WISCONSIN POLICY FORUM

STATE'S IMMUNIZATION RATES STILL DEPRESSED

Although vaccination rates for Wisconsin schoolchildren rebounded somewhat in 2022-23, they remain well below pre-pandemic levels. The reasons differ by community: districts with high rates of economically disadvantaged families tend to have higher rates of students behind on their immunization schedules, while students whose families waive the immunization requirements on personal conviction grounds tend to live in smaller, rural communities. Therefore, different approaches may be needed to improve vaccination rates around the state.

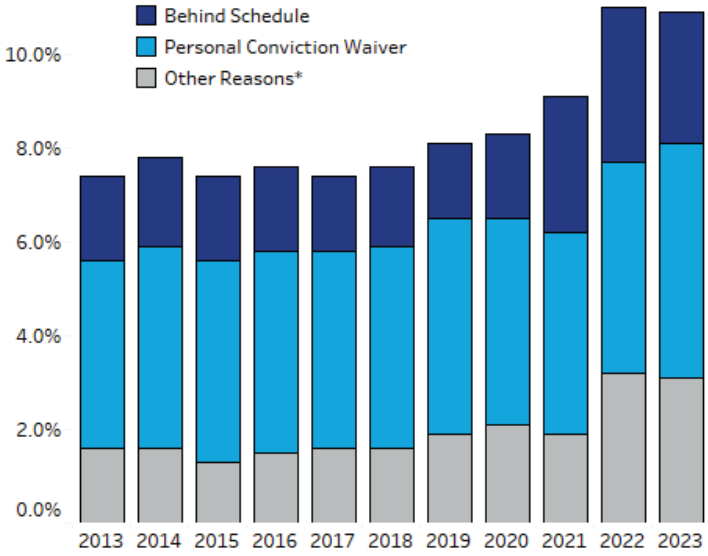
In the midst of the coronavirus pandemic, public health officials worried that the fierce public debate about COVID-19 vaccines would spread to attitudes toward vaccinations for other diseases, including those for children. The latest data appear to bear out these fears – national reports have indicated that immunization rates among schoolchildren have dropped in recent years, and Wisconsin has followed that trend.

In the 2022-23 school year (referred to as 2023 in this brief), 10.1% of Wisconsin's students did not meet the minimum immunization requirements for K-12 school enrollment, according to the state Department of Health Services (DHS). This is a 1.2 percentage point drop from the 2022 rate of 11.3%, but is still higher than every year in the previous decade. In each year from 2013 to 2018, the rate was below 8.0% (see Figure 1).

This brief examines the rise in the number of unvaccinated students across the state in all types of districts. In looking at why students have not been immunized, we find the reasons differ between certain types of districts such as those in urban and rural areas.

Figure 1: Unvaccinated Rate Remains High in Schools

Statewide rates of unvaccinated students in Wisconsin by year



Source: WI Dept. of Health Services; *includes students for whom there is no record.

HOW DISTRICTS TRACK IMMUNIZATIONS

DHS collects immunization data from Wisconsin's public, private, and independent charter schools. The 2023 data in this brief come from the state's 421 public school districts and any charter schools authorized by a public district. In the most recent data, each district reported the percentage of their students meeting minimum requirements or who are in process, behind schedule, had no record, or were waived for reasons related either to health, religion, or personal conviction.

Students who meet the minimum immunization requirements have had the age-appropriate schedule of vaccines protecting them from diphtheria, tetanus, pertussis, hepatitis B, measles, mumps, rubella, polio, and chickenpox (also known as varicella). In this report, students from the other six categories are collectively referred to as "unvaccinated" though they may have

had some of the required vaccinations. Students who are “in process” are newly enrolled in Wisconsin schools and have begun the required vaccination schedule. Any students who have immunization records on file but are missing the required doses are considered “behind schedule.” Students with “no record” have no immunization record with their school or have submitted insufficient information on the form such as “on record at doctor’s office.” Students in the three waiver categories have opted out of receiving one or more vaccines but are considered in compliance with the law because they have filed one of the three types of waivers.

VARIATION AMONG DIFFERENT STUDENTS AND DISTRICTS

Only 373 of the 421 districts were included in our analysis because of missing or apparently incorrect data. The excluded districts included 18 that gave no vaccination data to DHS in 2023. The remaining 30 districts were excluded because the sums of their student percentages in the seven categories were significantly different from 100%, indicating data quality issues. These 30 districts enrolled 30,811 students in 2023, which is 3.9% of the student population represented in the DHS report.

Although these districts represent a small portion of Wisconsin’s student population, their exclusion is a drawback to the data because there may be a significant difference between the rates of those districts that report their data fully and correctly and those that do not. DHS officials acknowledge that their relatively new data collection process can improve and are seeking to define the reporting categories more clearly to reduce errors.

The 373 districts remaining in our analysis enrolled 769,300 students in 2023. Collectively, 89.9% of their students met the minimum immunization requirements.

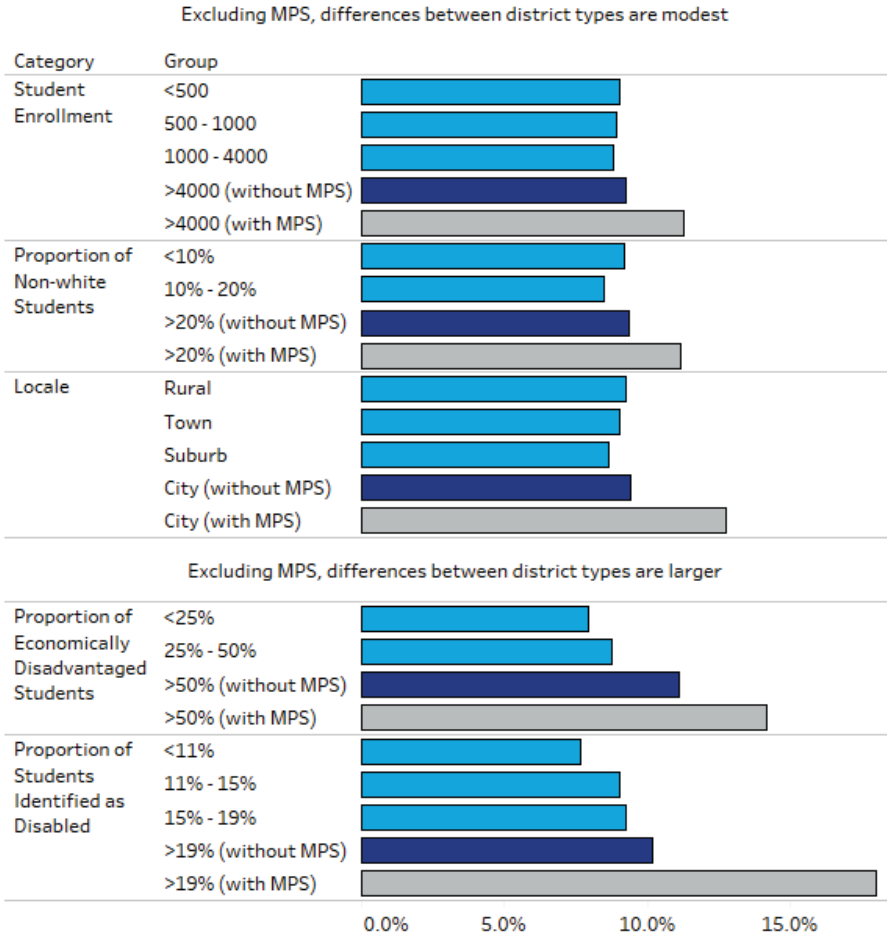
Milwaukee Public Schools (MPS) is by far the largest district in Wisconsin and therefore has an outsized effect on any statewide analysis. Its enrollment of 67,500 students accounts for 8.8% of our data set. Its 2023 student vaccination rate was 79%. We ran separate analyses to include and exclude MPS from the calculations in order to isolate its impact on the data.

We further examined vaccination rates using five distinctive traits of school districts: locale (urban versus rural), size by enrollment, and percentages of students who are non-white, have a disability, or come from economically disadvantaged homes.

Districts with higher rates of students with disabilities had a greater share of students who did not meet vaccination requirements (see Figure 2). The districts with fewer than 11% of students with a disability had an average unvaccinated rate of 7.7%, whereas the

Figure 2: Unvaccinated Trends Heavily Influenced by MPS

Average unvaccinated rate by district type, 2023



Sources: Department of Health Services and Department of Public Instruction

districts with more than 19% of students with a disability reported an unvaccinated rate of 18.0%. (Statewide in 2023, 14.9% of public school students were classified as having a disability.)

We also find that districts with smaller proportions of students from economically disadvantaged homes tend to have higher vaccination rates. Those with less than 25% of students who are economically disadvantaged had an average unvaccinated rate of 7.9%, while the average rate in districts where more than half of students were economically disadvantaged was 14.2%.

In both of these categories – disability and economic status – the differences cited above were consistent whether or not MPS was included in the analysis. For the other three categories cited in Figure 2, however, the removal of MPS made a difference. If MPS is included, then vaccination rates appear lower for large districts, urban districts, and districts with larger non-white student populations. However, if MPS is excluded from the analysis, there are not significant differences among these categories.

Of those students who did not meet minimum requirements, we delved more deeply into the two largest categories: "behind schedule" and "personal conviction waivers."

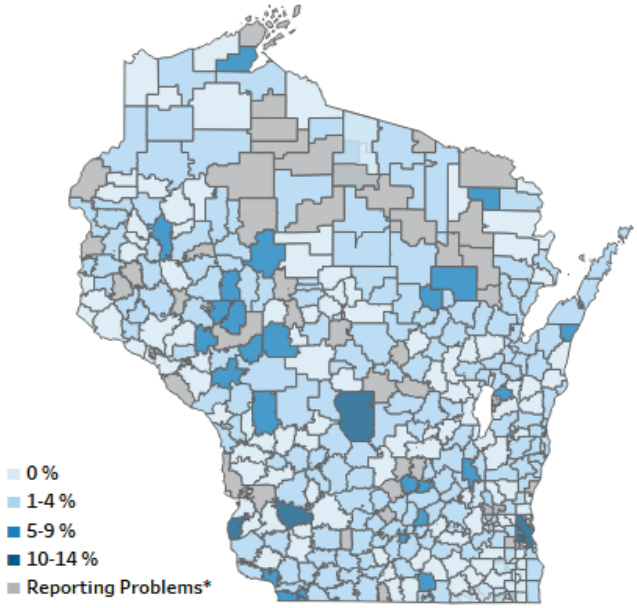
Districts with higher rates of students behind schedule tended to be larger and urban and had higher rates of students with disabilities and from economically disadvantaged homes (see Figure 3). These trends held even when MPS was excluded from the data.

The starkest difference was along income lines. Districts in which fewer than 25% of students come from economically disadvantaged homes had an average behind schedule rate of 1.3%, while those in which 25% to 50% were economically disadvantaged had a behind schedule rate of 1.8%. Notably, those districts in which more than half of students come from economically disadvantaged homes had an average behind schedule rate of 6.6%. Even without MPS, the average rate for these districts with more students in poverty was 3.7%, more than twice the rate of the other categories.

The behind schedule category does not necessarily indicate any reluctance from the student or family about being vaccinated. Instead, the lack of family resources, which is often associated with lower access to health coverage and medical care, may mean that these students have difficulty obtaining vaccinations.

Figure 3: Vaccinations Behind Schedule in Some Districts

Percentage of students behind schedule, 2023



Source: Dept. of Health Services; * Includes districts with missing or incorrect data.

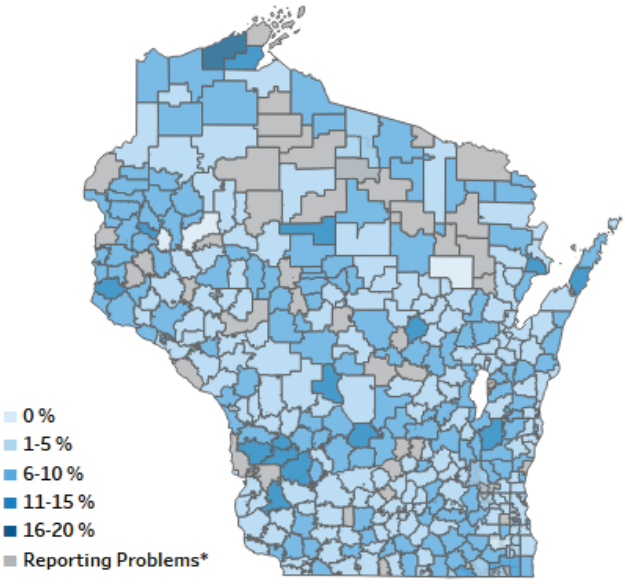
When seeking to increase immunization rates, therefore, DHS and state officials could choose to target the districts with the most students behind schedule with vaccination clinics or other similar resources. If the 78 districts with the most students living in poverty were able to catch up with their vaccinations, then more than 14,000 additional students in the state would be fully immunized and the overall statewide vaccination rate for students would increase by 1.8 percentage points.

Students are able to waive school immunization requirements for health reasons or personal or religious convictions. Over the past two decades, statewide personal conviction waivers have increased from 2.6% in 2003 to 4.6% in 2023 while health and religious waivers have remained relatively flat, with neither above 1% in a given school year.

Our analysis found that districts with higher rates of personal conviction waivers tended to be small, located in towns and rural communities, and have fewer students of color (see Figure 4 on the next page). Statewide, 4.6% of students waive some vaccination

Figure 4: Personal Conviction Waivers Leave Students Unvaccinated in Small, Rural Districts

Percentage of students with personal conviction waivers, 2023



Source: Dept. of Health Services; * Includes districts with missing or incorrect data.

requirement based on personal convictions. However, districts with fewer than 500 students had an average waiver rate for personal convictions of 6.2% while towns and rural districts had rates of 5.9% and 5.8%, respectively.

It is also notable that districts in which more than 90% of the students are white had an average personal conviction rate of 6.2%, whereas those in which fewer than 80% of students are white had an average rate of 3.7%. No trend in personal conviction waivers was evident with respect to socio-economic status or the proportion of students with disabilities. MPS was not driving the numbers up in any of these analyses; on the contrary, the district had a relatively low rate (1%) of personal conviction waivers and actually reduced the statewide rate of waivers.

Because many of the districts affected by waivers are small, one may be tempted to dismiss these trends. After all, the 93 small districts only account for 4% of the state's students. However, if the trend of personal conviction waivers keeps growing, these small communities of students may become vulnerable to outbreaks of preventable diseases and could also potentially spread diseases to others.

In addition, it is possible that low student immunization rates in a community reflect lower rates for adults as well (or will in the future as the students age).

GROUNDING ACTION IN RELIABLE DATA

The decrease in immunization rates is a statewide challenge that will require localized, community-based solutions. Where the state can play an immediate role, however, is in improving DHS' data collection process so that all districts report accurate and consistent information.

At the local level, those districts with large portions of their students behind in their vaccination schedules could be targeted with vaccination clinics, perhaps coinciding with school registration or back-to-school events.

Local and state officials may also wish to gather more information about districts with high rates of students waiving immunization requirements on personal conviction grounds. A better understanding of families' reasons for this decision could inform campaigns to explain the benefits of vaccines and improve immunization rates.

Low vaccination rates ultimately represent a risk to students, their communities, and the state as a whole. Educating the public and raising these rates will require time, focus, and resources, but the current trend indicates that policymakers should consider making a concerted effort now to do so.