



# Voices of Child Health in Chicago **REPORT**

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## REPORT HIGHLIGHTS

14% of parents said that they had refused a vaccination recommended by their children's doctor.

Flu vaccine was the immunization most frequently refused — by 83% of parents who had refused one or more vaccines for their children.

Younger parents were more likely than older parents to refuse the flu vaccine for their children.

Overall, among all parents in our sample, 10% refused flu vaccine for their children.

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## Chicago Parents' Behaviors and Beliefs about their Children's Flu Vaccinations

### Measuring parents' behaviors and beliefs about childhood vaccinations

In the 2017-18 Healthy Chicago Survey, Jr., Ann & Robert H. Lurie Children's Hospital of Chicago and the Chicago Department of Public Health (CDPH) teamed up to learn more about child health in the city. In this report, we share results about parents' decisions regarding their children's flu vaccinations. We asked 1,002 parents and guardians (referred to here as parents) if they had ever refused a vaccination that doctors recommended. For those parents who had refused a vaccination, we asked them what kind of vaccination they refused and why.

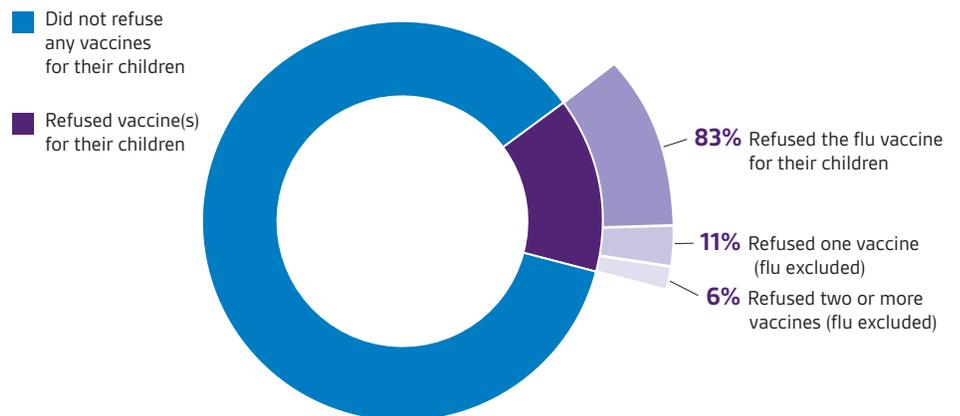


Figure 1. Proportions of Chicago parents who refused different vaccines for their children

### Flu vaccine: the most commonly refused childhood vaccine in Chicago

Among Chicago parents who had refused at least one vaccine for their children ( $n = 144$ ), the majority refused the flu vaccine (83%). One in ten parents (11%) who refused vaccines for their children declined one vaccine that was not the flu vaccine, and 6% of parents declined two or more vaccines that were not the flu vaccine (Figure 1). Overall, among all parents in our sample, 10% refused flu vaccine for their children.

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## Low rates of flu vaccination are concerning, particularly for children, because the Centers for Disease Control and Prevention estimated that 185 children died from flu-related illnesses in the United States during the 2017-18 flu season, including nine children from Illinois.

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A recent national survey found that the flu vaccine is the immunization children are least likely to receive both in Illinois and in the United States.<sup>1</sup> For instance, in 2017 only 55% of Illinois children (ages 6 months to 17 years) received the flu vaccine, compared to 58% nationally. In contrast, by age 3 more than 84% of eligible children were up to date on DTaP (diphtheria, tetanus and acellular pertussis) and 92% were up to date on MMR (measles, mumps and rubella).<sup>2</sup> Furthermore, recent surveys of U.S. adults found that over one third of adults with children in the household did not plan to obtain flu vaccine for their children.<sup>3,4</sup> Early estimates for the 2018-19 flu season indicate that 46% of U.S. children (ages 6 months to 17 years) had received the flu vaccine by mid-November 2018.<sup>5</sup>

### Flu vaccination rates across Chicago

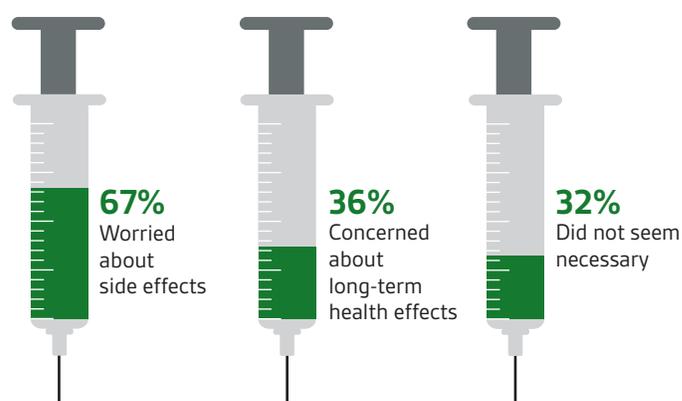
A 2015-16 local survey of Chicagoans in neighborhoods on the south and west sides of the city, conducted by the Sinai Urban Health Institute, found that only 60% of children (ages 6 months to 12 years) received flu vaccine.<sup>6</sup> This is very similar to data from the 2017-18 flu season, which indicated that 63% of Chicago youth (ages 6 months to 17 years) received flu vaccine.<sup>7</sup> Adults have even lower vaccination rates than children: flu vaccination rates for Chicago adults range between 35% and 39%.<sup>8-10</sup>

Low rates of flu vaccination are concerning, particularly for children, because the Centers for Disease Control and Prevention estimated that 185 children died from flu-related illnesses in the U.S. during the 2017-18 flu season, including nine children from Illinois.<sup>11,12</sup> Approximately 80% of U.S. children who died from flu-related illnesses in 2017-18 had not received the flu vaccine.<sup>11</sup> A 2017 study showed that flu vaccination can significantly reduce a child's risk of dying from influenza.<sup>13</sup>

Between September 30 and December 29, 2018, there have been 23 severe cases of influenza among adults and children in Chicago that resulted in hospitalizations in intensive care units.<sup>14</sup>

### Reasons that Chicago parents refused flu vaccines for their children

In our survey, when parents indicated that they had refused the flu vaccine for their child, we asked why they refused the vaccine. The most frequent reasons for refusal were that parents were worried about the “side effects” (67%), concerned about the “long term health effects” (36%), and perceived that the vaccine “did not seem necessary” (32%) (Figure 2). These reasons are consistent with common misconceptions about the flu vaccine.<sup>15</sup> For instance, people sometimes worry that the flu vaccine can give a person the flu, but the flu vaccine cannot cause flu illness because it does not carry the flu virus. The most common side effects from flu vaccine injections are mild, including soreness, redness, or tenderness where the shot was given. Serious allergic reactions to flu vaccines are very rare.



**Figure 2.** Most frequent reasons that Chicago parents refused flu vaccine for their children. *Note. Parents could select more than one reason*

### Flu vaccine refusals for Chicago children, related to parents' race/ethnicity

We also examined flu vaccine refusals among different groups<sup>7</sup> of parents in our diverse sample. Non-Latinx Black parents were the most likely to have refused the flu vaccine for their children (16%), followed by 9% of Latinx parents and 5% of non-Latinx White parents.

These patterns of flu vaccine refusal in some ways mirror flu vaccination rates among children. Nationally, during the 2017-18 flu season, Latinx children were the most likely to receive the flu vaccine (62%), followed by 56% of non-Latinx White children and 55% of non-Latinx Black children.<sup>16</sup>

Racial disparities in child flu vaccination rates have been documented in other populations.<sup>17,18</sup> One study that examined the reasons people gave for refusing the flu vaccine for their children found that Black parents were more likely than parents of other races to cite concerns about their child getting the flu from the flu vaccination.<sup>19</sup> Importantly, interventions in primary care

settings such as training office staff to discuss flu vaccine and the serious nature of influenza, and using every patient visit type as an opportunity to vaccinate, can be effective in eliminating racial disparities in influenza vaccination.<sup>18</sup>

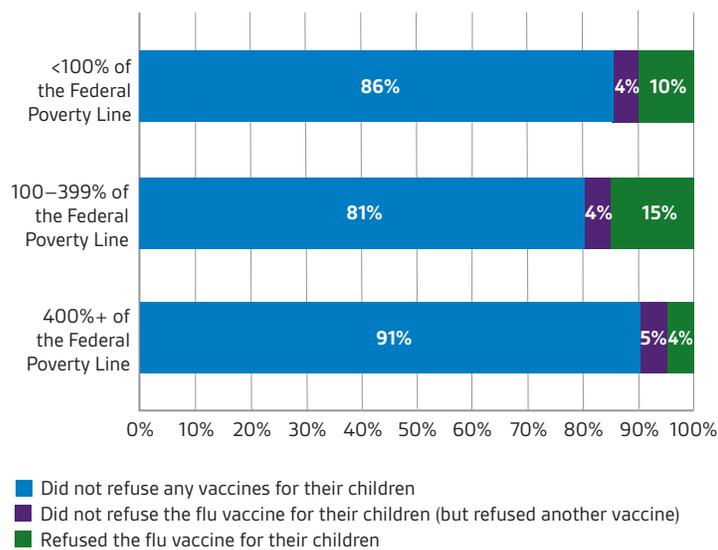
### Flu vaccine refusals related to parent age

Younger parents were more likely than older parents to say that they had refused flu vaccine for their children. Parents between 18 to 29 years of age were the most likely to have refused flu vaccine for their children (16%), followed by 9% of parents between 30 to 44 years of age and 5% of parents 45 years of age and older.

In our survey, rates of flu vaccine refusal did not differ significantly based on the ages of children. These findings contrast with national trends in the 2017-18 flu season, which indicated that younger children were more likely to be vaccinated than older children. For instance, 74% of children 2 to 23 months of age, 64% of children 2 to 4 years of age, 60% of children 5 to 12 years, and 47% of children 13 to 17 received the flu vaccine in 2017-18.<sup>20</sup> During the 2017-18 flu season in Chicago, there was a similar trend whereby younger children were more likely to be vaccinated than older children.<sup>7</sup>

### Flu vaccine refusals for Chicago children, by household income level

There was also variation in flu vaccine refusal for children related to household income level. In households with incomes between 100%–399% of the Federal Poverty Line (FPL), parents were more likely to refuse only flu vaccine for their children (15%), compared with parents in households below the poverty line (10%) and among parents in households with income at 400% or more of FPL (4%) (Figure 3).



**Figure 3.** Proportions of Chicago parents who refused flu vaccine for their children, by household income level.

### Younger parents were more likely than older parents to say that they had refused flu vaccine for their children.

### Mandatory flu vaccination for children

One method other municipalities have used to increase flu vaccination rates among young children is to require the flu vaccine for children who attend licensed childcare programs. New Jersey, Connecticut, Ohio and Rhode Island have implemented such mandates. A study on the impact of the mandate in Connecticut found that it substantially increased the rate of vaccination among young children (from 68% to 84%) and reduced the number of flu-related hospitalizations among young children by 12%.<sup>21</sup>

New York City also recently mandated flu vaccination for children 6 to 59 months of age before they could be admitted to city-regulated childcare and educational institutions. After the mandate was enacted, flu vaccination rates among 4-year-old children increased by 11%.<sup>22</sup>

These examples serve as a potential model by which to increase flu vaccination rates among young children in Chicago. This is particularly important because young children are at increased risk for severe flu-related illness and complications, and they are more likely to carry and spread influenza because they carry a higher viral load than adults.

### HOW THE SURVEY WAS CONDUCTED

This report presents findings from the 2017-18 Healthy Chicago Survey, Jr., administered by the Chicago Department of Public Health in collaboration with Lurie Children's. The survey was administered via phone interviews from December 2017 through June 2018. The sample consisted of 3,310 adults in Chicago, 1,002 of whom were the parent, step-parent or guardian of at least one child under 18 years old living in the household. The survey cooperation rate was 18%. All analyses were conducted with statistical weighting so that they are representative of the adult population of the City of Chicago during the time period of data collection.

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## Voices of Child Health in Chicago

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