Increased Influenza Vaccine Coverage Rate Following Covid-19: Durable Trend Or Epiphenomenon?

A. Ngami [1], T. Christie [2], F. Guelfucci [1], F. Bianic [1], P. Net [1]

1) Syneos Health, Value Access & HEOR, Montrouge, France ; 2) Syneos Health, InfoAccess, Singapore, Singapore

Background

- Following the COVID-19 pandemic, many countries revised their influenza vaccination policies in accordance with the WHO 2020 interim guidance on influenza vaccination[1]
- Previous research conducted by Ngami et al. showed significant increases in influenza VCR during the 2020/21 season compared to previous seasons.[2] The study recommended keeping monitoring influenza VCR and observe whether this increase would be durable or temporary.

Objective

- The objective of this study was to assess the change in influenza VCR under the COVID-19 pandemic (2020/22) in the US, Canada and Europe

Methods

- The same methodology described in Ngami et al. was applied: secondary desk researches were conducted to collect influenza VCR for the seasons 2010/11 to 2021/22 in France, Italy, Spain, UK, Canada and the US[2]
- Government and public health agency websites were consulted, and VCR were extracted for all groups eligible to influenza vaccination. Stakeholders were contacted by email when information was not available.
- We used non-parametric Wilcoxon signed-rank tests to investigate significant variations in VCR per eligible group for the 2020/22 seasons compared to previous seasons

Results

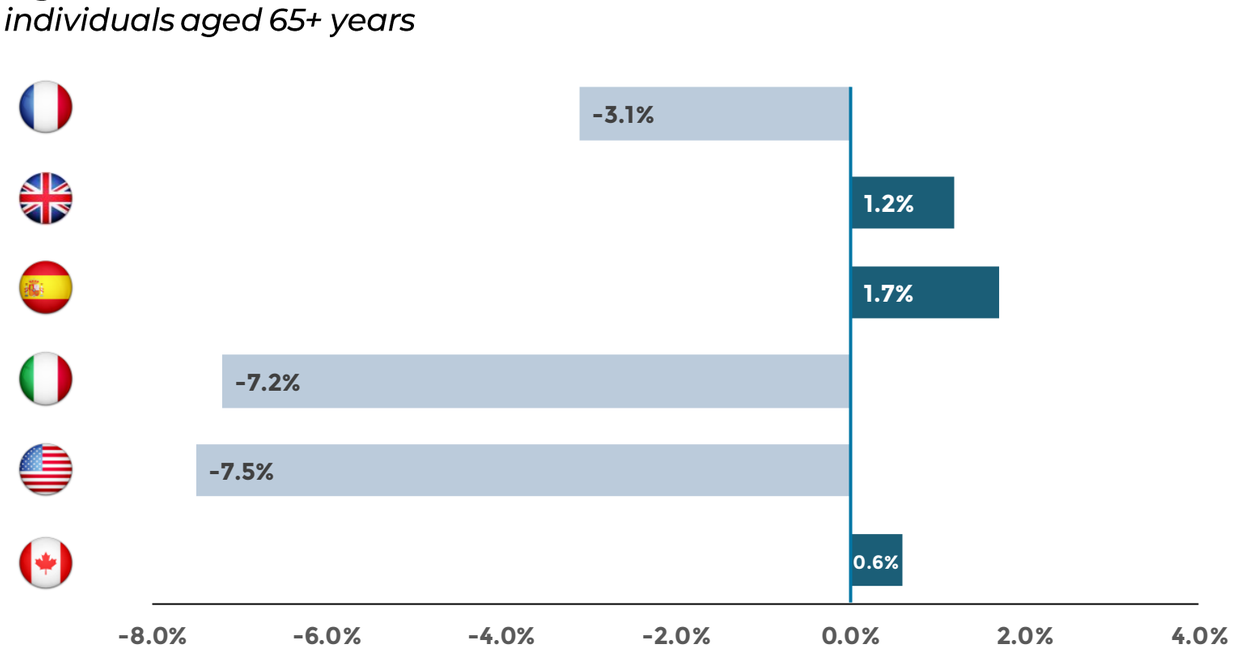
- Significant increases in VCR were observed in 2020/22 compared to previous seasons for all studied groups, except for Canada (all groups), the US (6mo – 17y group) and France (at-risk <65y) (**Table I**)
- Coverage in the UK reached its highest level in the 65+y age group, with a VCR of 82.10%, thus exceeding for the second time the 75% VCR objective set by the WHO
- A significant decrease in VCR was observed in the UK for the 6mo – 2y age group (-12.68%), along with non statistically significant drops in the US for the ≥6mo – 17y group (-1.99%), and Canada for the 18y – 64y group (-5.91%) (**Table I**)
- Additionally, important decreases in VCR were observed between 2020/21 and 2021/22 in 19 out of the 22 groups (86%) presented in **Table I**.
- Interestingly, VCR in elderly for Spain, Canada and the UK followed an opposite trend, with VCR increasing in 2021/22 compared to 2020/21 (+1.7%, +0.60% and +1.2% respectively) (**Table I**, **Figure 1**)

Table I: *Influenza vaccine coverage rates by eligible group since 2010*

		2010/11	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Variation 2010/19 vs 2020/22
	65+y	56.20%	50.80%	50.00%	49.70%	51.00%	52.00%	59.90%	56.80%†	12.56%***
	<65y (AR)	37.20%	39.10%	28.70%	28.90%	29.70%	31.00%	38.70%	34.30%†	4.58%
	Total	51.80%	48.30%	45.70%	45.60%	46.80%	47.80%	55.80%	52.60%†	12.26%***
	65+ y	72.80%	71.00%	70.50%	72.90%	72.00%	72.40%	80.90%	82.10%	12.43%***
	6mo – 64y (AR)	50.40%	45.10%	48.60%	49.70%	48.00%	44.90%	53.00%	52.50%†	7.17%***
	6mo – 2y	25.20%	18.60%	19.50%	20.70%	18.80%	16.10%	21.70%	14.40%†	-12.68%*
	16y – 65y	51.70%	45.70%	49.40%	50.20%	48.40%	45.30%	53.40%	53.10%†	6.22%**
	2 – 3y	N/A	36.60%	40.20%	44.00%	44.90%	43.80%	56.70%	50.10%†	28.67%**
	2y	N/A	54.40%	57.60%	61.00%	63.60%	63.60%	63.90%	48.30%†	27.05%**
	3y	N/A	52.90%	55.40%	60.40%	61.50%	62.60%	63.20%	50.80%†	29.39%*
	65+y	56.90%	56.10%	55.50%	55.70%	54.30%	54.70%	67.70%	69.40%	22.35%**
	General Population	17.90%	13.90%	15.10%	15.30%	15.80%	16.80%	23.70%	20.50%†	41.03%***
	65+y	62.40%	49.90%	52.00%	52.70%	53.10%	54.60%	65.30%	58.10%†	13.09%**
	≥6mo – 17y	51.00%	59.30%	59.00%	57.00%	62.60%	63.80%	58.20%	55.30%†	-1.99%
	≥18y	40.50%	41.70%	43.30%	37.10%	45.30%	48.40%	59.00%	45.40%†	23.58%***
	18y – 49y	30.50%	32.70%	33.60%	26.90%	34.90%	38.40%	50.80%	34.70%†	32.56%***
	50y – 64y	44.50%	43.60%	45.40%	39.70%	47.30%	50.60%	54.20%	50.00%†	15.47%***
	65+y	66.60%	63.40%	65.30%	59.60%	68.10%	69.80%	75.20%	67.70%†	8.98%***
	≥18y	N/A	34.40%	35.80%	38.30%	41.80%	41.80%	40.40%	38.70%†	2.94%
	18y – 64y (AR)	N/A	37.20%	37.00%	39.40%	30.80%	43.60%	40.50%	37.60%†	3.86%
	18y – 64y (not AR)	N/A	24.40%	25.10%	26.50%	42.80%	30.00%	29.20%	26.80%†	-5.91%
	65+y	N/A	64.60%	69.50%	70.70%	69.90%	70.30%	70.40%	71.00%	2.46%

AR= At-risk ; Meaningful difference at level of significance of 5% (*), 1% (**), 0.1% (***) ; † Lower VCR compared to 2020/21

Figure 1: *Variations in influenza VCR between seasons 2021/22 and 2020/21 in individuals aged 65+ years*



Discussion

- Similar trends reported in Ngami et al. were observed in our study[2], with significant increases in VCR observed during the combined 2020/22 seasons
- However, drops in VCR were noticed between 2021/22 and 2020/21, potentially revealing early signs of vaccine fatigue, with ultimately a risk of returning to pre-COVID-19 rates
- Several hypothesis can be drawn regarding those decreases:
  - Strong emphasis was put on vaccination against COVID-19, thus calls for influenza vaccination may have been diluted and missed by populations,
  - COVID-19 perceived as being more 'serious' than influenza, leading individuals to prioritize vaccination against COVID-19 first,
  - Repeated injections for protection against COVID-19 (primary course + boosters) may have discouraged population to get an additional shot for influenza
- The 2022/23 influenza season will be important to determine whether the increase in VCR would have only been temporary or turn into a durable trend

AR= At-risk; VCR= Vaccine Coverage Rate; WHO= World Health Organization

References

1) WHO (2020). https://apps.who.int/iris/bitstream/handle/10665/336260/WER9544-539-543-eng-fre.pdf?sequence=1&isAllowed=y

2) Ngami A, Guelfucci F, Bianic F, Net P. POSC198 Impact of COVID-19 on Influenza Vaccine Coverage Rate During the 2020/2021 Season. Value in Health. 2022 Jan;25(1):S139-40.

Pierre.net@syneoshealth.com