
TO: Chair and members of the Board of Health

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Recommendations

It is recommended that the Board of Health:

1. Receive this report for information.

Key Points

- The rate of COVID-19 related cases has dropped significantly in the last few weeks and is now at 33 per 100,000.
- More than 99% of the vaccine received within a given week is utilized that same week.
- Currently Wellington-Dufferin-Guelph (WDG) meets the vaccination target identified in Step 1 of the Provincial Reopening Plan. It is projected that WDG will meet the Step 2 target by July 6th and Step 3 target by July 16th. Although total first doses will be met weeks earlier than these dates, second doses will occur later as WDG completes first doses prior to second doses.

Discussion

This report is designed to provide an informational update on the current status and impacts associated with the third wave of the COVID-19 pandemic in WDG.

COVID-19 Case Rates

The number of new COVID-19 cases continues to decrease rapidly. The rate per 100,000 is now 33, compared to 61.5 as recently as May 22nd and even higher at 96.2 the week of May 1 (see Figure 1). This means that currently 33 people out of every 100,000 people have COVID-19. With a decrease in COVID-19 cases, it has also been seen that hospitalizations are also decreasing, which is great news when looking at overall provincial acute care capacity. The reproductive number (Re) has also dropped, and is now at 0.72, down from 1.03 the week of May 27. The Re represents a measure of how quickly a virus can spread and having a value of less than 1.0 is crucial to see the end of the pandemic. A value of greater than 1.0 means that each positive COVID-19 case will infect more than one other person leading to the exponential growth of positive case counts.

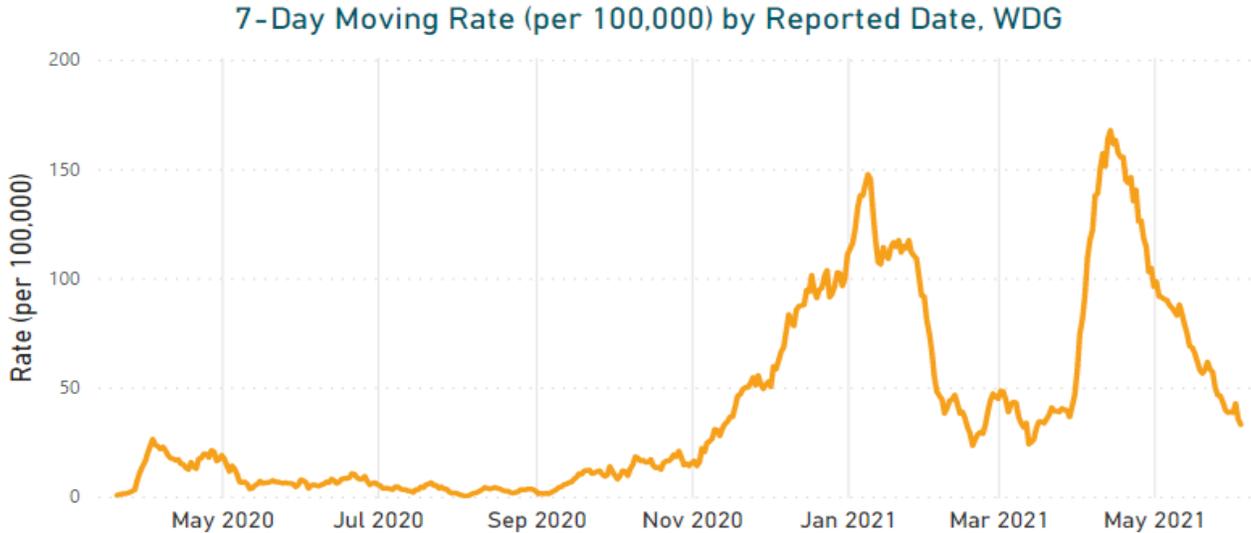


Figure 1 – Displays the average positive COVID-19 case rate over time.

During the third wave of this pandemic, WDG experienced significant spikes in COVID-19 cases in younger age groups. In particular, the 18-24 age group was most significantly affected, and the weekly positive case rate jumped to 351 per 100,000 in early April. A high case rate of 351 per 100,000 and a younger affected population is significantly different than what was observed in the previous two waves. Fortunately, the rate has dropped and is now at 51 per 100,000 and is more under control. Figure 2 demonstrates how the younger age groups have seen higher case rates in this third wave of the pandemic.

Weekly Case Rate (per 100,000), by Age Group and Reported Date (WDG Region)

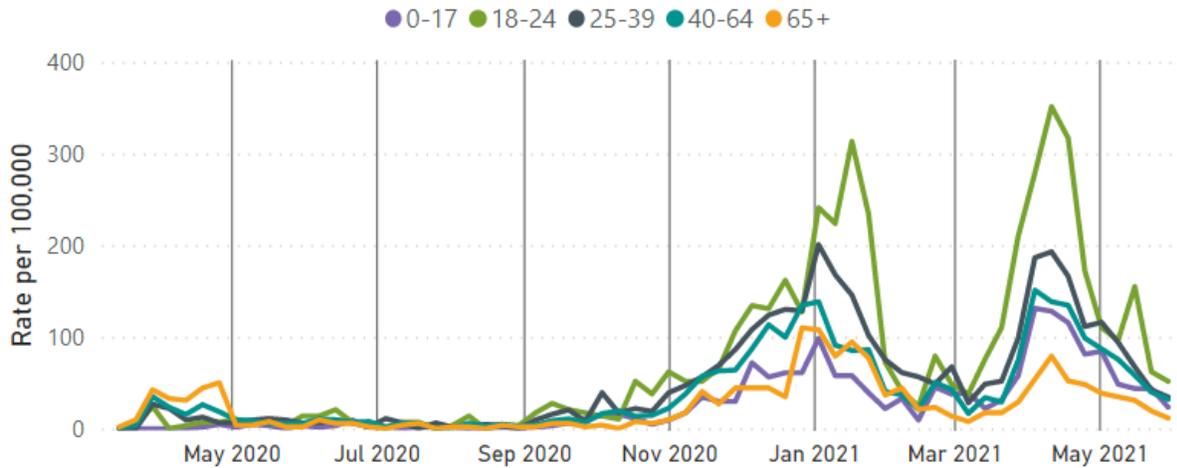


Figure 2 – Displays the positive COVID-19 case rates over time by age.

There are currently no active COVID-19 outbreaks in long-term care or retirement homes. The total number of workplace outbreaks has also decreased and is now at one, down from nine the week of May 17. The COVID-19 case management team has done a tremendous job to contain outbreaks using case and contact management as soon as the Agency is informed of probable outbreak situations.

The WDG region continues to see a high proportion of variants of concern. The percentage of COVID-19 cases that screened positive each week for mutations of interest or variants of concern has risen over time to a range of 70-85%. The overwhelming majority of variant cases seen in WDG have been the Alpha variant (B.1.1.7 – first detected in the UK) as shown in Figure 3 below.

Total Cases Identified Through Laboratory Screening/Sequencing, WDG Region

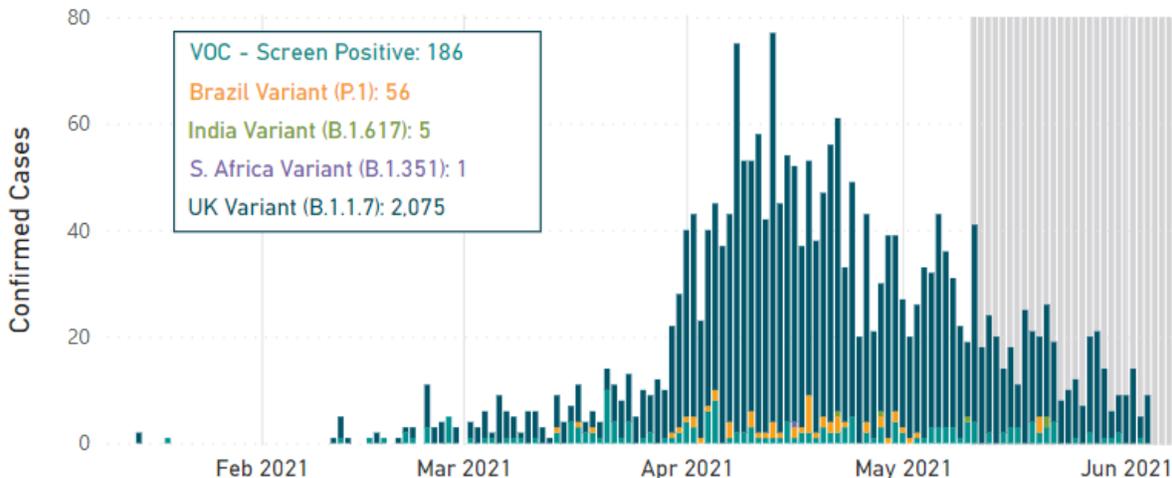


Figure 3 – Displays the # confirmed cases in WDG related to mutations/variants of concern.

The decrease in positive COVID-19 case rates in WDG is due, in part, to vaccination efforts. The pace of vaccination in WDG has increased significantly in late March and has stayed at this elevated level to present. Currently more than 66% of the eligible WDG population (aged 12+) have received at least one dose of the COVID-19 vaccine and it is projected that by the end of June this number will increase to more than 75%.

Vaccine Allocation

Until mid-May, the total vaccine dose rate received by WDGPH was 44.5 doses per 100 population. The majority of vaccine received was Pfizer, which accounted for more than 70% of the total supply. A select number of pharmacies and primary care offices in WDG also received the AstraZeneca vaccine in early April.

COVID-19 disease incidence was not equal in Ontario and, in order to manage significant rates of disease in hot spot communities, vaccine supply was over-allocated to some areas and under-allocated to others. For the first two weeks of May, 50% of the provincial vaccine supply was re-allocated towards Toronto, York and Peel, which reduced vaccine supply in WDG and other areas of the province by 27%. Resuming after the first two weeks of May, the vaccine supply was redistributed based on a per capita system, so the number of doses allocated to WDG increased. Within Ontario, because vaccine has not been allocated equally, there are varying levels of vaccination across the province based on vaccine allocations.

The decrease in vaccine allocation to WDG, and increase to hot spot locations (Peel, Toronto, York), allowed vaccination of adults over age 18 in these areas to access vaccination earlier. Therefore, it would make sense to see higher vaccination rates in younger populations for hot spot areas. The vaccination rate for those 18-29 years old in WDG is 45.7% whereas it is 74%, 58.3% and 62.4% for Peel, Toronto, and York, respectively.

It is important to note that within one week of receiving vaccine, the Agency was able to ensure that more than 99% was used to help get people in WDG vaccinated as quickly as possible.

Vaccination Progress

A significant number of WDG residents have been vaccinated in the last month. As of June 7, 179,228 residents had received at least one dose of the COVID-19 vaccine. This accounts for 66.4% of eligible residents in the region.

COVID-19 Vaccine Doses Administered by Week

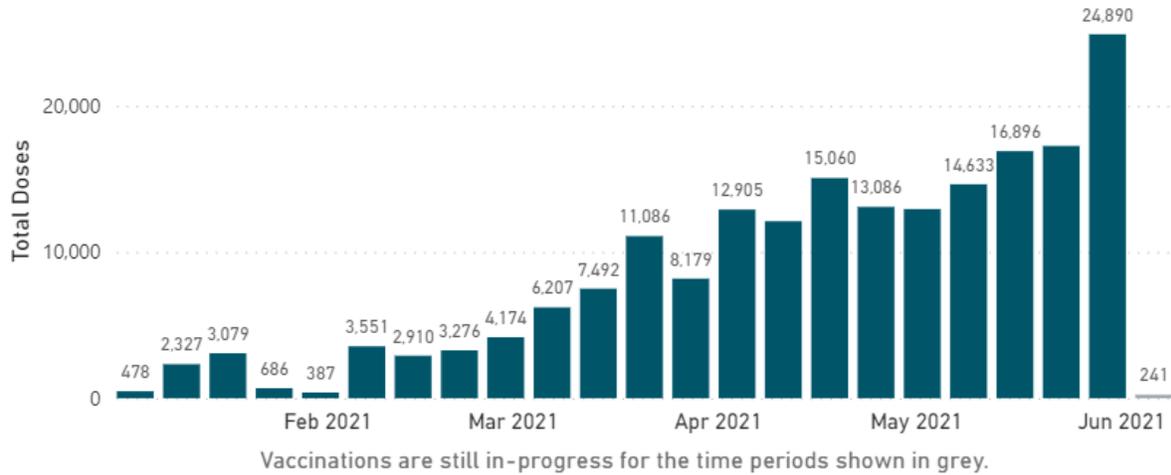


Figure 4 – Total vaccine delivered in WDG by week.

More than 90% of WDG seniors (aged 65+) have already received one dose of the vaccine. During the month of May, eligibility for vaccines changed and WDGPH is now vaccinating younger age groups, including the 12-15-year-old age group. The percentage of the population fully vaccinated remains low but that is expected to change starting in June/July when a significant number of people will be returning for second dose appointments as per the Provincial four-month dose schedule. This increase in second dose coverage in WDG is anticipated to move the region through all steps of the Provincial Reopening Plan in July 2021. Ontario will move to Step 1 of the Provincial Reopening Plan on June 11. It is anticipated that WDG will reach the Step 2 targets on July 6th and Step 3 targets on July 16th. The above is based on anticipated vaccine allocation and could be sooner depending on the amount of vaccine received.

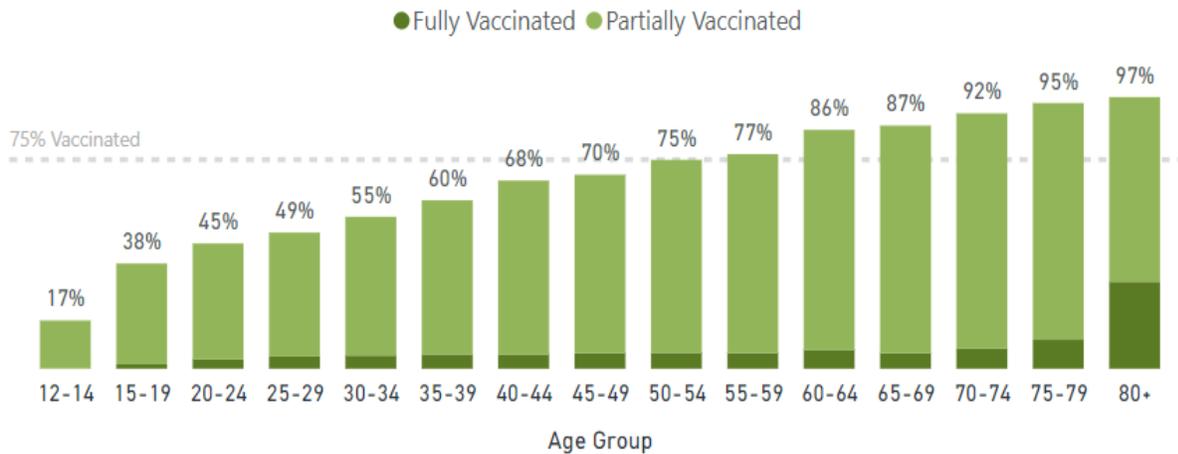


Figure 5 – Percent WDG population vaccinated based on age.

Adult Population (Age 18+) ▾

Step 1 and 2 reflect the province-wide vaccination thresholds required to advance in Ontario's Roadmap to Reopen.

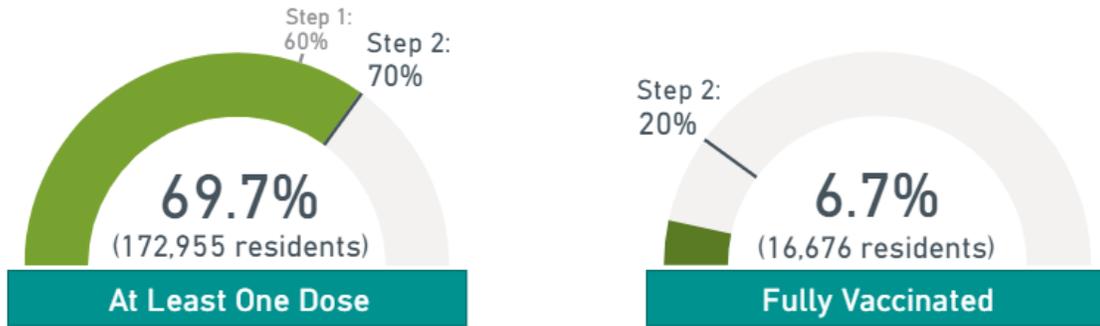


Figure 6 – Current vaccination rates for WDG with Provincial Reopening Plan targets

In WDG a first dose approach is being used to ensure the greatest number of people within the region can receive at least one dose of vaccine. Unfortunately, it is not anticipated that many second dose schedules will be able to be shortened because of current projected dose allocation numbers. If dose allocation increases for WDG, a second dose approach with shortened dose intervals will be implemented.

WDGPH-led vaccination clinics contributed 50% of all doses administered in the region. WDGPH continues to work collaboratively with partners, primary care and pharmacies to ensure the community is vaccinated at a rapid pace. Below, Figure 7 shows where the doses are being delivered within WDG. These various channels are of utmost importance to ensure that vaccine can be delivered to the largest number of people within the region in the shortest amount of time. WDGPH-led mass vaccination sites were crucial to deliver vaccine to the entire population quickly, but it is important to note that vaccine delivery in the pharmacy and primary care settings is the future of vaccine delivery and a true sustainability plan moving forward.

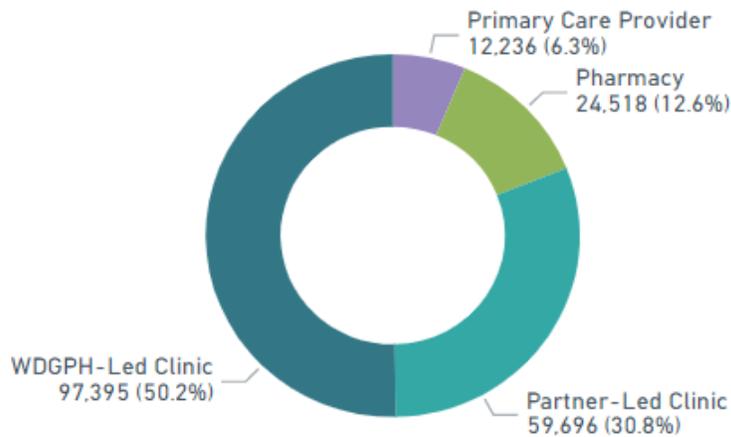


Figure 7 – Location of dose administration in WDG

Future Outlook

Accurate prediction of the future of the pandemic and of transmission of COVID-19 in the population locally and in other regions is challenging, as the virus is an emerging pathogen and continues to mutate quite rapidly. In addition, the duration of protection offered by the vaccines currently in use, especially in the face of some emerging variants of concern (VOCs), is currently unknown, though evidence so far is encouraging in this regard. In the short term, provided most of the population can be fully vaccinated over the next few weeks to stay ahead of new VOCs being recognized globally and currently emerging in Ontario, it can be expected that any waves of transmission occurring over the next year should be reduced in size and should also result in far fewer hospitalizations and deaths compared to previous waves. This is because evidence indicates that while only one dose of the current two-dose vaccines may not be sufficient to provide robust protection against some VOCs, two doses provide almost as much protection against VOCs as against the original variants of the virus that circulated in the early stages of the pandemic (Bernal et al., 2021)¹.

In the longer term, it seems likely that even after pandemic-level transmission of the virus has been brought under control by a combination of natural and vaccine-induced population immunity, and severe outcomes such as hospitalizations and deaths have been reduced to a low and hopefully sporadic level, COVID-19 will continue to circulate locally and globally at endemic levels. Depending on the nature of the virus and how it mutates, this may either be at a steady low level interspersed by outbreaks from time to time, or only as sporadic or seasonal outbreaks (Sandman et al., 2021; Lavine et al. 2021; Veldhoen and Simas, 2021)^{2,3,4}. The development of new vaccines, as well as re-formulation of current vaccines as booster immunizations against current and future variants, will be an important part of keeping the virus under control as it adapts to circulate more and more successfully in the human population. The prevention of serious illness and deaths are of paramount importance in the fight against the virus. Therefore, the reduction of transmission, the control of the virus at low levels and the prevention of these severe outcomes in the long term would be considered a successful end to the current pandemic.

Conclusion

The rate of COVID-19 infections in WDG has significantly dropped in the last few weeks due, in large part, to improved vaccination efforts. Since mid-March, WDGPH has been allocated a large number of vaccines of which more than 99% is used within one week. As of June 7th, 66.4% of eligible residents had received at least one dose of the COVID-19 vaccine. The rapid vaccination pace is expected to continue in June and July 2021, which will allow WDGPH to meet both targets identified in Step 2 and Step 3 of the Provincial Reopening Plan in July.

WDGPH Strategic Direction(s)

Check all that apply:

- Building Healthy Communities
- Service Centred Approach
- Health Equity
- Organizational Capacity

References

1. Bernal JL, Andrews N, Gower C, et al. [Effectiveness of COVID-19 vaccines against the B.1.617.2 variant](#). Public Health England preprint, May 2021
2. Sandmann FG, Davies NG, Vassall A, et al. [The potential health and economic value of SARS-CoV-2 vaccination alongside physical distancing in the UK: a transmission model-based future scenario analysis and economic evaluation](#). The Lancet Infectious Diseases, 2021, ISSN 1473-3099. [https://doi.org/10.1016/S1473-3099\(21\)00079-7](https://doi.org/10.1016/S1473-3099(21)00079-7).
3. Lavine JS, Bjornstad ON and Antia R. [Immunological characteristics govern the transition of COVID-19 to endemicity](#). Science, 12 Feb 2021; Vol. 371, Issue 6530, pp. 741-745. DOI: 10.1126/science.abe6522
4. Veldhoen, M., Simas, J.P. [Endemic SARS-CoV-2 will maintain post-pandemic immunity](#). Nat Rev Immunol (2021). <https://doi.org/10.1038/s41577-020-00493-9>