Results ESNO Survey to Nurses in Europe on Vaccination Uptake

Final version

Amsterdam, 7 May 2021
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• The *ESNO Survey to Nurses in Europe on Vaccination* Uptake, that was administered by 238 respondents in November 2020, shows that 53.4% got vaccinated for influenza in 2018 and 55.2% in 2019. The majority of them were (very) likely to get vaccinated for influenza in 2020 (67.8%) and COVID-19 when available (60.6%).

• The majority of them (strongly) agrees to mandate influenza vaccination for physicians (56.4%), nurses (58.4%), and other healthcare workers (55.9%). A bigger majority agrees to mandate influenza vaccination for older people (67.4%), chronically ill people (69.4%), and immunosuppressed patients (70.6%).
Take home messages (2/2)

- Of respondents on the *ESNO Survey to Nurses in Europe on Vaccination Uptake*, administered in November 2020, 39.6% (strongly) agrees to make vaccination for COVID-19 mandatory, 34.9% (strongly) disagrees and 25.5% neither agrees nor disagrees.

- Furthermore, the majority of respondents assessed their knowledge about pathogens, vaccines, and immune system on a medium level (61.7%; 63.7%; 56.7% resp.).

- A higher level of self-assessed knowledge about vaccines and the immune system is statistically significant associated with the likelihood to get vaccinated for COVID-19, but not for influenza.
1. Background
During this unprecedented year in relation to the Corona-virus pandemic, our attention has focused on viral and other infectious diseases, and especially on vaccination. On top of this, there is also concern about nurses’ personal uptake of the influenza vaccination ‘with opinions being expressed without having heard the nurse’s voice’. 

ESNO is a strong advocate and promoter of nursing knowledge and competencies related to infectious disease transmission and vaccination and is interested if this contributes to nurse’s decision on vaccination uptake.
2. Objective
Objective

• To learn about nurses’ personal motivation related to influenza vaccination and, when available, the Corona-virus vaccination, and how this relates to the professional activity and training needs of nurses in Europe.
3. Methods
Methods

• Self-constructed, electronic survey administrated via website, Twitter, Facebook in November 2020.

• 20 questions, mostly with predefined answering categories.

• Themes:
  ▪ demographic characteristics;
  ▪ professional characteristics;
  ▪ uptake influenza vaccination in 2018/2019;
  ▪ likelihood of uptake influenza vaccination in 2020 and corona vaccination when available;
  ▪ opinion on mandating influenza and corona vaccination for healthcare professionals and specific groups;
Methods

• Themes (continued):
  ▪ likelihood to advise patients against influenza vaccination;
  ▪ level of agreement to make vaccination for COVID-19 mandatory;
  ▪ self-assessment of knowledge about pathogens, vaccines, immune system
  ▪ source(s) for obtaining information related to pathogens, vaccines and immune system.

  ▪ Descriptive statistics and non-parametric tests were performed with SPSS 27.
4. Results
Demographic characteristics (1/3)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (yrs) (n=238)</strong></td>
<td></td>
</tr>
<tr>
<td>Mean ± sd</td>
<td>48.9 ± 10.1</td>
</tr>
<tr>
<td>Min-max</td>
<td>27-72</td>
</tr>
<tr>
<td><strong>Gender (%) (n=232)</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>22.8</td>
</tr>
<tr>
<td>Female</td>
<td>76.7</td>
</tr>
<tr>
<td>Other</td>
<td>0.4</td>
</tr>
</tbody>
</table>
### Demographic characteristics (2/3)

<table>
<thead>
<tr>
<th></th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>European countries</strong></td>
<td>221 (92.9)</td>
</tr>
<tr>
<td>#1 Italy</td>
<td>37 (15.5)</td>
</tr>
<tr>
<td>#2 UK</td>
<td>25 (10.5)</td>
</tr>
<tr>
<td>#3 The Netherlands</td>
<td>21 (8.8)</td>
</tr>
<tr>
<td><strong>Non-European countries</strong></td>
<td>17 (7.1)</td>
</tr>
<tr>
<td>#1 Turkey</td>
<td>5 (2.1)</td>
</tr>
</tbody>
</table>
Demographic characteristics (3/3)

Country of work (n=238)
### Professional characteristics (1/5)

<table>
<thead>
<tr>
<th>Profession</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse</td>
<td>54 (22.7)</td>
</tr>
<tr>
<td>Nurse Specialist</td>
<td>98 (41.2)</td>
</tr>
<tr>
<td>Nurse Practitioner</td>
<td>4 (1.7)</td>
</tr>
<tr>
<td>Nurse Educator</td>
<td>19 (8.0)</td>
</tr>
<tr>
<td>Ward manager</td>
<td>10 (4.2)</td>
</tr>
<tr>
<td>Nurse manager</td>
<td>6 (2.5)</td>
</tr>
<tr>
<td>Research Nurse</td>
<td>8 (3.4)</td>
</tr>
<tr>
<td>Clinical Research Associate</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Professor</td>
<td>6 (2.5)</td>
</tr>
<tr>
<td>Chief Nursing Officer</td>
<td>17 (7.1)</td>
</tr>
<tr>
<td>Other</td>
<td>15 (6.3)</td>
</tr>
</tbody>
</table>
Current profession (n=238)

- Nurse: 22.7%
- Nurse Specialist: 41.2%
- Nurse Practitioner: 1.7%
- Nurse Educator: 8.0%
- Ward Manager: 4.2%
- Nurse Manager: 2.5%
- Research Nurse: 3.4%
- Clinical Research Associate: 0.4%
- Professor Health Professions: 2.5%
- Chief Nursing Officer: 7.1%
- Other: 6.3%
Professional characteristics (3/5)

Current speciality (n=238)
### Professional characteristics (4/5)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience in current profession (yrs) (n=238)</td>
<td></td>
</tr>
<tr>
<td>less than 2</td>
<td>4.6</td>
</tr>
<tr>
<td>3-11</td>
<td>20.1</td>
</tr>
<tr>
<td>12-20</td>
<td>28.1</td>
</tr>
<tr>
<td>21 or longer</td>
<td>47.1</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Professional characteristics (5/5)

Years of experience in current profession (n=238)
Uptake influenza vaccination in 2018 and 2019

2018 (n=238)

- Yes: 53.4%
- No: 46.6%

2019 (n=232)

- Yes: 55.2%
- No: 44.8%
Motivation for getting influenza vaccination in 2018 and 2019

If you got influenza vaccination in 2018, why? (n=113)
- To protect myself and my family: 19.8%
- To protect my patients: 12.6%
- To protect myself, my family and my patients: 41.4%
- Other: 26.1%

If you got influenza vaccination in 2019, why? (n=115)
- To protect myself and my family: 20.0%
- To protect my patients: 31.3%
- To protect myself, my family and my patients: 37.4%
- Other: 11.3%
Motivation for not getting influenza vaccination in 2018 and 2019

If no influenza vaccination in 2018, why not? (n=98)

- I'm healthy/ no need/ I never had influenza: 34.7%
- Previous bad experience / allergy / health reasons: 18.9%
- No interest / no contact with patients: 11.6%
- I don't agree/ I don't want: 11.6%
- Other or no reason: 23.2%

If no influenza vaccination in 2019, why not? (n=97)

- I'm healthy/ no need/ I never had influenza: 32.0%
- Previous bad experience / allergy / health reasons: 25.8%
- No interest / no contact with patients: 14.4%
- I don't agree/ I don't want: 20.6%
- Other or no reason: 7.2%
Likelihood of uptake influenza vaccination in 2020 and of COVID-19 vaccination when available

How likely will you get the influenza vaccination in 2020 (n=224) and the COVID-vaccination when available (n=212)?

COVID-19 vaccination  Influenza vaccination

Very likely  58,0%  38,2%
Likely  22,6%  9,8%
Neither likely nor unlikely  17,0%  8,0%
Unlikely  9,4%  8,9%
Very unlikely  12,7%  15,2%

0,0%  10,0%  20,0%  30,0%  40,0%  50,0%  60,0%  70,0%

Very likely  Likely  Neither likely nor unlikely  Unlikely  Very unlikely
Opinion on mandating influenza vaccination for healthcare professionals

Do you agree to make influenza vaccination mandatory for specific professions? (n=224)

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
Opinion on mandating influenza vaccination for specific groups

Do you agree to make vaccination mandatory for specific groups? (n=224)

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

**Older people**
- Strongly agree: 39.8%
- Agree: 27.6%
- Neither agree nor disagree: 12.2%
- Disagree: 9.5%
- Strongly disagree: 10.9%

**Chronically ill people**
- Strongly agree: 42.5%
- Agree: 26.9%
- Neither agree nor disagree: 13.7%
- Disagree: 6.8%
- Strongly disagree: 10.0%

**Immunosuppressed patients**
- Strongly agree: 44.9%
- Agree: 25.7%
- Neither agree nor disagree: 12.6%
- Disagree: 7.0%
- Strongly disagree: 9.8%
Likelihood to advise patients or carers against influenza vaccination

How likely would you advise patient or carers against vaccination in the situation enlisted below? (n=212)

- Very likely
- Likely
- Neither likely nor unlikely
- Unlikely
- Very unlikely

- **I have made the decision not to have influenza vaccination**
  - Very likely: 36.5%
  - Likely: 22.3%
  - Neither likely nor unlikely: 18.0%
  - Unlikely: 12.8%
  - Very unlikely: 10.4%

- **I have medical reasons for not having influenza vaccination**
  - Very likely: 28.6%
  - Likely: 13.6%
  - Neither likely nor unlikely: 18.9%
  - Unlikely: 29.1%

- **Members of my family got reactions to the flu vaccine**
  - Very likely: 16.4%
  - Likely: 21.7%
  - Neither likely nor unlikely: 19.3%
  - Unlikely: 5.8%
Do you agree to make vaccination for COVID-19 mandatory?

Do you agree to make vaccination for COVID-19 mandatory? (n=212)
Self-assessment of knowledge about pathogens, vaccines, and immune system

How do you assess your knowledge? (n=201)

- Knowledge about pathogens
  - Low: 8.5%
  - Medium: 61.7%
  - High: 29.9%

- Knowledge about vaccines
  - Low: 12.4%
  - Medium: 63.7%
  - High: 23.9%

- Knowledge about immune system
  - Low: 9.0%
  - Medium: 56.7%
  - High: 34.3%
Main sources for obtaining information about pathogens, vaccines and immune system

From which source did you get information about pathogens, vaccines, and immune system? (n=201)

- Education: 36.4%
- Literature: 44.6%
- Media: 19.1%
Testing of associations between (likelihood) of uptake influenza and COVID-19 vaccination and professional activity

<table>
<thead>
<tr>
<th>Tested association</th>
<th>N valid cases</th>
<th>df</th>
<th>Pearson Chi-square</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing patient care – Influenza vaccinated in 2018</td>
<td>238</td>
<td>1</td>
<td>1.666</td>
<td>0.197</td>
</tr>
<tr>
<td>Providing patient care – Influenza vaccinated in 2019</td>
<td>232</td>
<td>1</td>
<td>1.698</td>
<td>0.193</td>
</tr>
<tr>
<td>Providing patient care – likelihood uptake influenza vaccination in 2020</td>
<td>223</td>
<td>4</td>
<td>3.736</td>
<td>0.443</td>
</tr>
<tr>
<td>Providing patient care – likelihood uptake COVID-19 vaccination when available</td>
<td>212</td>
<td>4</td>
<td>0.461</td>
<td>0.977</td>
</tr>
</tbody>
</table>
## Testing of associations between uptake influenza vaccination in 2018 and 2019 and self-assessed knowledge level

<table>
<thead>
<tr>
<th>Tested association</th>
<th>N valid cases</th>
<th>df</th>
<th>Pearson Chi-square</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uptake influenza vaccination in 2018 – knowledge of pathogens</td>
<td>201</td>
<td>2</td>
<td>4.230</td>
<td>0.121</td>
</tr>
<tr>
<td>Uptake influenza vaccination in 2018 – knowledge of vaccines</td>
<td>201</td>
<td>2</td>
<td>0.398</td>
<td>0.819</td>
</tr>
<tr>
<td>Uptake influenza vaccination in 2018 – knowledge of immune system</td>
<td>201</td>
<td>2</td>
<td>0.734</td>
<td>0.693</td>
</tr>
<tr>
<td>Uptake influenza vaccination in 2019 – knowledge of pathogens</td>
<td>201</td>
<td>2</td>
<td>2.294</td>
<td>0.318</td>
</tr>
<tr>
<td>Uptake influenza vaccination in 2019 – knowledge of vaccines</td>
<td>201</td>
<td>2</td>
<td>2.532</td>
<td>0.282</td>
</tr>
<tr>
<td>Uptake influenza vaccination in 2019 – knowledge of immune system</td>
<td>201</td>
<td>2</td>
<td>0.966</td>
<td>0.617</td>
</tr>
</tbody>
</table>
Testing of associations between likelihood of uptake influenza in 2020 and self-assessed knowledge level

<table>
<thead>
<tr>
<th>Tested association</th>
<th>N valid cases</th>
<th>df</th>
<th>Pearson Chi-square</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood uptake influenza vaccination in 2020 – knowledge of pathogens</td>
<td>200</td>
<td>8</td>
<td>9.391</td>
<td>0.310</td>
</tr>
<tr>
<td>Likelihood uptake influenza vaccination in 2020 – knowledge of vaccines</td>
<td>200</td>
<td>8</td>
<td>7.390</td>
<td>0.495</td>
</tr>
<tr>
<td>Likelihood uptake influenza vaccination in 2020 – knowledge of immune system</td>
<td>200</td>
<td>8</td>
<td>13.018</td>
<td>0.111</td>
</tr>
</tbody>
</table>
Testing of associations between likelihood of uptake COVID-19 vaccination (when available) and self-assessed knowledge level

<table>
<thead>
<tr>
<th>Tested association</th>
<th>N valid cases</th>
<th>df</th>
<th>Pearson Chi-square</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood uptake COVID-19 vaccination – knowledge of pathogens</td>
<td>201</td>
<td>8</td>
<td>13.117</td>
<td>0.108</td>
</tr>
<tr>
<td>Likelihood uptake COVID-19 vaccination – knowledge of vaccines</td>
<td>201</td>
<td>8</td>
<td>21.403</td>
<td>0.006*</td>
</tr>
<tr>
<td>Likelihood uptake COVID-19 vaccination – knowledge of immune system</td>
<td>201</td>
<td>8</td>
<td>15.552</td>
<td>0.049*</td>
</tr>
</tbody>
</table>

* A higher level of self-assessed knowledge about vaccines and the immune system is statistically significant associated with the likelihood to get vaccinated for COVID-19.
5. Conclusions
Conclusions (1/5)

• Of 238 respondents, the majority (76.7%) is female. Their mean age is 48.9 (±10.1) yrs. Respondents work in 30 European and 7 non-European countries. Of those working in Europe, most work in Italy (15.5%), UK (10.5%) or the Netherlands (8.8%).

• Almost half of respondents (47.1%) works 21 yrs. or longer in their current profession. Of all respondents, the majority (73.5%) provides nursing care in different specialty areas incl. dialysis/nephrology (19.7%), urology (11.3%), critical/emergency care (9.2%), and surgery/anaesthesia (9.2%).
Conclusions (2/5)

• Of respondents, 53.4% got the influenza vaccination in 2018 and 55.2% in 2019.

• Most mentioned motivation for getting vaccinated was ‘to protect myself, my family and my patients’ (41.4% in 2018; 37.4% in 2019).

• Most mentioned motivations for not getting vaccinated were ‘I’m healthy/ no need/ I never had influenza’ (34.7% in 2018; 32.0% in 2019) and ‘I don’t agree/ I don’t want’ (23.2% in 2018; 20.6% in 2019).
Conclusions (3/5)

• In November 2020, the majority of respondents were (very) likely to get vaccinated for influenza in 2020 (67.8%) and COVID-19 when available (60.6%).

• The majority of respondents (strongly) agrees to mandate influenza vaccination for physicians (56.4%), nurses (58.4%), and other healthcare workers (55.9%).

• The majority of respondents (strongly) agrees to mandate influenza vaccination for older people (67.4%), chronically ill people (69.4%), and immunosuppressed patients (70.6%).
Conclusions (4/5)

• About half of respondents are (very) unlikely to advise patients against influenza vaccination in the situation where respondents:
  • have made the decision not to get vaccinated for influenza (54.5%);
  • have medical reasons for not getting influenza vaccination (48.0%);
  • have family members with reaction to influenza vaccination (56.0%).

• Of respondents, 39.6% (strongly) agrees to make vaccination for COVID-19 mandatory, 34.9% (strongly) disagrees and 25.5% neither agrees nor disagrees.
Conclusions (5/5)

• The majority of respondents assesses their knowledge about pathogens, vaccines, and immune system on a medium level (61.7%; 63.7%; 56.7% resp.).

• The main sources for obtaining information related to pathogens, vaccines and immune system are: literature (44.6%), education (36.4%) and media (19.1%).

• Of potential associations tested it was found that a higher level of self-assessed knowledge about vaccines and the immune system is statistically significant associated with the likelihood to get vaccinated for COVID-19.
Adding Evidence to Health Care Innovation

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