



# Factors influencing the attitudes and opinions of Czech physicians and citizens toward influenza vaccination in Czech pharmacies (4CPS-016)

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## BACKGROUND

Pharmacy-based vaccination (PBV) has already shown widespread success. Czech Republic has low influenza vaccination rate with currently no PBV.

## OBJECTIVE

The objective was to determine physicians' and citizens' attitudes and opinions toward influenza vaccination in Czech pharmacies.

## METHODS

### Sociological cross-sectional study:

November to December 2020

Pilot testing preceded

Face-to-face structured interviews (1,348 physicians; 2,023 citizens)



### Parts of the study:

A questionnaire focused on:

- Socio-demographic variables
- The attitude of physicians and citizens to influenza vaccination in pharmacies (positives, negatives, utilization of PBV)
- Statements (whether citizens and physicians agree with influenza vaccination in pharmacies)

Descriptive statistics and Pearson Chi-Square test (Statistical analysis by program SASD 1.5.8.)

## RESULTS

### SOCIO-DEMOGRAPHIC DATA

- 1093 physicians (611 female; 55.9%)
  - Mean age 48 ± 0.8 years
  - 406 (37.1%) religious
  - Physician Specialization
    - 341 (31.2%) General practitioner for adults
    - 211 (19.3%) General practitioner for children and adolescents
    - 541 (49.5%) Other
- 1769 citizens (611 female; 51.0%)
  - Mean age 47 ± 0.1 years
  - 607 (34.3%) religious
  - Education (Tab. 1)



**Table 1** Citizens' education completed

Education	Quantity (%)
Primary	149 (8.4)
Trade/technical/vocational	512 (28.9)
Secondary (with diploma)	714 (40.4)
Higher (bachelor's or master's degree)	394 (22.3)

### ATTITUDE (CITIZENS AND PHYSICIANS) ON INFLUENZA VACCINATION IN PHARMACIES PROVIDED BY TRAINED PHARMACISTS

#### AGREEMENT

- 25.2% citizens, 33.1% physicians

#### DISAGREEMENT

- 41.1% citizens (more frequently woman,  $p < 0.05$ )
- 56.3% physicians (more frequently religious,  $p < 0.01$ )

#### NO OPINION

- 33.7% citizens (more frequently with lower education,  $p < 0.05$ )
- 10.6% physicians



### ATTITUDES TO THE POSSIBILITY OF VACCINATION IN THE PHARMACY (CITIZENS' VIEW)



#### AGREEMENT

- 8.6% only at a pharmacy that citizens visit regularly and where they trust their pharmacist
- 4.2% at any pharmacy
- 18.7% only at a recommendation of their physician

#### DISAGREEMENT

- 27.6% refusing influenza vaccination in general
- 14.5% never (more frequently citizens > 65 years,  $p < 0.001$ )

#### NO OPINION

- 25.3%

### INFLUENZA VACCINATION IN PHARMACIES—REPORTED POSITIVES (TAB. 2)



**Table 2** Reported positives regarding vaccination in pharmacies (citizens and physicians)

Influenza vaccination in Pharmacy—positives	Citizens	Physicians
Increased availability of vaccination	22.7%	20.8%
Higher rate of influenza vaccination	15.0%	23.5%
Saving time for general practitioners	24.3%	41.8%
I don't perceive any positives	50.3%	34.0%
Other positives	21.2%	37.9%

*The sum of relative frequencies exceeds 100% (citizens and physicians mark up to 3 positives)*

- Increased availability of vaccinations (citizens with higher education,  $p < 0.001$ )

### INFLUENZA VACCINATION IN PHARMACIES—REPORTED NEGATIVES (TAB. 3)



**Table 3** Reported negatives regarding vaccination in pharmacies (citizens and physicians)

Influenza vaccination in pharmacy—negatives	Citizens	Physicians
Pharmacists are not competent health professionals	23.8%	25.1%
Pharmacists are not able to assess for whom influenza vaccination is not suitable	23.9%	23.4%
The pharmacy is not an adequate place for influenza vaccinations	31.0%	41.5%
Pharmacists are unable to deal with the adverse reactions of influenza vaccination.	29.2%	15.6%
Other negatives	16.2%	19.6%

*The sum of relative frequencies exceeds 100% (citizens and physicians mark up to 3 negatives)*

- Pharmacy is not adequate place for influenza vaccination (women,  $p < 0.01$ )

## CONCLUSION

Almost a third of respondents agreed with influenza vaccinations in pharmacies. This would significantly increase influenza vaccination in the Czech Republic. The level of education was the most important factor in selecting the positives of this vaccination, other factors had a statistically less significant effect on opinions and attitudes. For this reason, a higher level of information and knowledge of the population of the Czech Republic can be considered as one of the possible factors for increasing interest and reducing concerns about influenza vaccination by trained pharmacists in pharmacies.