

# Queensland School Immunisation Program

## 2021 Annual Report



### **Queensland School Immunisation Program—Annual Report 2021**

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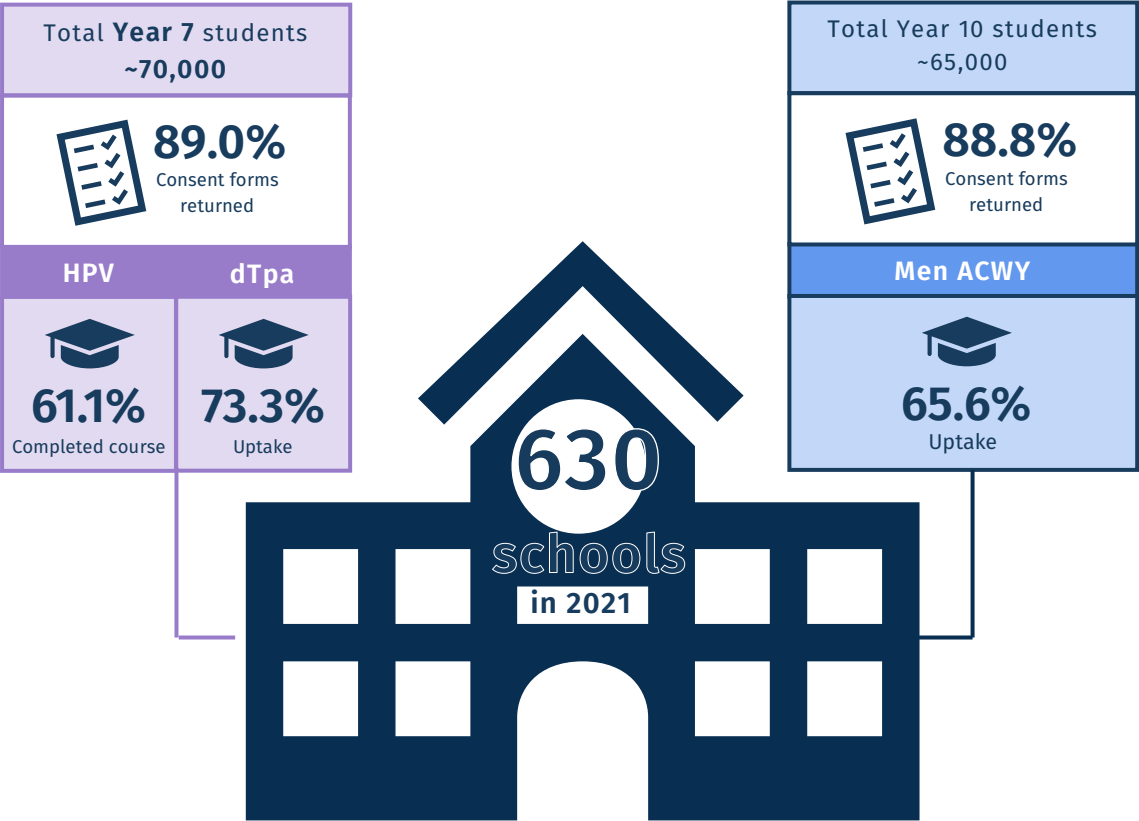
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# Key outcomes from the Queensland School Immunisation Program 2021



# Introduction

The School Immunisation Program (SIP) offers secondary school students in state and non-state schools across Queensland the opportunity to be vaccinated against a range of diseases in the school setting. The diseases vaccinated against through the SIP are:

- human papillomavirus (HPV)
- diphtheria, tetanus, pertussis (dTpa)
- meningococcal ACWY (menACWY).

The SIP is delivered by Hospital and Health Services (HHSs) either directly or via an agreement with an immunisation provider. The model for delivery varies across the state and some HHSs deliver the SIP to schools in other HHSs<sup>1</sup>. Meningococcal ACWY vaccine is also offered free in the community setting via GPs for adolescents aged 15 -19 years of age.

This report focuses on uptake of the vaccines offered in the SIP for school year 2021.

## Strategic Goals

Key focus area 2: Adolescents, Objective 2.1 of the *Queensland Health Immunisation Strategy 2017-2022* (the Strategy) sets an aspirational target of 85 per cent of adolescents to be vaccinated through the SIP. To achieve this target, the Strategy identifies three specific Actions. These are outlined below, along with progress to date:

- Action 2.1.1: Implement and monitor changes to the *Public Health Act 2005* to enable disclosure of identifiable student information to vaccine service providers.
  - School immunisation providers now have legislative power to request student and parent details from school principals to follow up with parents who did not return a consent form.
- Action 2.1.2: Review consent and follow-up processes to streamline the School Immunisation Program.
  - Consent forms now allow parents to indicate 'yes' or 'no' to vaccination. Immunisation providers do not follow up parents who indicate 'no' to vaccination
- Action 2.1.3: Implement and evaluate innovative projects to increase participation, including opportunistic vaccination, to ensure completion of the vaccination schedule.
  - SIP providers are encouraged to offer catch-up vaccinations for students who miss scheduled school clinics. Students can also receive their vaccination at their doctor or community immunisation clinic.

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<sup>1</sup> Some HHSs use a flexible model of service delivery due to a range of reasons including fluctuations in staff availability, access during the wet season and mobility of adolescents from remote communities. Strategies include offering continual catch up vaccination of those aged 12 – 19 years in the community setting during the year and catch up in the following school year.

# School Immunisation Program 2021 performance

## COVID-19 pandemic

School-based vaccination rates have decreased since 2019. This is likely an effect of the COVID-19 pandemic, which has resulted in the cancellation of some school vaccination clinics, along with a sustained increase in student and staff absenteeism.

In 2021, school-based vaccination clinics were also impacted by confusion regarding the required interval between receiving a COVID-19 vaccination and a SIP vaccination, as well as the required interval between contracting COVID-19 and being vaccinated in the SIP. In some cases, this confusion resulted in parental consent for the school-based vaccination being withdrawn.

Students who missed their school-based vaccination in 2021 can receive catch-up vaccinations through the school-based program in 2022 or through other immunisation providers such as GPs. Vaccine completion rates continues to be monitored by the Queensland Immunisation Program.

## Consent form return

Every student must return a form indicating parental consent to vaccination prior to being vaccinated.

Where a student does not return a consent form, school immunisation providers have legislative power to request student and parent details from school principals to follow up directly with the parents. Most providers access student and parent details from all, or a targeted proportion, of their schools to improve consent form return.

Parents can indicate 'yes' or 'no' to vaccination. School immunisation providers do not follow up with parents who indicate 'no' to vaccination.

Consent form return is stated as a proportion of the total students and includes those who indicated 'no' to vaccination.

## HPV uptake results

In 2018, the nine-valent human papillomavirus (HPV) vaccine, Gardasil 9®, was introduced onto the National Immunisation Program (NIP) schedule for adolescents, replacing the four-valent vaccine Gardasil®. Consequently, the HPV vaccine regimen used in the SIP changed from a three-dose course (given at 0, 2 and 6 months) to a two-dose course (given at 0 and 6 months).

As shown in Table 1 and Figure 1, for the 2021 school year:

- 92.6% of year 7 students returned a consent form. This was an increase from 86.6% in 2020.
- 61.1% of year 7 students completed their two-dose HPV vaccination course in 2021. This was a small increase from 2020 (60.1%).
- A higher proportion (72.4%) of students received their first dose of HPV vaccine in 2021 compared to 2020 (71.0%).
- HPV uptake fell by 11.3% over the two-dose course (72.4% for dose 1 and 61.1% for dose 2), greater than the 10.9% percentage point difference observed in 2020.

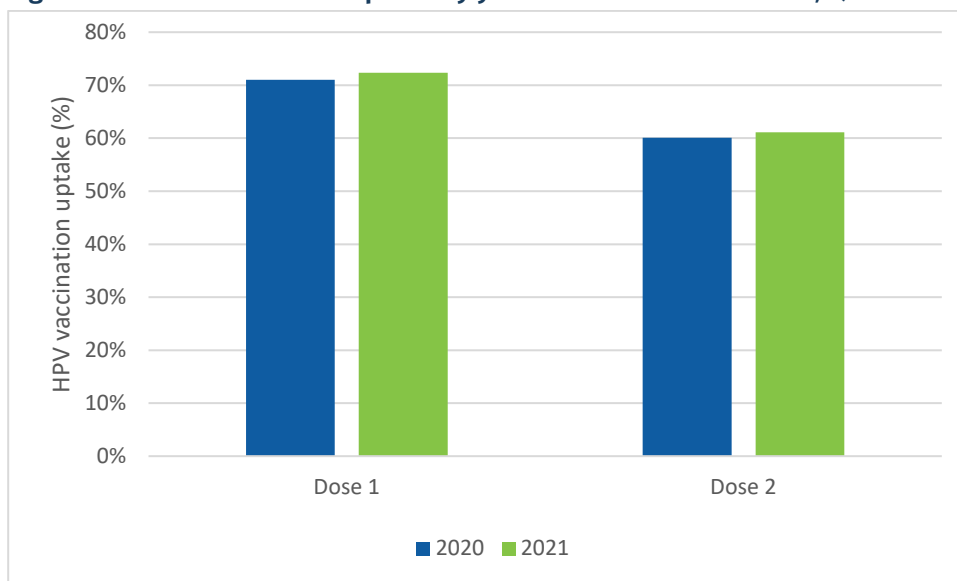
**Table 1: Year 7 HPV vaccine uptake by HHS, Queensland SIP 2021**

Year 7 HPV (2021)					
Hospital and Health Service	Total Schools	Total Cohort	% consent forms returned	% dose 1 uptake	% dose 2 uptake
Cairns and Hinterland	38	3,647	81.0%	70.6%	56.4%
Central Queensland	42	3,450	89.4%	77.9%	62.7%
Central West	9	97	91.8%	88.7%	74.2%
Darling Downs	64	4,578	80.1%	65.6%	49.8%
Gold Coast	50	7,907	87.6%	73.7%	62.8%
Mackay	24	2,555	92.3%	81.6%	68.4%
Metro North	93	13,903	100.8%*	73.4%	61.0%
Metro South	119	15,939	104.9%*	73.4%	68.2%
North West	11	390	81.0%	73.1%	50.3%
South West	12	303	86.8%	82.2%	74.9%
Sunshine Coast	54	5,891	81.5%	61.3%	48.0%
Torres and Cape	9	305	75.4%	69.5%	41.3%
Townsville	40	3,314	87.1%	78.8%	65.4%
West Moreton	33	4,367	81.7%	69.0%	57.6%
Wide Bay	32	2,912	87.1%	75.2%	63.0%
<b>Queensland Total</b>	<b>630</b>	<b>69,558</b>	<b>92.6%</b>	<b>72.4%</b>	<b>61.1%</b>

Source: 2021 SIP Annual Outcome Reports

\*Consent form return over 100% was a result of enrolment provided by schools being higher than student enrolments reported by the Department of Education, the Association of Independent Schools Queensland and the Queensland Catholic Education Commission at February census date.

**Figure 1: Year 7 HPV vaccine uptake by year level and dose number, Queensland SIP 2020 and 2021<sup>2</sup>**



Source: 2020 and 2021 SIP Annual Outcome Reports

Queensland coverage data from the Australian Immunisation Register indicates that in 2020, 76.7% of girls and 73.8% of boys were fully vaccinated against HPV by the age of 15 years. These rates were lower for Aboriginal and Torres Strait Islander children, at 71.5% for girls and 64.8% for boys by the age of 15 years<sup>2</sup>.

<sup>2</sup> National Centre for Immunisation Research and Surveillance, 2020. *Annual Immunisation Coverage Report 2020*.

## dTpa uptake results

As shown in Table 2, for the 2021 school year:

- 89.0% of students returned a consent form, an increase from 86.8% observed in 2020.
- 73.3% of students received their dTpa vaccination, slightly higher than the 72.1% achieved in the 2020 SIP.

**Table 2: Diphtheria, tetanus and pertussis (dTpa) vaccine uptake by HHS, Queensland SIP 2021**

Year 7 dTpa (2021)				
Hospital and Health Service	Total schools	Total Cohort	% consent forms returned	% dTpa uptake
Cairns and Hinterland	38	3,647	81.1%	72.2%
Central Queensland	42	3,450	89.4%	79.3%
Central West	9	97	91.8%	86.6%
Darling Downs	64	4,578	77.9%	68.0%
Gold Coast	50	7,907	88.5%	75.6%
Mackay	24	2,555	92.3%	83.1%
Metro North	93	13,903	96.2%	73.8%
Metro South	119	15,939	93.0%	74.0%
North West	11	390	81.0%	73.6%
South West	12	303	86.8%	82.5%
Sunshine Coast	54	5,891	82.1%	61.5%
Torres and Cape	9	305	75.4%	70.2%
Townsville	40	3,314	87.0%	79.0%
West Moreton	33	4,367	81.5%	69.8%
Wide Bay	32	2,912	87.6%	77.5%
<b>Queensland Total</b>	<b>630</b>	<b>69,558</b>	<b>89.0%</b>	<b>73.3%</b>

Source: 2021 SIP Annual Outcome Reports

Coverage data from the Australian Immunisation Register indicates that in 2020, 84.2% of Queensland children had received their adolescent booster of dTpa by the age of 15 years. The rate was slightly lower for Aboriginal and Torres Strait Islander children, at 82.8% by the age of 15 years<sup>3</sup>.

<sup>3</sup> National Centre for Immunisation Research and Surveillance, 2020. *Annual Immunisation Coverage Report 2020*.



## Meningococcal ACWY uptake results

As shown in Table 3, for the 2021 school year:

- A higher proportion of students returned a consent form (88.8%) compared with 2020 (82.3%). This result continues the upward trend of consent form return for this vaccination since its introduction in 2017.
- There was a decrease in the proportion of Year 10 students who received their meningococcal ACWY vaccination in 2021 (65.6%) compared to the 2020 SIP (67.4%).

**Table 3: Meningococcal ACWY vaccine uptake by HHS, Queensland SIP 2021**

Year 10 Meningococcal ACWY (2021)				
Hospital and Health Service	School count	Total cohort	% consent forms returned	% Meningococcal ACWY uptake
Cairns and Hinterland	38	3,565	74.2%	66.1%
Central Queensland	42	3,275	80.9%	70.0%
Central West	9	86	89.5%	69.8%
Darling Downs	64	4,016	71.0%	56.4%
Gold Coast	50	7,451	83.8%	70.8%
Mackay	24	2,293	86.1%	77.8%
Metro North	93	13,127	99.7%	64.7%
Metro South	119	15,109	108.6%*	66.6%
North West	11	315	80.0%	70.2%
South West	12	261	85.1%	82.0%
Sunshine Coast	54	5,737	70.0%	52.3%
Torres and Cape	9	240	57.9%	44.2%
Townsville	40	3,127	82.2%	75.2%
West Moreton	33	4,027	74.2%	65.2%
Wide Bay	32	2,752	70.6%	63.8%
<b>Queensland Total</b>	<b>630</b>	<b>65,381</b>	<b>88.8%</b>	<b>65.6%</b>

Source: 2021 SIP Annual Outcome Reports

\*Consent form return over 100% was a result of enrolment provided by schools being higher than student enrolments reported by the Department of Education, the Association of Independent Schools Queensland and the Queensland Catholic Education Commission at February census date.

Coverage data from the Australian Immunisation Register indicates that in 2020, 73.3% of Queensland children had received their adolescent booster of MenACWY by the age of 17 years. The rate was lower for Aboriginal and Torres Strait Islander children, at 67.3% by the age of 17 years<sup>4</sup>.

<sup>4</sup> National Centre for Immunisation Research and Surveillance, 2020. *Annual Immunisation Coverage Report 2020*.

## Other measures

Successfully vaccinating a student relies on several steps – the student must be provided with and return a consent form, the consent form must indicate parental approval to vaccinate, and the student must attend and complete the vaccination appointment. Therefore, it is also useful to analyse the proportion of students who completed each step of this pathway since improving any step of this pathway will improve the vaccination uptake rate. In particular, the proportion of students fully vaccinated after return of a consent form indicating approval to vaccination ('Proportion of students who consented to vaccination who were vaccinated') is a useful measure of SIP performance since there was a demonstrable intent to vaccinate these students.

Table 4 shows that vaccination consent form return in 2021 was higher than in previous years (89-93% in 2021 and 80-87% in 2019 and 2020). This was largely driven by an increase in consent form return in Metro North and Metro South. A similar proportion of returned forms indicated parental approval for vaccination over the last three years (87-88% in 2021 and 88-93% in 2019 and 2020).

The main driver of reduced immunisation coverage in the SIP in 2020 and 2021 was a lower proportion of students fully vaccinated after returning a consent form indicating approval to vaccination (76-95% in 2021 and 2020 and 86-96% in 2019). This was likely due to COVID-19 related factors such as cancellation of school clinics and increased student absenteeism, in addition to standard reasons including conflicting school scheduling, student illness, or needle phobia.

**Table 4: Number and percent of students completing each step of the Queensland SIP pathway by vaccine, 2019-2021**

Vaccine	2021			2020			2019		
	HPV	dTpa	menACWY	HPV	dTpa	menACWY	HPV	dTpa	menACWY
Total student cohort (n)	69,558	69,558	65,381	70,183	70,183	62,820	68,262	68,262	61,942
Consent forms returned (n,%)	64,416 (92.6%)	61,896 (89.0%)	58,074 (88.8%)	60,916 (86.8%)	60,906 (86.8%)	51,714 (82.3%)	59,193 (86.7%)	59,044 (86.5%)	49,334 (79.6%)
Consented to vaccination (n,%)	55,844 (86.7%)	53,879 (87.0%)	50,914 (87.7%)	53,797 (88.3%)	54,517 (89.5%)	46,909 (90.7%)	52,971 (89.5%)	53,989 (91.4%)	45,691 (92.6%)
Proportion of students who consented to vaccination who were vaccinated (%)	76.2%	94.7%	84.2%	78.5%	92.9%	90.2%	86.0%	96.1%	93.3%
Vaccine uptake (n,%)	42,534 (61.1%)	51,002 (73.3%)	42,860 (65.6%)	42,213 (60.1%)	50,632 (72.1%)	42,321 (67.4%)	45,536 (66.7%)	51,860 (76.0%)	42,628 (68.8%)

Source: 2019-2021 SIP Annual Outcome Reports.

**Total student cohort:** The total number of students in that year level reported as 'total cohort for dose 1' on the SIP Annual Outcome Report. This information is provided by schools to SIP providers.

**Consent forms returned (%):** The number of consent forms returned divided by the total student cohort. For HPV this is presented as percent of consent forms returned for dose 1.

**Consented to vaccination (%):** The number of consent forms returned indicating 'yes' for vaccination divided by the number of consent forms returned. For HPV this is presented as percent of consent forms returned indicating 'yes' for dose 1.

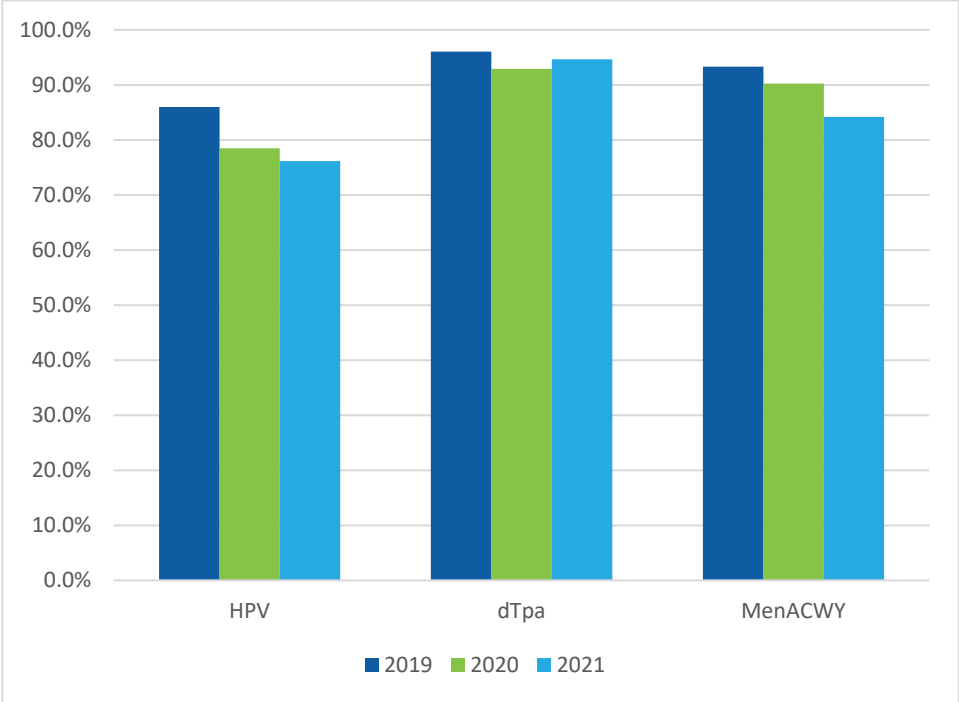
**Proportion of students who consented to vaccination who were vaccinated (%):** The number of students fully vaccinated divided by the number of consent forms returned indicating 'yes' for vaccination. For HPV this is presented as percent of students vaccinated as a proportion of consent forms returned indicating 'yes' for dose 1.

**Vaccine uptake:** The number of students fully vaccinated divided by the total student cohort.

Figure 2 shows that between 2020 and 2021, there was a decline in the proportion of students fully vaccinated against Meningococcal ACWY after return of a consent form indicating 'yes' to vaccination, from 90.2% to 84.2%.

Since 2019, the most significant decline in the proportion of students fully vaccinated despite consent to vaccination was observed for HPV (76-79% in 2020-2021 vs 86.0% in 2019). Since HPV is the only SIP vaccine that requires two doses, its completion rate was the most likely to be affected by COVID-19-related factors such as cancellation of school clinics and absenteeism.

**Figure 2: Students vaccinated of those who consented to vaccination (%), Queensland SIP 2019-2021**

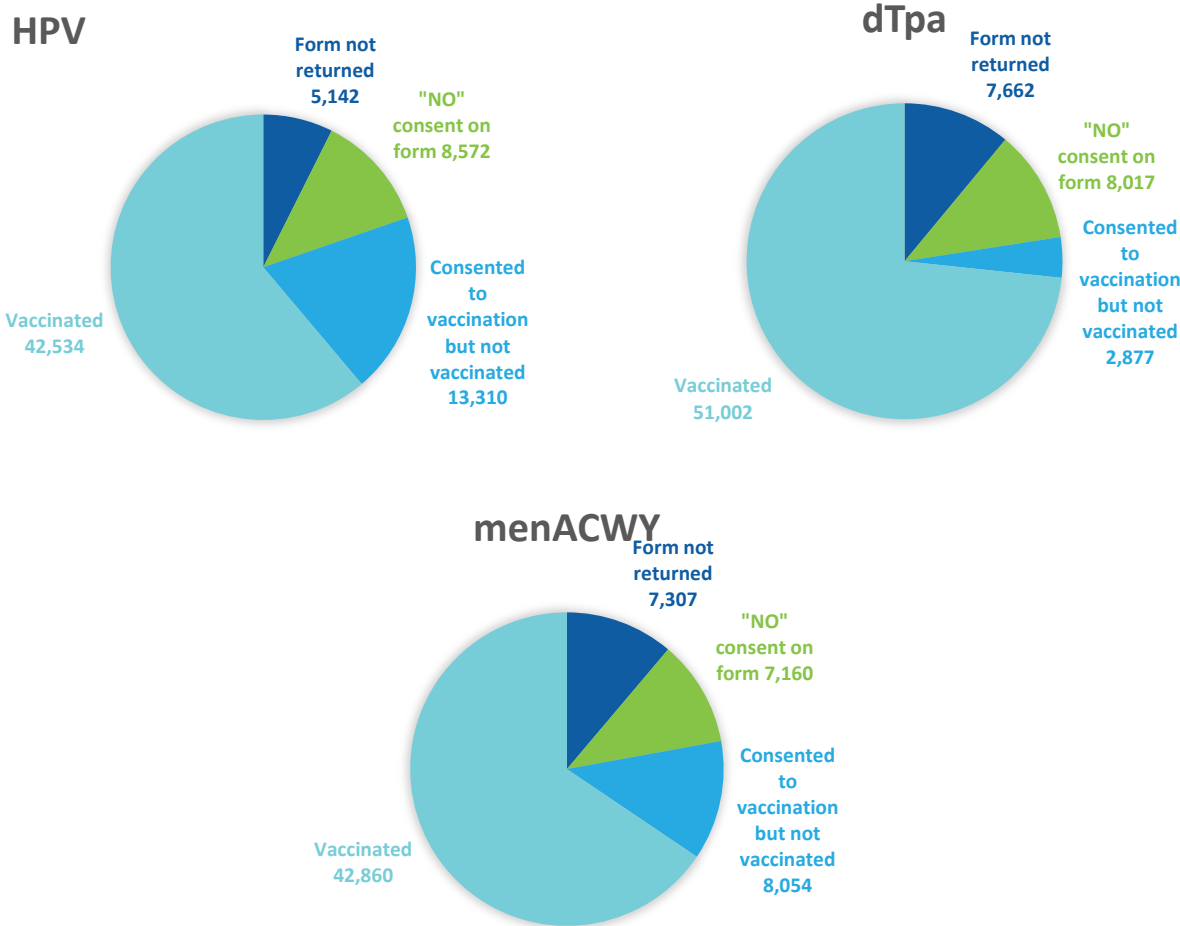


Source: 2019-2021 SIP Annual Outcome Reports

Figure 3 shows that in 2021, over 88% of students returned their consent form. Between vaccine types, a similar proportion of parents returned a consent form indicating they did *not* give approval for their child to be vaccinated ('no' to vaccination), although the absolute number was lower for meningococcal ACWY.

There was a substantial number of students who returned a form indicating consent for vaccination but who were not fully vaccinated. This was particularly marked for HPV; 13,310 students whose parents had indicated consent for vaccination were not fully vaccinated by the end of the school year.

**Figure 3: Student numbers through the 2021 Queensland SIP pathway**



# Methods and definitions

Data in this report are derived from the SIP Annual Outcome Reports submitted to Communicable Diseases Branch (CDB) by the HHSs.<sup>5</sup>

The following methods and definitions were used to determine HPV, dTpa, and meningococcal ACWY uptake in the SIP:

- **Total student cohort:** The total number of students in that year level reported as ‘total cohort for dose 1’ on the SIP Annual Outcome Report. This information is provided by schools to SIP providers based on student enrolments reported by the Department of Education, the Association of Independent Schools Queensland and the Queensland Catholic Education Commission at February census date.
- **Consent forms returned (n):** Total number of ‘yes’ and ‘no’ consent forms returned.
- **Consent forms returned (%):** The number of consent forms returned divided by the total student cohort. For HPV this is presented as percent of consent forms returned for dose 1.
- **Consented to vaccination (n):** Total number of students who returned a ‘yes’ consent form.
- **Consented to vaccination (%):** The number of forms returned indicating ‘yes’ for vaccination divided by the number of consent forms returned. For HPV this is presented as percent of consent forms returned indicating ‘yes’ for dose 1.
- **Proportion of students who consented to vaccination who were vaccinated (%):** The number of students fully vaccinated divided by the number of consent forms returned indicating ‘yes’ for vaccination. For HPV this is presented as percent of students vaccinated as a proportion of consent forms returned indicating ‘yes’ for dose 1.
- **Vaccine uptake:** The number of students vaccinated for that dose divided by the total student cohort.

Data in this report cannot be compared to coverage data produced by other national agencies as the methodology may differ with respect to source of data, time period, age group and geographical areas.

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<sup>5</sup> At the conclusion of each year’s SIP, the HHS’s Public Health Units collate data from each SIP provider and produce a HHS SIP Annual Outcome Report. The report provides information such as total enrolments, number of consent forms returned, and number of students vaccinated by year level.