

TILDA scientists reveal vital evidence to inform HSE COVID-19 vaccine rollout

TILDA release key recommendations to boost uptake and efficacy of vaccine in older adults

As vaccination of the population against SARS-CoV-2 infection begins, it is critically important that lessons from previous vaccination programmes among older adults are used to inform current efforts.

To assist this, researchers at The Irish Longitudinal Study on Ageing (TILDA), at Trinity College Dublin, have rapidly produced a report that provides key information on influenza (flu) vaccine uptake and health behaviours which govern vaccine efficacy, while addressing important considerations and opportunities for government and the HSE ahead of the COVID-19 vaccine rollout for older adults (**Monday, 18th January, 2021**).

The report analyses data from TILDA participants between 2016 and 2019, outlining the prevalence of flu vaccination in this cohort and levels of physical activity among those who received the flu vaccine, and provides a review of the scientific evidence showing the positive effects of prolonged physical activity on vaccine efficacy. The report also provides key information on news sources accessed by TILDA participants during the COVID-19 pandemic and the levels of trust in these sources among those surveyed. It shows that 65% of TILDA participants accessed information via national radio channels, 43% accessed information via national newspapers, and very few (6-7%) older adults accessed public health information through government websites. This is an important consideration when communicating messaging on the vaccine.

Considerations for efficacy of vaccines in older adults

Vaccine efficacy in older adults can be a challenge due to the effects of ageing on the immune system. As people age, the ability to produce robust antibody responses following vaccination declines, with older adults less likely to generate the long-term protection often required for full immunity to a virus. Research shows that exercise can help to boost antibody responses in older adults. TILDA's report outlines how prolonged, regular aerobic or moderate exercise in the weeks and months prior to vaccination can help to improve antibody responses post vaccination in older adults.

KEY FINDINGS OF THE REPORT

- 59% of adults aged over 60 had an annual flu vaccination between 2016 and 2019.
- More older persons received the vaccine: 40% aged 60-69 compared with 76% aged 70 and older.
- Those less likely to receive vaccination are younger individuals aged 60-69 years; who live in rural areas; who are in employment; or who have private/no health insurance.
- The report provides evidence on the positive effect of prolonged physical activity on boosting antibody responses following vaccinations in older adults. This is important information given that adults are less likely to mount robust antibody responses following

vaccination; 44% of adults aged over 60 in Ireland do less than the recommended level of physical activity for cardiovascular health and for enhanced immunity and vaccination responsiveness.

- It is recommended that adults aged 60 and older should consistently incorporate some form of aerobic exercise such as a brisk walk at least 2 – 3 times per week in the weeks and months prior to vaccination.
- Public health campaigns should specifically target groups that are less likely to meet minimum recommended physical activity levels: that is, women; adults aged 75+; individuals with a primary level of education or none; and those who live in urban areas.
- Previous evidence has shown promoting physical activity among older adults should highlight the positive benefits of taking part in physical activity, and the short term social and mental health benefits it brings, communicated in a clear and concise way.
- It is important that information on a vaccine for the COVID-19 virus is communicated via trusted news sources where adults aged over 60 might access information on a vaccine.

Principal Investigator of TILDA and President of the Irish Gerontological Society, Professor Rose Anne Kenny said:

“The TILDA dataset provides an important resource which can be drawn from to effectively disseminate information on the health, circumstances and behaviours of older adults in Ireland. Our research provides strong evidence and positive guidelines for government and health authorities tasked with rolling out a successful vaccination programme for older adults. We have reached an important milestone with the rollout of a vaccine to combat COVID-19. Any action which will boost immunity and in particular the immune response to the SAR2CoV vaccine is very important. Moreover, TILDA’s report indicates the appropriate channels of communication to reach older adults with effective messaging since the start of the pandemic, a key element in promoting the uptake of vaccination in older adults ”

Researcher on the report, Dr Cillian McDowell said:

“In addition to the usual benefits of physical activity like improved mood and wellbeing, evidence suggests that being more active can help to boost vaccine specific antibody responses, particularly among older adults. Based on this, we encourage adults aged over 60 to make an effort to move more and incorporate a form of aerobic exercise into their lives in the weeks and months prior to vaccination. Some activity is good, but more is better, and a good goal would be a 30-minute walk brisk enough to increase your breathing rate, done 2 – 3 times per week.”

National Clinical Advisory Group Lead in the HSE’s Social Care Division, Dr Siobhán Kennelly, said:

“Maximising the impact of vaccine effectiveness in the context of the COVID-19 pandemic will be a key element in reducing susceptibility of older people to COVID-19. In this context the findings of this TILDA study suggesting a positive link between sustained aerobic exercise and antibody response is an important one and should be emphasised in communications targeted at these groups. In addition free and accessible vaccination with high levels of publicity have influenced the significantly increased uptake of influenza

vaccination in all people aged over 65 this winter. This should continue be an important part of public health provision in future vaccination programmes.”

To read more on TILDA’s COVID-19 related projects, please visit here:

<https://tilda.tcd.ie/CovidData/reports>