity, while others reflect specific countries of origin or ancestry, such as black race or Hispanic ethnicity. Some of the predefined response categories to the questions on race and ethnicity used by the Census Bureau. Some may have gone on to marry before their 18th birthday, but these marriages were not counted in our analysis.

There is also some degree of measurement error in our estimates. This may result partly from deliberate misreporting, and partly from the nature of the relevant survey question. ACS respondents may fail to report that a minor is married, particularly if the child's age is below the legal minimum for marriage in the state or if the respondent believes that reporting a married young child may draw unwanted attention. However, some minors living with intimate partners may have been reported to be married even if they were not legally wed, because the survey question leaves respondents free to report marital status as they understand it. This type of measurement error would lead to overestimation of child marriage, assuming legality of the union is part of the definition. Families may forgo obtaining a marriage license for a minor in order to avoid contact with the judicial system. This may be especially true among the youngest children, whose marriages may invite greater scrutiny than those among older adolescents. Moreover, legal recognition may not be necessary for a marriage to be perceived as legitimate and binding within a community. Reports from girls married as children in the United States substantiate the existence of unlicensed religious marriages.41 Immigrant families from these regions may hold social or religious values conducive to child marriage, potentially leading to greater acceptance of the practice among immigrant communities within the United States. The immigration experience itself may also influence the propensity for child marriage. Early marriage could be used as a mechanism for controlling a child's sexuality in a new sociocultural environment perceived to be more sexually permissive, though there is no empirical evidence to support this hypothesis.

**Limitations**

We aimed to measure the prevalence of marriage before the age of 18 in the United States, but we underestimate the true prevalence for two reasons. First, the ACS does not ask about the marital status of persons younger than 15, although in many states, such marriages may be married. Second, there is a censoring issue. None of the 15–17-year-olds included in the survey had yet lived through the entire period during which they were “at risk” of child marriage. Some may have gone on to marry before their 18th birthday, but these marriages were not counted in our analysis.

**TABLE 1. Estimated prevalence of marriage per 1,000 children aged 15–17, and differences in prevalence, by selected characteristics**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Prevalence</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>5.7 (5.3–6.1)</td>
<td>ref</td>
</tr>
<tr>
<td>Girls</td>
<td>6.8 (6.0–7.5)</td>
<td>1.1 (0.5–1.8)</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White non-Hispanic</td>
<td>5.0 (4.7–5.4)</td>
<td>ref</td>
</tr>
<tr>
<td>White Hispanic</td>
<td>8.8 (7.4–10.1)</td>
<td>3.7 (2.3–5.1)</td>
</tr>
<tr>
<td>Black non-Hispanic</td>
<td>6.0 (5.6–6.4)</td>
<td>1.0 (0.5–1.5)</td>
</tr>
<tr>
<td>Black Hispanic</td>
<td>7.1 (3.5–10.7)</td>
<td>2.1 (–1.5 to 5.6)</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>10.3 (6.8–13.9)</td>
<td>5.3 (1.7–8.9)</td>
</tr>
<tr>
<td>Chinese</td>
<td>14.2 (11.1–17.3)</td>
<td>9.2 (6.0–12.3)</td>
</tr>
<tr>
<td>Other Asian/Pacific Islander</td>
<td>8.9 (7.3–10.5)</td>
<td>3.9 (2.2–5.6)</td>
</tr>
<tr>
<td>Mixed race</td>
<td>4.5 (3.5–5.4)</td>
<td>−0.6 (–1.5 to 0.3)</td>
</tr>
<tr>
<td>Other</td>
<td>9.7 (7.4–12.0)</td>
<td>4.7 (2.3–7.1)</td>
</tr>
<tr>
<td>Birthplace</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>5.5 (5.0–5.9)</td>
<td>ref</td>
</tr>
<tr>
<td>Mexico</td>
<td>19.6 (16.0–23.1)</td>
<td>14.1 (10.3–17.8)</td>
</tr>
<tr>
<td>Central America</td>
<td>22.9 (17.4–28.5)</td>
<td>17.4 (11.9–23.0)</td>
</tr>
<tr>
<td>Caribbean</td>
<td>15.3 (10.8–19.8)</td>
<td>9.8 (5.3–14.4)</td>
</tr>
<tr>
<td>South America</td>
<td>15.1 (9.0–21.2)</td>
<td>9.6 (3.7–15.5)</td>
</tr>
<tr>
<td>Europe</td>
<td>6.9 (4.5–9.4)</td>
<td>1.4 (–1.1 to 4.0)</td>
</tr>
<tr>
<td>East Asia</td>
<td>15.3 (10.1–20.5)</td>
<td>9.8 (4.5–15.1)</td>
</tr>
<tr>
<td>South Asia</td>
<td>8.7 (4.4–13.0)</td>
<td>3.2 (–1.2 to 7.6)</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>10.0 (7.5–12.5)</td>
<td>4.5 (1.8–7.2)</td>
</tr>
<tr>
<td>Middle East</td>
<td>26.3 (17.8–34.9)</td>
<td>20.9 (12.4–29.4)</td>
</tr>
<tr>
<td>Africa</td>
<td>12.4 (6.2–18.7)</td>
<td>7.0 (0.6–13.3)</td>
</tr>
<tr>
<td>Oceania</td>
<td>11.7 (1.3–22.1)</td>
<td>6.2 (–4.1 to 16.6)</td>
</tr>
<tr>
<td>Canada</td>
<td>13.8 (4.2–44.2)</td>
<td>8.3 (–8.1 to 24.7)</td>
</tr>
</tbody>
</table>

Notes: Figures in parentheses are 95% confidence intervals. ref=reference group.

Children born outside of the United States, particularly those born in Mexico, Central America and the Middle East, are much more likely than their native-born peers to have ever been married. Many countries in these regions have markedly higher levels of child marriage than the United States.40 Immigrant families from these regions may hold social or religious values conducive to child marriage, potentially leading to greater acceptance of the practice among immigrant communities within the United States. The immigration experience itself may also influence the propensity for child marriage. Early marriage could be used as a mechanism for controlling a child’s sexuality in a new sociocultural environment perceived to be more sexually permissive, though there is no empirical evidence to support this hypothesis.
legal status of their union. These children are not systematically included in our estimates, and this limits the comparability of our measures with those from other countries.

**Conclusion**

The United States invests public resources to prevent child marriage in low-income countries through the Agency for International Development and through commitment to the United Nations Sustainable Development Goals.6,42 The Violence Against Women Reauthorization Act, passed by Congress in 2013, requires the secretary of state to develop a strategy to prevent child marriage in developing countries.43 Efforts to address child marriage within the United States are also needed. As of December 2017, at least 14 states had introduced or adopted bills that would prevent minors from obtaining marriage licenses or would place additional restrictions on their marriage.44 Some of these legislative efforts have faced strong opposition. In New Hampshire, such a bill was indefinitely postponed after lawmakers expressed concern that it would prevent marriages among some young people they presumably believed should be permitted to marry—such as girls who become pregnant and youth serving in the military.45 The governor of New Jersey vetoed a bill after it was overwhelmingly passed by the state’s legislature, citing infringements on the customs of religious communities.46

Although these policymakers appear to believe the marriage of minors is justifiable in specific circumstances, knowledge of the social forces that perpetuate child marriage in the United States and other high-income countries is very limited. Who has instigated these marriages and their reasons for doing so, especially in recent years, remain unclear. One commonly hypothesized reason for child marriage in the United States is the so-called shotgun wedding, entered into under pressure from family members or others who aim to avoid perceived stigma resulting from premarital sexual activity and pregnancy. Such marriages have likely become less common in recent decades as births among children under the age of 18 have fallen sharply and the proportion of births that are nonmarital has risen.47,48 However, they may still occur within communities in which young people have limited access to information about reproductive health or access to contraception is restricted, and in which pregnancy outside of marriage is less accepted. Case reports of individual cases may not reflect the most common drivers of child marriage in the country. They draw needed attention to situations in which existing policies have placed children at risk, but they also highlight the need for systematic research into the current motivations for child marriage in the country. Our understanding of child marriage among some of the high-risk groups identified in this study is especially lacking. Learning more about the forces that perpetuate this practice may provide insight into mechanisms to prevent it and its deleterious effects, and will inform ongoing policy debates. Legislation that prevents the granting of marriage licenses to minors would set an important precedent for the protection of children’s rights, but unlicensed child marriages may still occur. Additional prevention mechanisms that address the underlying motivations for child marriage should also be pursued.

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Acknowledgments

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