

Durham Region Influenza Bulletin: 2021/22 Influenza Season Summary (August 29, 2021 to August 27, 2022)

Table 1: Influenza activity in Durham Region

Measure	Summary of Measure
Laboratory Confirmed Cases ¹ (Table 2, Figures 1 & 2)	<p>There were 84 lab confirmed cases of influenza in the 2021/22 influenza season, higher than the previous season (2 in 2020/21) but much lower than the 2019/20 season (463). Counts were much lower than expected during the 2020/21 and 2021/22 seasons due to the COVID-19 pandemic.</p> <p>There were 83 cases of influenza A with a peak in late April; 48 (58 per cent) of these cases were H3, and 35 (42 per cent) were untyped or indeterminate.</p> <p>There was 1 case of influenza B.</p> <p>The proportion of all flu cases that were influenza B was similar (1 per cent) compared to last season (0 per cent).</p>
Age-Specific Rates of Confirmed Cases (Figure 3)	<p>Influenza rates were higher among Durham Region children aged 0-9 years compared to other age groups. Rates were higher for Durham males aged 5-9 and Durham females aged 25-39, 40-54 and 55-69 compared to Ontario males and females.</p> <p>There were 8 cases of influenza among Durham Region adults aged 70 and older with a higher rate among males than females.</p> <p>There were 33 cases of influenza among Durham Region children aged 0 to 9 years with a higher rate among males than females.</p>
Hospitalizations Among Lab Confirmed Cases ² (Figures 4 & 5)	<p>The number of hospitalizations among lab-confirmed cases was higher (47) compared to the previous season (1 in 2020/21) but much lower compared to the 2019/20 season (321). Hospitalizations peaked at the end of April/early May.</p> <p>The proportion of hospitalizations was slightly higher among females (53 per cent) compared to males (47 per cent).</p> <p>The largest proportion of hospitalizations was among children aged 14 and younger (53 per cent), while 21 per cent were among adults 50 years and older.</p>
Respiratory Outbreaks in Institutions ³ (Figures 6 & 7)	<p>There were significantly more respiratory outbreaks in Durham Region institutions (235) compared to previous seasons (121 in 2020/21 and 78 in 2019/20) due to the COVID-19 pandemic.</p> <p>None of these outbreaks were confirmed influenza, which is similar to the 2020/21 season (0 outbreaks) but lower compared to the 2019/20 season (11 outbreaks or 14 per cent), with 92 per cent of these outbreaks attributed to COVID-19.</p> <p>Institutional outbreaks related to respiratory diseases other than COVID-19 were minimal and had no obvious peak in the 2021/22 season. Most institutional outbreaks were related to COVID-19 with the majority occurring between December 2021 to August 2022 with a peak in late December 2021.</p>
Child Absenteeism Due to Illness Reported by Child Care Centres ⁴ (Figure 8)	<p>Child absenteeism at child care centres peaked in late November 2021 at 10.7 per cent. This was lower than the peak in the previous flu season (15.0%) in early October 2020.</p>

Measure	Summary of Measure
Elementary ⁵ and Secondary ⁶ School Absenteeism Due to Illness Reported by Selected Durham Region School Boards (Figures 9 & 10)	<p>Rates of absenteeism due to illness at Durham Region elementary schools were similar to previous years from August 2021 to February 2022, but were much higher than average from late February until June 2022. Rates peaked in early April at 6.4 per cent. This was similar to the peak for the previous season, which was 6.7 per cent in early October 2020.</p> <p>Absenteeism rates for secondary schools peaked in April 2022 at 4.4 per cent. Since public schools were closed as of March 15, 2020 due to the COVID-19 pandemic and absenteeism data for secondary schools was not collected prior to this past season, average data was not available for comparison.</p> <p>Note that schools in Ontario were closed to in-person learning after the winter break from January 5-14, 2022 due to the COVID-19 pandemic.</p>
Influenza Immunization Rates Among Long-Term Care Home (LTCH) and Hospital Staff ⁷ (Figure 11)	<p>Overall, influenza immunization rates were higher among LTCH staff compared to hospital staff in Durham Region.</p> <p>Immunization rates among LTCH staff decreased from 83 per cent (2020/21) to 78 per cent (2021/22). There was also a decrease in immunization rates among hospital staff from 57 per cent (2020/21) to 24 per cent (2021/22).</p> <p>For the 2021/22 season, immunization rates among Durham Region LTCH staff were higher compared to Ontario LTCH staff; however, Ontario hospital staff had higher rates compared to Durham Region hospital staff.</p>

1. The *Health Protection and Promotion Act* (HPPA) requires physicians, nurses and certain other health professionals to report all cases of influenza. These health professionals commonly identify cases of influenza through laboratory test results. There may be considerable under-reporting of cases because an infected person with mild or no clinical symptoms may not seek medical care and/or health professionals may not order laboratory testing.
2. Beginning in the 2017/18 influenza season, only hospital inpatients in an Intensive Care Unit or Critical Care Unit and patients in institutions such as long-term care homes are tested for influenza. Adapted from *Labstract – September 2017: Respiratory Viral Testing Algorithm – Update for Fall and Winter 2017-2018*, by Public Health Ontario, 2017, retrieved from www.publichealthontario.ca.
3. Institutions in Durham Region, including hospitals, long-term care homes (LTCHs) and retirement homes, are required to report suspected outbreaks to the Durham Region Health Department (DRHD).
4. A sample of 79 child care centres in Durham Region voluntarily reported child absenteeism due to illness on a weekly basis. Response rates varied by week.
5. Durham District School Board, Durham Catholic District School board, Kawartha Pine Ridge District School Board, Peterborough Victoria Northumberland and Clarington Catholic District School Board, and Conseil Scolaire Viamonde School Board reported elementary school absenteeism due to illness to DRHD on a weekly basis.
6. Durham District School Board, Durham Catholic District School board, and Kawartha Pine Ridge District School Board reported secondary school absenteeism due to illness to DRHD on a weekly basis.
7. As per the Ontario Recommendations for the Control of Respiratory Infection Outbreaks in Long-Term Care Homes (2018) and the Influenza Surveillance Protocol for Ontario Hospitals (2018), seasonal immunization coverage rates for staff of LTCHs and public hospitals are reportable to the local Medical Officer of Health.

Public Health Ontario produces a provincial summary of each influenza season in their [Public Health Ontario Respiratory Pathogen Bulletin](#).

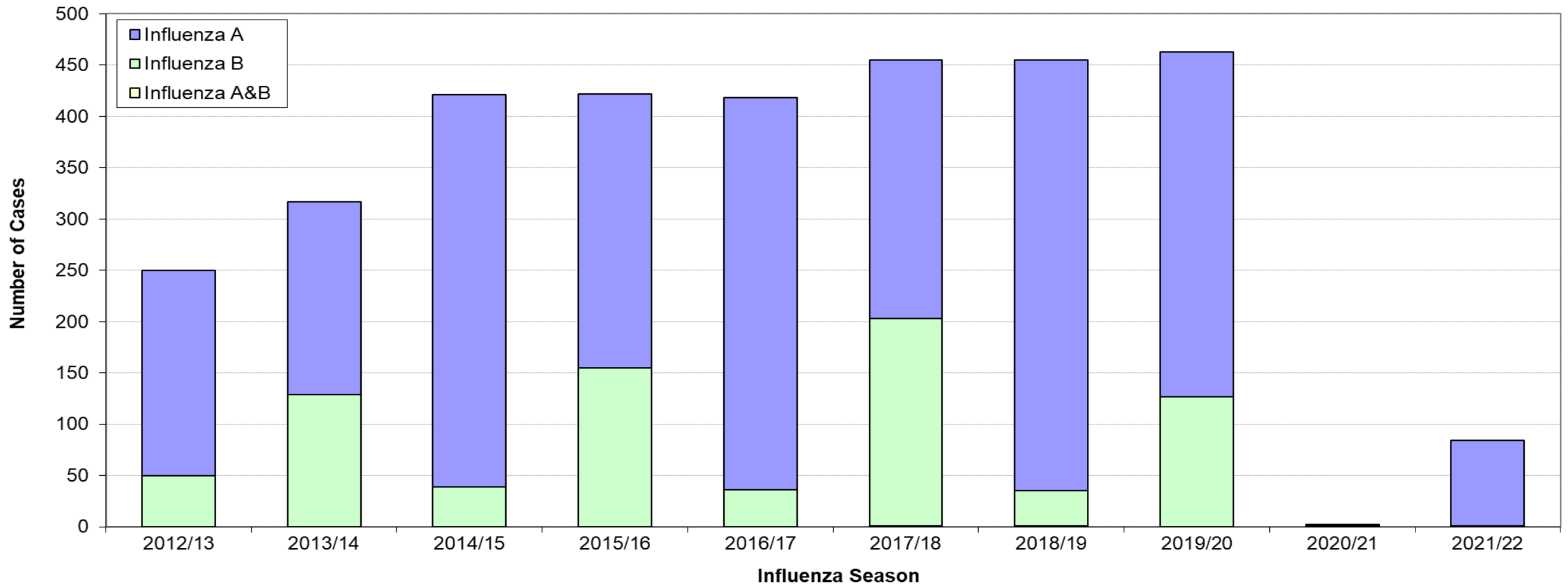
For more information or if you require this information in an accessible format, please contact Durham Health Connection Line at 905-666-6241 or 1-800-841-2729.

Table 2: Confirmed influenza cases in Durham Region by type and episode week for 2021/22 influenza season compared to previous seasons

Week Beginning Date	Week Number	Influenza A	Influenza B	Influenza A & B	2021/2022 Total Cases	2020/2021 Total Cases	2019/2020 Total Cases	2018/2019 Total Cases	2017/2018 Total Cases	2016/2017 Total Cases
29-Aug	35	0	0	0	0	0	0	0	0	0
5-Sep	36	0	0	0	0	0	0	1	1	0
12-Sep	37	0	0	0	0	0	0	0	1	1
19-Sep	38	0	0	0	0	0	0	1	0	1
26-Sep	39	0	0	0	0	0	0	0	0	0
3-Oct	40	0	0	0	0	0	0	0	0	0
10-Oct	41	0	0	0	0	0	1	1	0	2
17-Oct	42	0	0	0	0	0	1	0	0	1
24-Oct	43	0	0	0	0	0	0	0	0	0
31-Oct	44	0	0	0	0	0	1	1	0	0
7-Nov	45	0	1	0	1	0	2	1	1	0
14-Nov	46	0	0	0	0	0	0	1	1	6
21-Nov	47	2	0	0	2	0	2	1	5	5
28-Nov	48	0	0	0	0	0	4	4	4	4
5-Dec	49	0	0	0	0	0	12	9	7	20
12-Dec	50	0	0	0	0	1	20	24	14	21
19-Dec	51	1	0	0	1	0	32	29	17	30
26-Dec	52	0	0	0	0	0	59	43	23	59
2-Jan	1	0	0	0	0	0	48	36	34	48
9-Jan	2	0	0	0	0	0	37	39	34	31
16-Jan	3	0	0	0	0	0	53	35	33	27
23-Jan	4	0	0	0	0	0	43	21	20	31
30-Jan	5	0	0	0	0	0	33	25	45	18
6-Feb	6	0	0	0	0	0	36	15	49	23
13-Feb	7	0	0	0	0	0	11	15	47	14
20-Feb	8	0	0	0	0	0	25	10	23	12
27-Feb	9	0	0	0	0	1	20	12	24	11
6-Mar	10	1	0	0	1	0	13	17	13	7
13-Mar	11	0	0	0	0	0	7	21	18	7
20-Mar	12	2	0	0	2	0	3	16	7	7
27-Mar	13	5	0	0	5	0	5	16	13	4
3-Apr	14	4	0	0	4	0	4	18	8	7
10-Apr	15	9	0	0	9	0	0	5	2	4
17-Apr	16	4	0	0	4	0	0	11	3	0
24-Apr	17	10	0	0	10	0	0	8	2	3
1-May	18	8	0	0	8	0	0	9	2	4
8-May	19	9	0	0	9	0	0	3	0	2
15-May	20	5	0	0	5	0	0	1	1	3
22-May	21	5	0	0	5	0	0	2	2	1
29-May	22	6	0	0	6	0	0	0	1	2
5-Jun	23	2	0	0	2	0	0	0	0	1
12-Jun	24	1	0	0	1	0	0	1	0	0
19-Jun	25	2	0	0	2	0	0	1	0	1
26-Jun	26	3	0	0	3	0	0	0	0	0
3-Jul	27	1	0	0	1	0	0	0	0	0
10-Jul	28	2	0	0	2	0	0	0	0	0
17-Jul	29	0	0	0	0	0	0	0	0	0
24-Jul	30	0	0	0	0	0	0	0	0	0
31-Jul	31	1	0	0	1	0	0	0	0	0
7-Aug	32	0	0	0	0	0	0	0	0	0
14-Aug	33	0	0	0	0	0	0	1	0	0
21-Aug	34	0	0	0	0	0	0	1	0	0
Total	--	83	1	0	84	2	463	455	455	418

Source: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) Database, Extracted by Durham Region Health Department [2022-08-29].

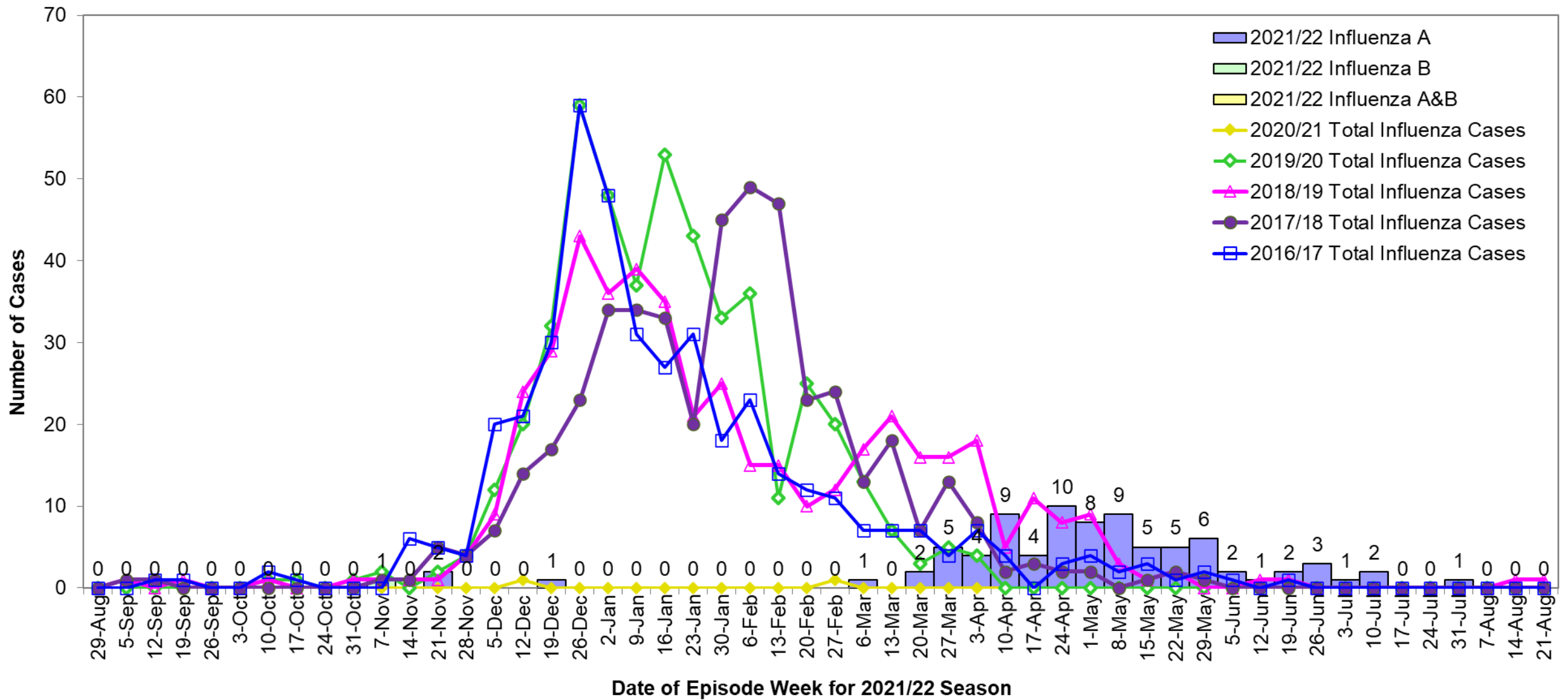
Figure 1: Confirmed influenza cases in Durham Region by type by influenza season, 2012/13 to 2021/22



Type	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Total Cases	250	317	421	422	418	455	455	463	2	84
Influenza A	200	188	382	267	382	252	420	336	1	83
Influenza B	50	129	39	155	36	202	34	127	0	1
Influenza A&B	0	0	0	0	0	1	1	0	1	0
% Influenza B	20%	41%	9%	37%	9%	44%	7%	27%	0%	1%

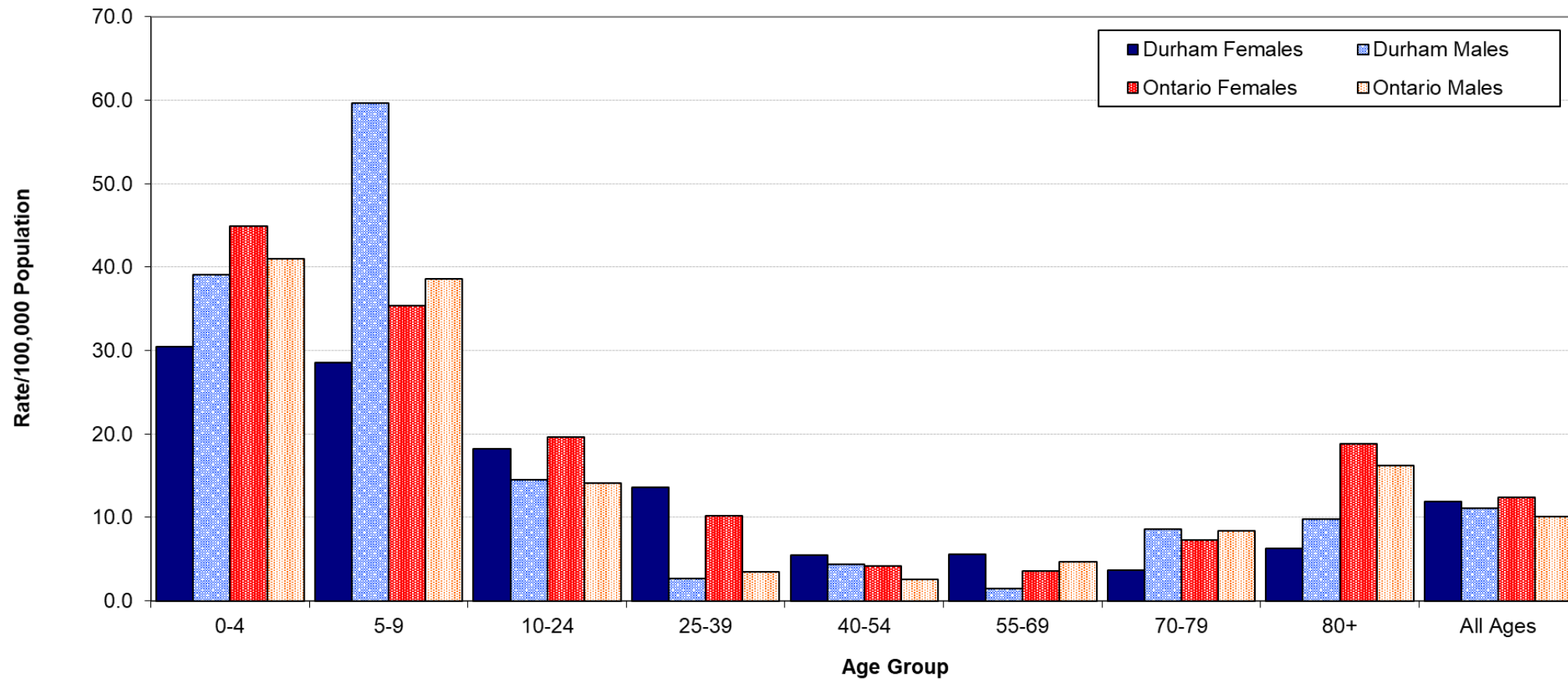
Data Source: Ontario Ministry of Health (MOHLTC), integrated Public Health Information System (iPHIS) Database, Extracted by Durham Region Health Department [2022-08-29].

Figure 2: Confirmed influenza cases in Durham Region by type; 2021/22 influenza season by week compared to previous seasons



Data Source: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) Database, Extracted by Durham Region Health Department [2022-08-29].

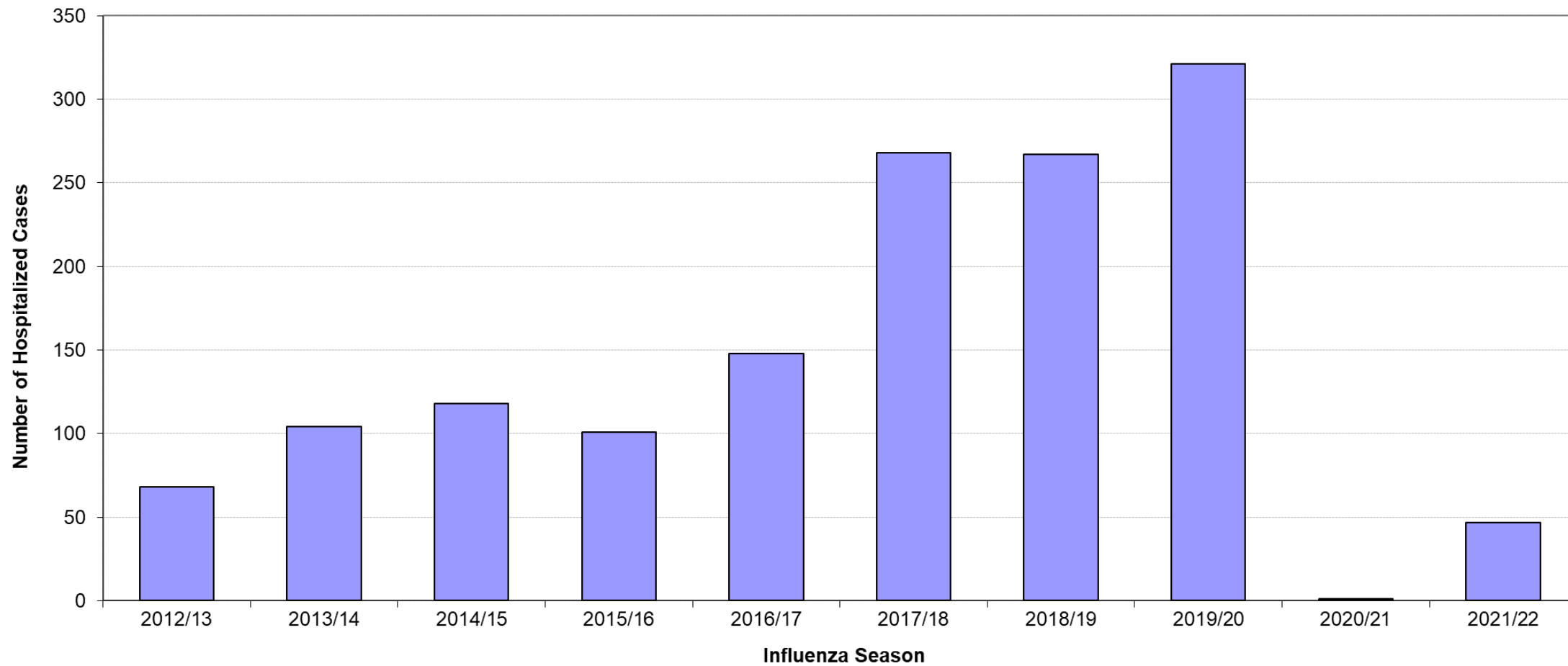
Figure 3: Age specific incidence rate for confirmed influenza cases, Durham Region and Ontario, 2021/22 influenza season



Rates and Counts	0-4	5-9	10-24	25-39	40-54	55-69	70-79	80+	All Ages
Durham Female Rate	30.4	28.6	18.3	13.6	5.4	5.6	3.7	6.3	11.9
Durham Male Rate	39.1	59.7	14.5	2.6	4.3	1.5	8.6	9.8	11.1
Ontario Female Rate	44.9	35.4	19.6	10.2	4.2	3.5	7.3	18.9	12.4
Ontario Male Rate	41.0	38.5	14.1	3.5	2.5	4.6	8.4	16.2	10.1
Durham Female Cases	6	6	12	10	3	3	2	2	44
Durham Male Cases	8	13	10	2	2	1	1	3	40
Durham Total Cases	14	19	22	12	5	4	3	5	84

Data Sources: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) Database, extracted by Durham Region Health Department [2022-08-29]; Ontario MOHLTC, iPHIS database, Public Health Ontario Query: Counts by Age and Gender, extracted [2022-08-30]; Population Estimates, MOHLTC, IntelliHEALTH ONTARIO.

Figure 4: Hospitalizations among confirmed influenza cases in Durham Region by influenza season, 2012/13 to 2021/22

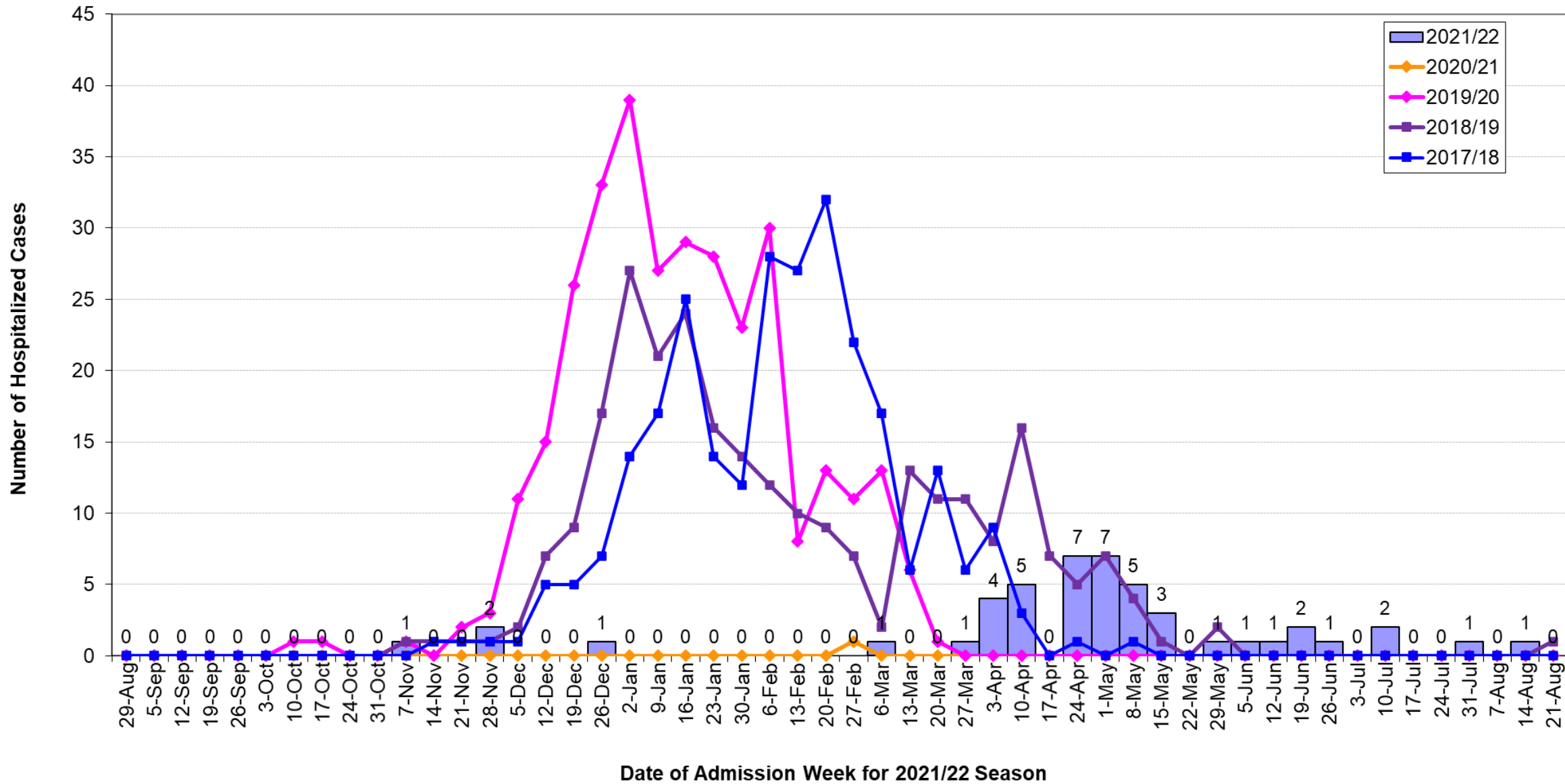


Cases	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Total Cases	250	317	421	422	418	455	455	463	2	84
Hospitalized	68	104	118	101	148	268	267	321	1	47
% Hospitalized	27%	33%	28%	24%	35%	59%	59%	69%	50%	56%

Beginning in the 2017/18 influenza season, only hospital inpatients in an Intensive Care Unit or Critical Care Unit and patients in institutions such as long-term care homes are tested for influenza. Adapted from *Labstract – September 2017: Respiratory Viral Testing Algorithm – Update for Fall and Winter 2017-2018*, by Public Health Ontario, 2017, retrieved from www.publichealthontario.ca.

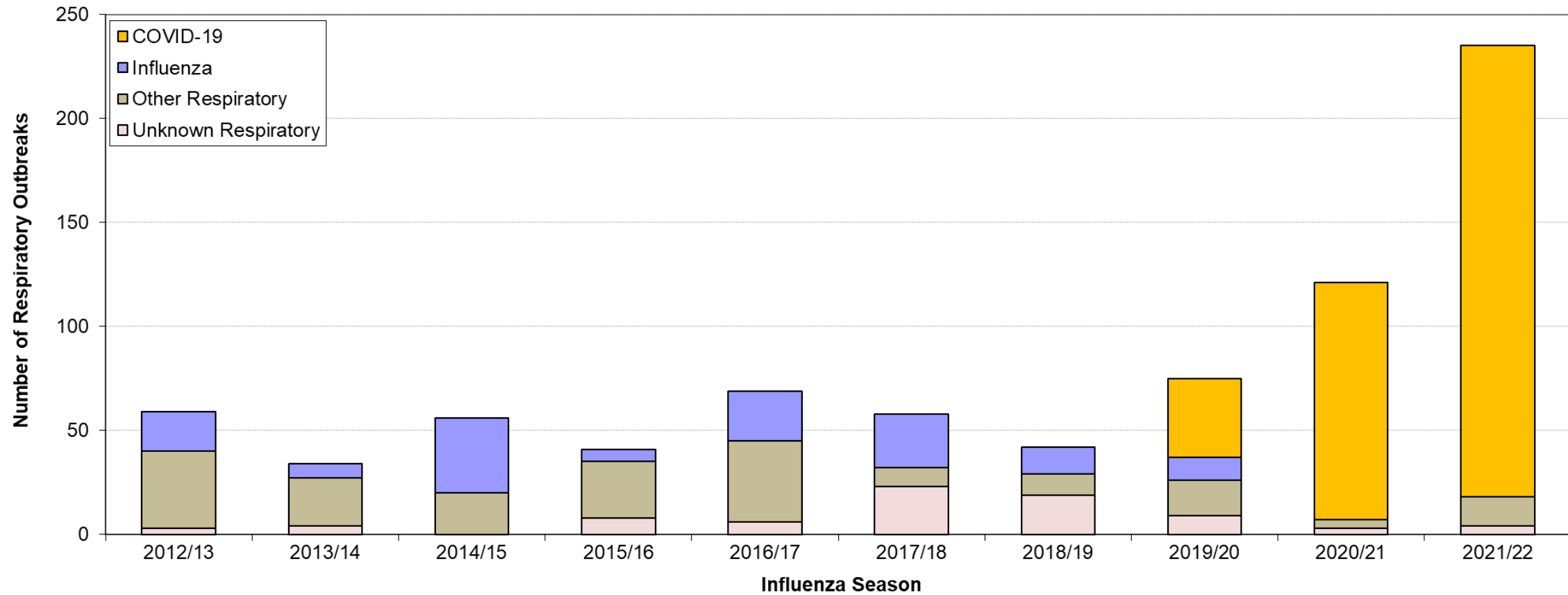
Data Source: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) Database, Extracted by Durham Region Health Department [2022-08-29].

Figure 5: Hospitalizations among confirmed influenza cases in Durham Region by admission week, 2017/18 to 2021/22



Data Source: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) Database, Extracted by Durham Region Health Department [2022-08-29].

Figure 6: Number of respiratory outbreaks in institutions by influenza season, 2012/13 to 2021/22



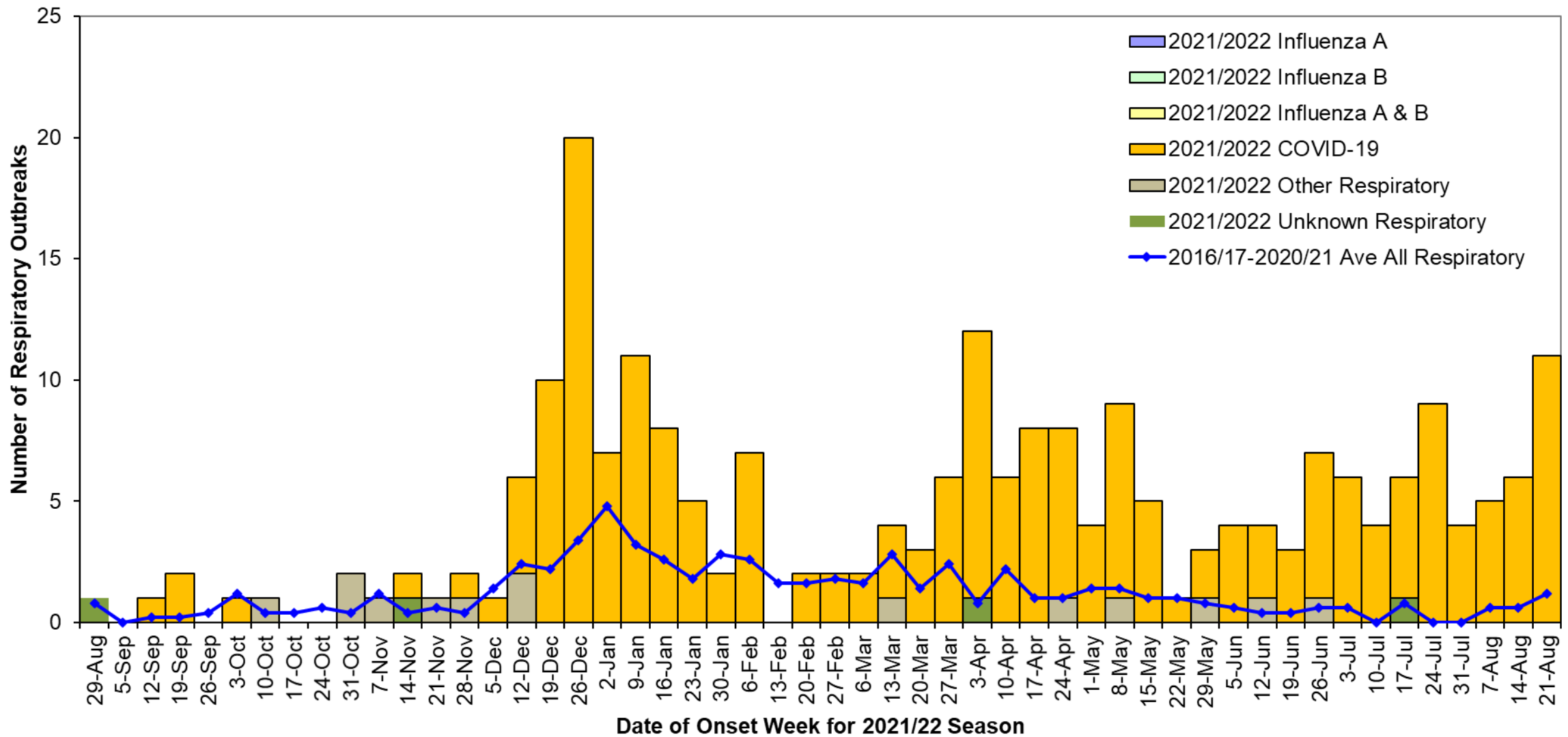
Outbreak	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Influenza	19	7	36	6	24	26	13	11	0	0
COVID-19	0	0	0	0	0	0	0	38	114	217
Other Respiratory	37	23	20	27	39	9	10	17	4	14
Unknown Respiratory	3	4	0	8	6	23	19	9	3	4
Total	59	34	56	41	69	58	42	75	121	235
% Influenza	32%	21%	64%	15%	35%	45%	31%	15%	0%	0%

Institutions include Long-Term Care Homes (LTCHs), Hospitals and Retirement Homes.

Data Sources: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) database, Extracted by Durham Region Health Department [2022-08-29];

Ontario Ministry of Health, Case and Contact Management (CCM) System, Extracted by Durham Region Health Department [2022-09-15]

Figure 7: Number of respiratory outbreaks in institutions; 2021/22 influenza season by week compared to previous seasons



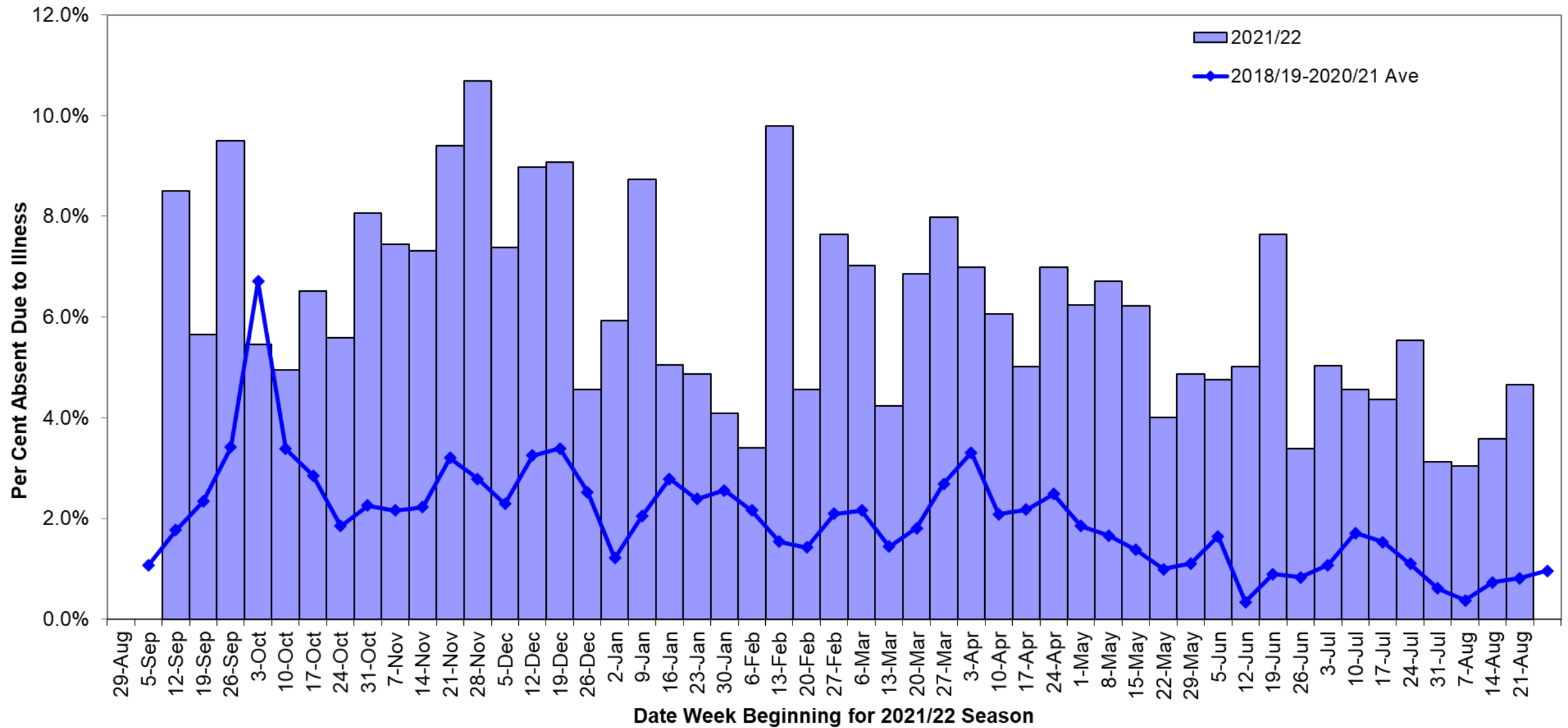
Institutions include long-term care homes, hospitals and retirement homes.

Onset date may differ from reported date.

Data Sources: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) database, Extracted by Durham Region Health Department [2022-08-29];

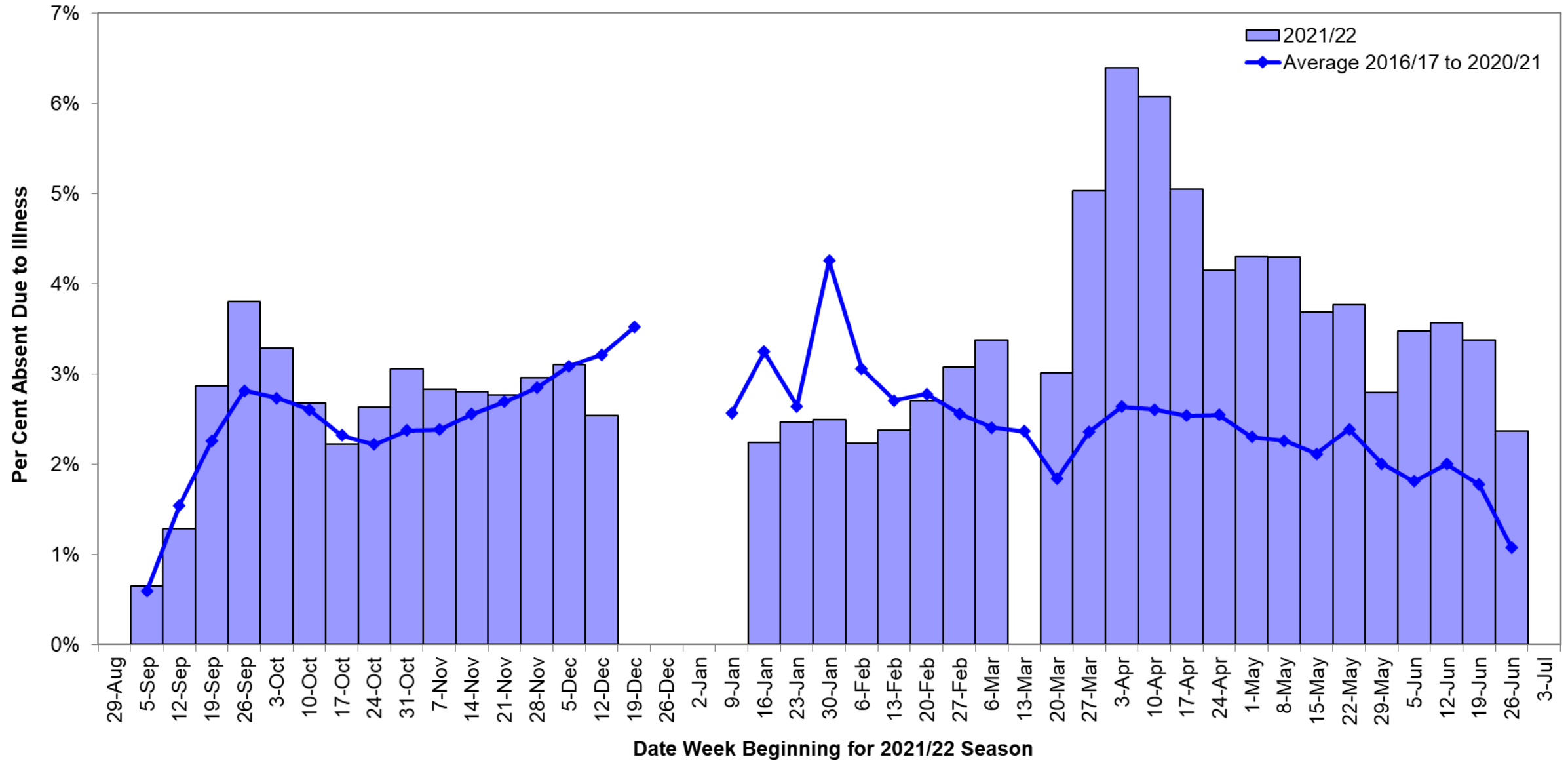
Ontario Ministry of Health, The Public Health Case and Contact Management Solution (CCM), Extracted by Durham Region Health Department [2022-09-15]

Figure 8: Absenteeism due to illness in Durham Region child care centres; 2021/22 influenza season by week compared to average from previous seasons



A sample of 79 child care centres in Durham Region voluntarily reported child absenteeism due to illness on a weekly basis. Response rates varied by week.
 Data Source: Sentinel Child Care Centres in Durham Region.

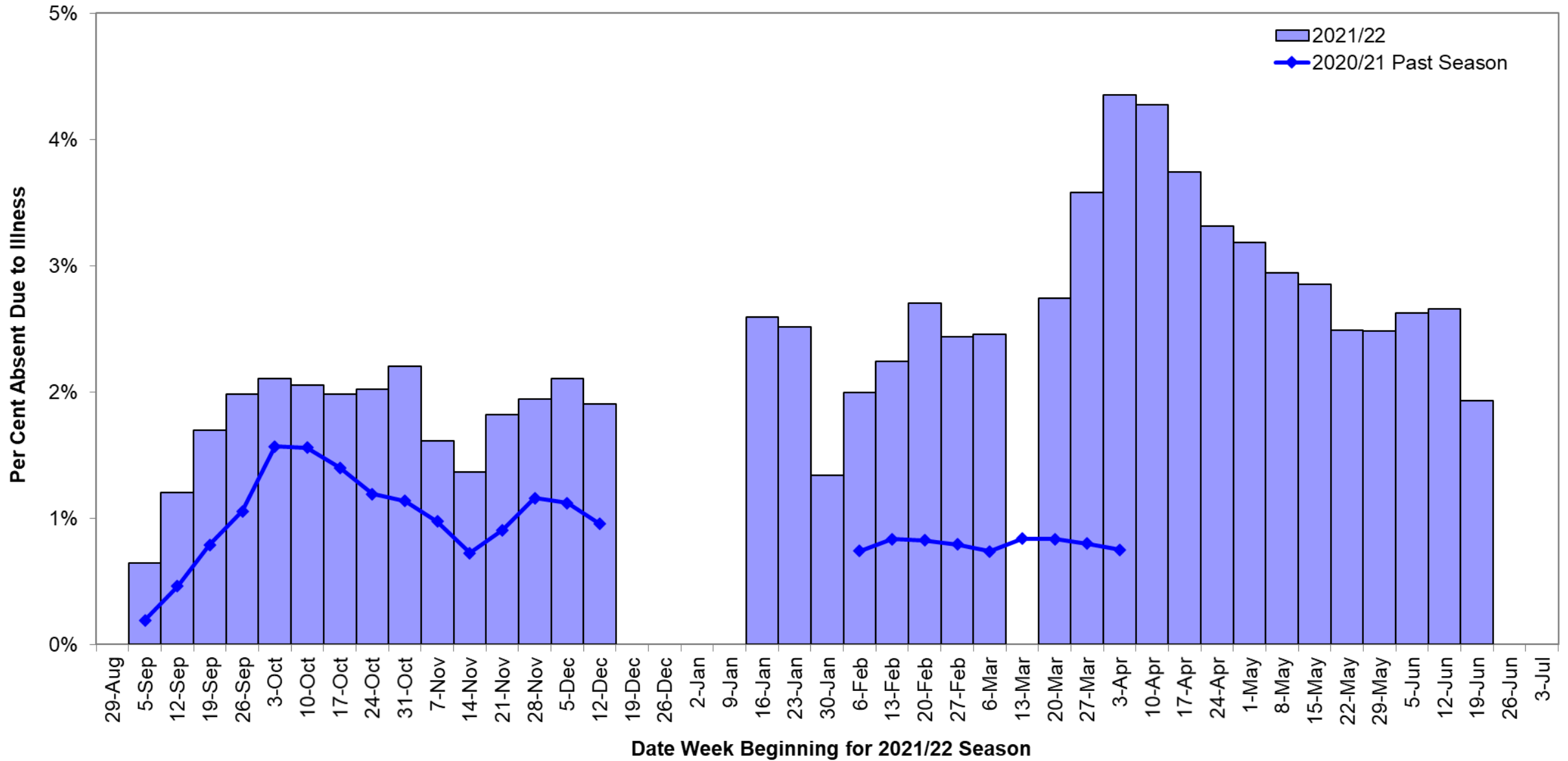
Figure 9: Absenteeism due to illness in Durham Region elementary schools; 2021/22 influenza season by week compared to average from previous seasons



Schools were closed after winter break from January 5-14, 2022 due to the COVID-19 pandemic.

Data Sources: Durham District School Board, Durham Catholic District School Board, Kawartha Pine Ridge District School Board, Peterborough Victoria Northumberland and Clarington Catholic District School Board, and Conseil Scolaire Viamonde School Board.

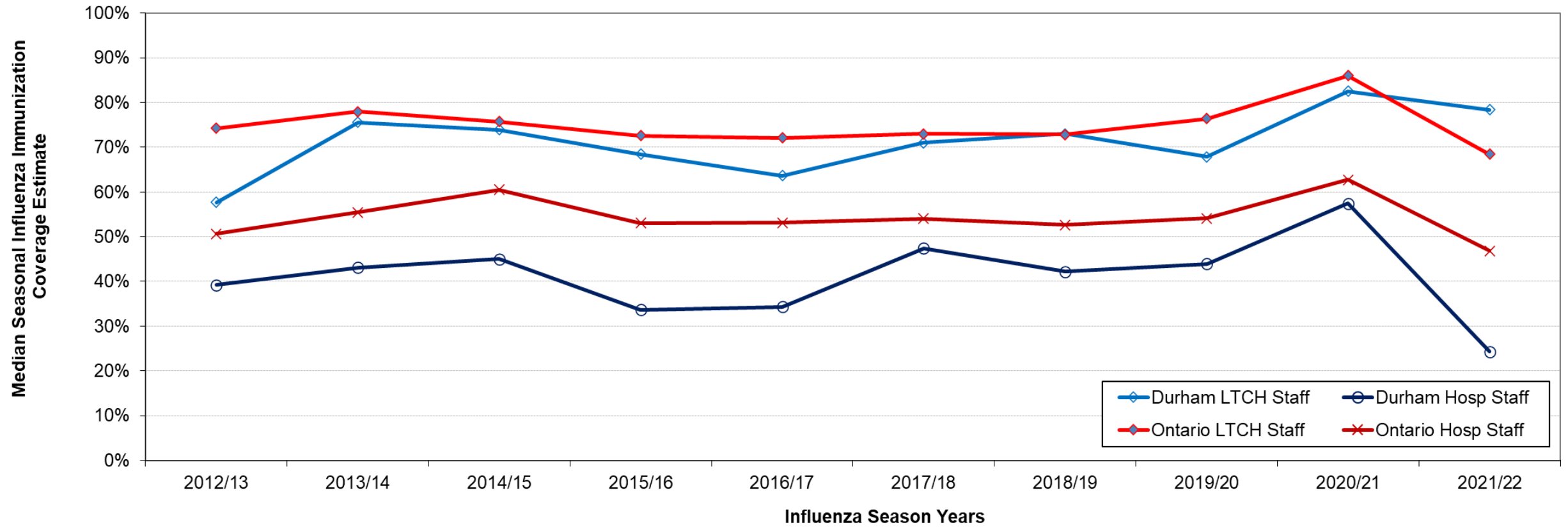
Figure 10: Absenteeism due to illness in Durham Region secondary schools; 2021/22 influenza season by week compared to the 2020/21 season



Schools were closed after winter break from January 5-14, 2022 due to the COVID-19 pandemic.

Data Sources: Durham District School Board, Durham Catholic District School Board, and Kawartha Pine Ridge District School Board.

Figure 11: Median influenza immunization coverage rates among long-term care home and hospital staff; Durham Region and Ontario 2012/13 to 2021/22 influenza seasons



Residents and Staff	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Durham LTCH Staff	57.7%	75.6%	73.9%	68.4%	63.6%	71.0%	73.0%	67.9%	82.5%	78.4%
Ontario LTCH Staff	74.2%	78.0%	75.7%	72.6%	72.1%	73.0%	72.8%	76.4%	86.0%	68.4%
Durham Hospital Staff	39.2%	43.1%	45.0%	33.7%	34.3%	47.4%	42.2%	43.9%	57.4%	24.3%
Ontario Hosp Staff	50.6%	55.4%	60.5%	53.0%	53.1%	54.0%	52.6%	54.1%	62.7%	46.8%

Data Sources: Durham Region Health Department, Health Care Worker Immunization Database;

Public Health Ontario, Fact Sheet: Median influenza immunization coverage estimates among hospital and long-term care staff, 2021-22 influenza season, Ontario