

# Increasing Influenza vaccination uptake among children aged 2-17 years old in Ireland: A new initiative deployed mid-season

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## Introduction

Vaccination of children with live attenuated influenza vaccine (LAIV) is a new aspect of the annual Influenza vaccination programme in Ireland, added to the campaign for the first time in 2020-21.

Despite universal eligibility for target age ranges, and with no vaccination or administration costs to parents, uptake has not reached target levels (Target 50%, Ambition 75%), with uptake in the 2021-22 season only reaching 16.4%.

Noting in January 2023 that uptake was below target, the Health Service Executive (HSE) implemented a new initiative to provide a readily accessible vaccination opportunity, before the LAIV available became unusable due to expiration on 23 January 2023.

## Background

Influenza infection among children in Ireland remains a significant and recurrent public health concern. Historically in Ireland, age-specific notifications of influenza infection have been highest in children less than 15 years old (Figure 1 below, 2018-19 data) <sup>1</sup>.

In the decade to 2018/19 there were more than 11,000 confirmed influenza notifications in children, with more than 4,750 admissions to hospital, 183 admissions to critical care and 41 deaths among children who had a confirmed notification of Influenza <sup>2</sup>.

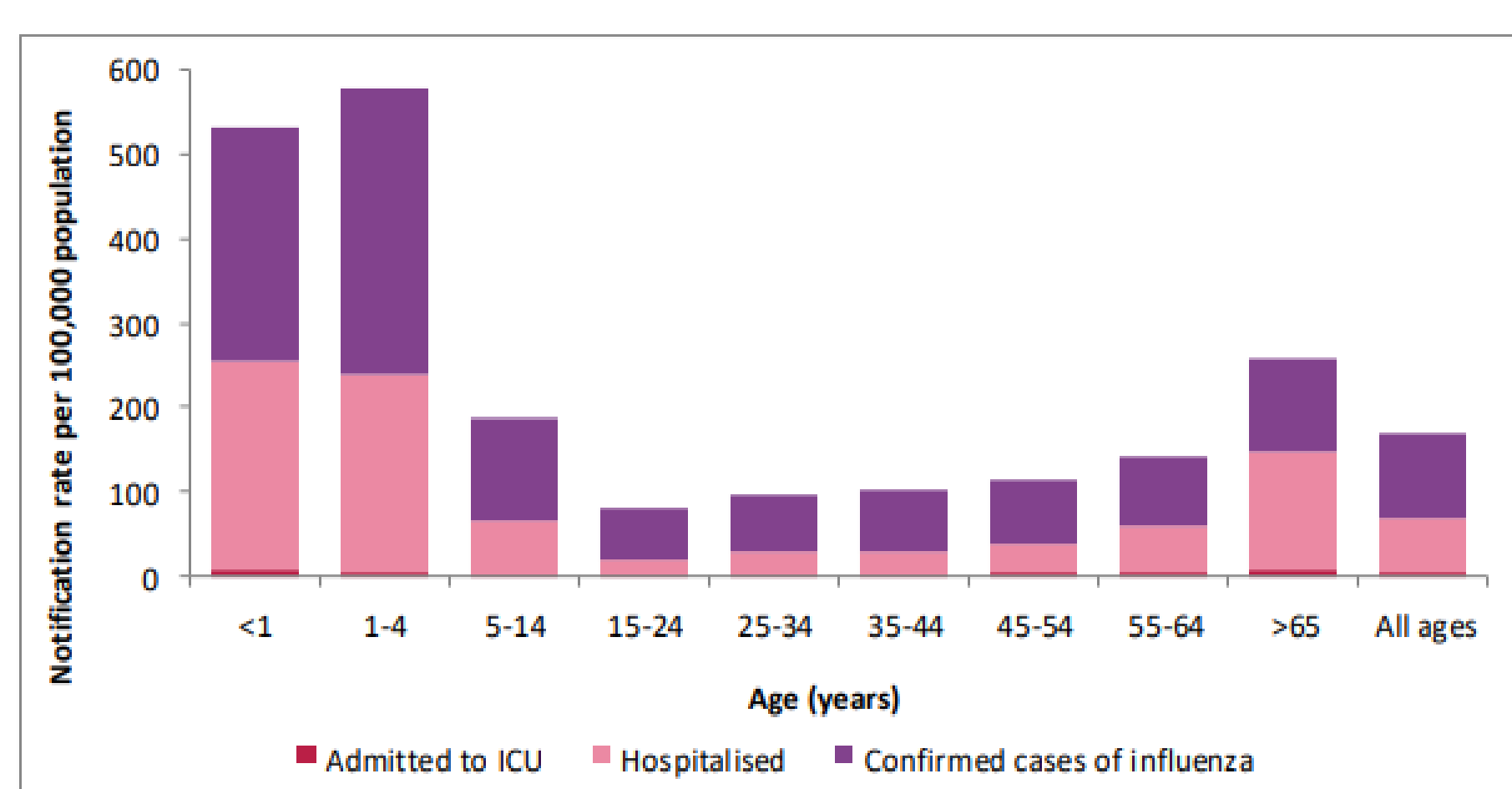


Figure 1 – Influenza notification rates, Ireland 2018-19 <sup>1</sup>

Within the national Influenza vaccination programme in Ireland, LAIV was first made available to children during the 2020/21 season, although it has been in more widespread use internationally for a significant period of time. Since its introduction, the two primary channels for administration have been via General Practitioners and via Community Pharmacies, supported by centrally produced publicity and media campaigns.

In seasons to date, immunisation within school settings has not been a feature of LAIV use in Ireland, although in 2021-22 a small pilot project was carried out in a number of schools to examine feasibility of a schools-based component of the LAIV programme.

Initially the LAIV was made available to children aged 2-12 years and was free at the point of access, with vaccine and administration costs covered by the HSE. In the 2021-22 season, the eligibility was extended to 2-17 year olds.

The current national target for Flu vaccine uptake in children aged 2-17 is 50%, with a stated ambition for 75%. In 2021-22 the estimated uptake was 16.5%.

During the 2022-23 Flu season, the Health Service in Ireland experienced particular pressure related to seasonal respiratory infections including Influenza, COVID-19 and RSV, leading to increased presentations to clinical services and higher levels of staff absence.

Ireland, along with several other European countries, was also experiencing a higher than expected level of Invasive Group A Streptococcal (IGAS) infections, with unusually severe disease in younger children. Unfortunately, Ireland also experienced several deaths associated with IGAS in children aged less than 10 years of age <sup>3</sup>. In December 2022 a pre-print studied highlighted by the UKHSA identified a link between uptake of LAIV and lower incidence of GAS infections <sup>4</sup>.

## Method

In early January 2023, the National Immunisation Office in Ireland noted Flu vaccine uptake among children aged 2-17 was very low, at 13.4%. The LAIV doses in Ireland were also noted to be expiring after 23 January 2023. In view of the additional winter pressures being experienced and the low uptake among children 2-17 a plan was formed to step up walk-in clinics in areas as capacity allowed.

Using a network of central vaccination centres, developed as part of the response to the COVID 19 pandemic but not used previously for children's Influenza vaccinations, a series of walk-in clinics were scheduled between 10-23 January 2023. Parents were familiar with the centres, because of their role in the response to COVID 19 and a 'walk-in' approach across all days of the week was taken to maximise flexibility for families. A coordinated local and national media campaign was deployed raise awareness of the opportunity and to reinforce the importance of vaccination.

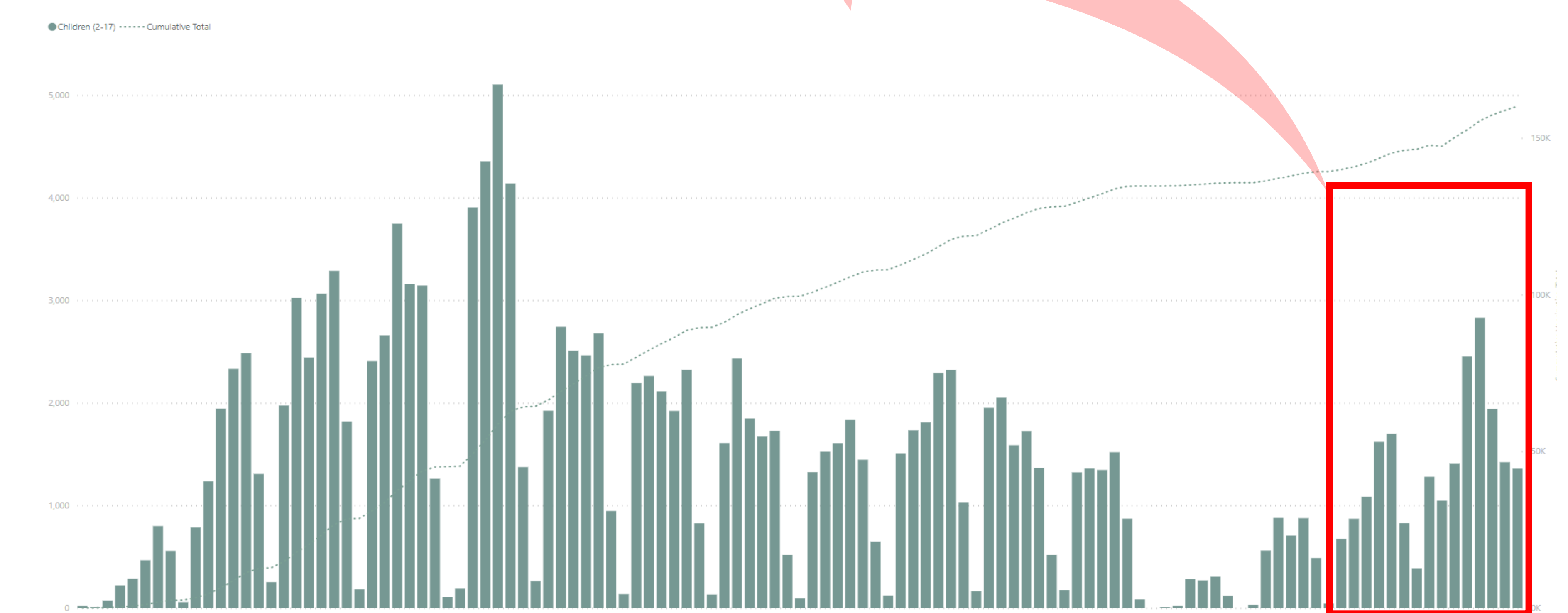
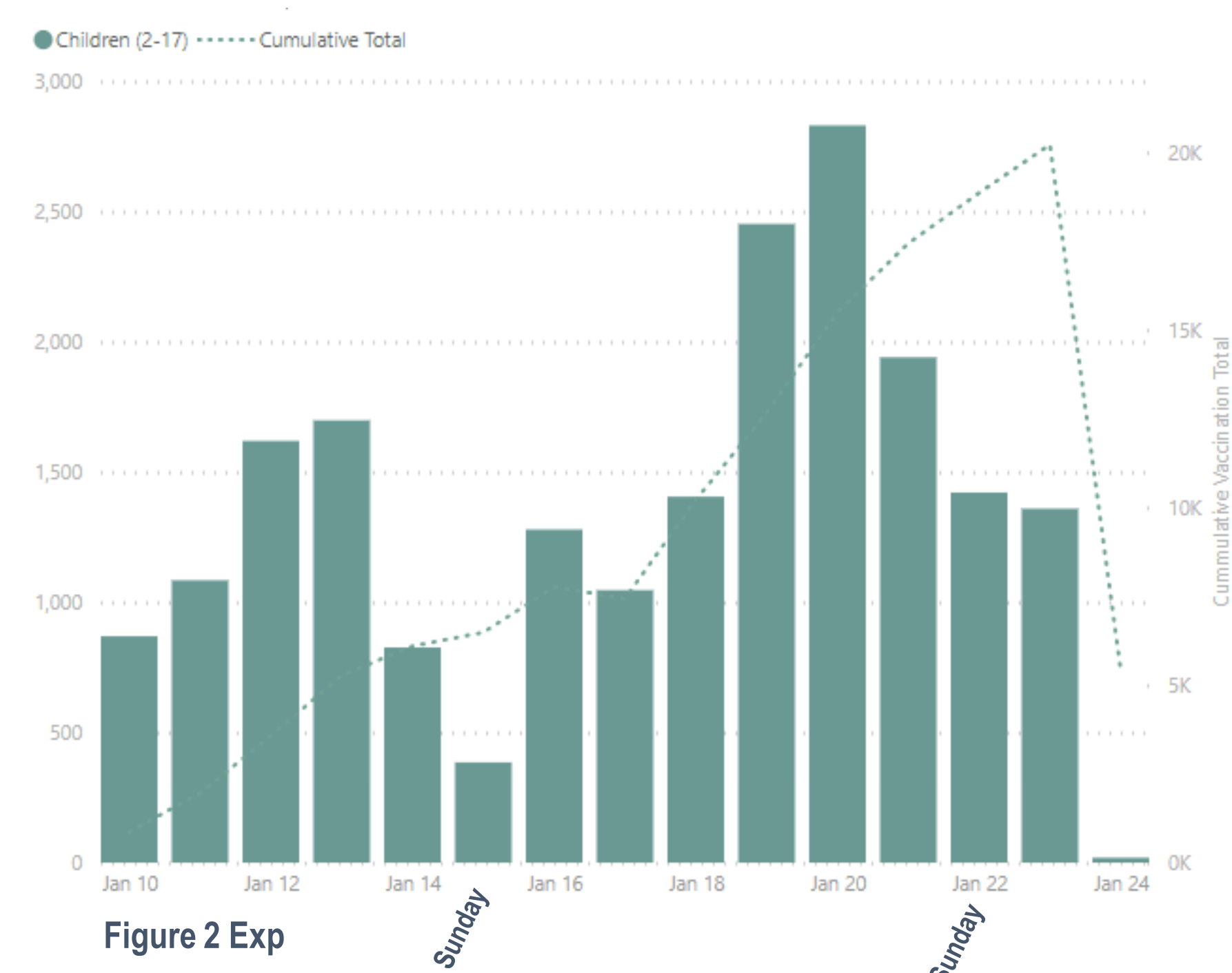
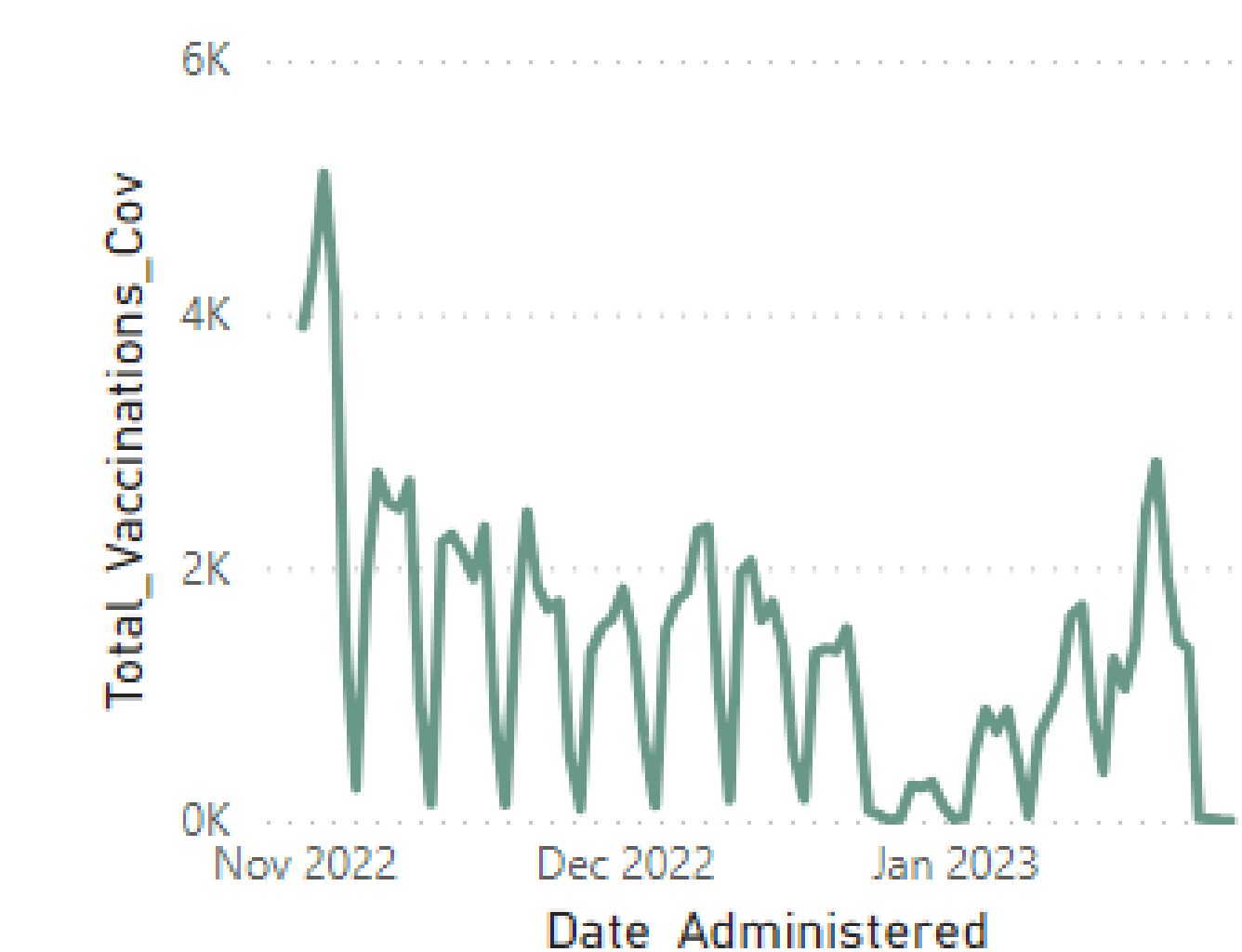


Figure 2 – LAIV doses administered in 2022-23 Season, Ireland



Total Vaccinations for Children (2-17) trended up between Monday, January 9, 2023 and Saturday, January 21, 2023 with a rise of 1,267.

Figure 3 – LAIV Doses Administered Trend, November '22 to January '23, Ireland

## Results

Throughout the 2022-23 flu season 159,325 children received vaccination with LAIV, representing an estimated uptake of 15.4% (Figure 2).

20,023 (12.6%) of these children received their vaccination between 10 and 23 January 2023, a higher level of activity than expected for this period of the flu season (Red Box in Figure 2 and Figure 2 Exp). A PowerBI trend analysis indicated an upward trend in vaccination doses in the period of interest (Figure 3).

In total, 31 walk-in clinics were organised across 11 counties in Ireland between 10-23 January. Almost one quarter (24.2%) of the doses in this period were delivered in the new walk-in clinics.

In the season prior to 10 January, very few LAIV doses were administered on Sundays, with a mean of 146 doses each Sunday. For the 2 Sundays in the period of interest, the mean doses administered per Sunday increased to 903, with the majority (1421, 78.7%) administered on one Sunday, 22 January, with the vast majority of these Sunday doses administered in the new walk-in clinics (92.2%) (Figure 2 Exp).

Additional national media campaigns linked to the roll out of the walk-in clinics appeared to have an effect in the system beyond the walk in clinics and community pharmacies also saw increased activity in the period of interest, with their daily total for 20 January (1514 children) almost equalling the highest daily total for the whole season (3 November 2022, 1516 children)

## Discussion and Conclusion

Achieving the target for influenza vaccine in children in Ireland remains a significant challenge. This new initiative was met with a positive response, with a rise in uptake seen at a relatively late stage in the flu season and almost 5000 doses administered in an environment that hadn't been used before.

The positive response may speak to a latent demand for LAIV that was not previously acted on due to convenience factors. It may also indicate that the communications issued around winter pressures and the burden of infectious diseases resulted in health-seeking behaviours from parents and young people.

Parents appeared to respond to the flexibility offered via the walk-in clinics, with a Sunday being the busiest day in the clinics. The impact of this initiative was not limited to the new walk-in clinics, but there was a spill over of effect to existing pathways.

Programmes should consider providing similar walk-in central clinics earlier in future seasons.

Additional measures should be examined to ensure barriers to access LAIV are lowered as far as possible, including the possibility of schools-based immunisations, as used in other countries.

## References

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