Factors associated with COVID-19 Vaccination Hesitancy in Azerbaijan

Факторы, ассоциированные с нерешительностью по поводу вакцинации от COVID19 в Азербайджане

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Background – Базовая информация

- **Azerbaijan - Upper Middle-Income Country**
- Азербайджан – страна со средне-высоким уровнtм дохода
- **Population: 10 Million people**
- Население: 10 миллионов человек
- **As of March 30, 2022 – На 30 марта 2022 года:**
  - 791814 COVID-19 cases/случаев
  - 9687 deaths/смертей
  - <100 daily new infections/инфекций в день

Background – Базовая информация

- All adults ages 18+ and children of 12-15 years of age are eligible for vaccination
- Все взрослые старше 18 и дети 12-15 лет могут получить вакцину
- The main vaccine is Sinovac/CoronaVac and Pfizer-Biontech.
- Основаные вакцины Sinovac/CoronaVac and Pfizer-Biontech.
- As of March 30, 2022, a total of 13 425 032 doses have been administered
- На 30 марта 2022 года было введено 13 425 032 доз.
  - Received one dose: 5 322 427 – Получили одну дозу
  - Received two doses: 4 821 276 – Получили две дозы
  - Received 3 or more doses: 3 054 089 – Получили 3 или более доз
  - Current daily uptake: ±19.000 doses – Число доз за день

Vaccine hesitancy factors
Факторы, влияющие на нерешительность по поводу вакцинации

- Misinformation is one key drivers of vaccine hesitancy. It played big role in reducing general public's trust and confidence in the immunization process and not just against SARS-CoV-2.
- Дезинформация – один из основных факторов, повлиявших на нерешительность по поводу вакцинации среди населения и не только против коронавируса.
- Speed of vaccine development and less stringent control system over quality and safety. Infection control/overall public safety outweighed individual safety.
- Скорость разработки вакцин и менее строгий контроль за качеством и безопасностью. Безопасность общественная и меры инфекционного контроля возобладали над безопасностью индивидума.

Among Healthcare workers – Медицинские работники

	Number in Total Study Population (%)	Number in study Population with at least 1 dose of COVID-19 vaccine (%)	OR* (95% CI**)	P-value
Pre-existing comorbidities				
No	865 (59.2%)	646 (74.7%)	1	0.01
At least one	595 (40.8%)	408 (68.6%)	0.73 (0.58-0.93)	
Influenza vaccine in 2019-20				<0.0001
No	1,042 (71.4%)	716 (68.7%)	1	
Yes	418 (28.6%)	338 (80.9%)	1.92 (1.45-2.54)	
Overall health status- self assessed				0.002
Excellent	102 (7.1%)	81 (79.4%)	1	
Very Good or Good	1,070 (74.9%)	789 (73.7%)	0.72 (0.44-1.19)	
Fair or Poor	257 (18%)	168 (65.4%)	0.49 (0.28-0.84)	
Previous COVID-19 infection				<0.0001
No	1,105 (75.7%)	917 (82.9%)	7.8 (5.95-10.11)	
Yes	355 (24.3%)	137 (38.6%)	1	
***Odds ratio**				
****95% Confidence interval**				

- Those with at least one co-morbidity were 27% less likely to be vaccinated
- Наличие как минимум одной ко-морбидности снижает вероятность вакцинации на 27%

- Compared to those in excellent health, those in very good/good or fair/poor health were less likely to be vaccinated
- Вероятность вакцинации среди людей с хорошим/очень хорошим или с плохим/очень плохим здоровьем была ниже

Among Healthcare workers – Медицинские работники

	Number in Total Study Population (%)	OR* (95% CI**)	P-value
COVID-19 vaccination is safe			<0.0001
Strongly agree	667 (45.7)	1	
Mildly agree	252 (17.2)	0.74 (0.53-1.03)	
Neutral	405 (27.7)	0.49 (0.37-0.64)	
Mildly disagree	87 (5.9)	0.50 (0.31-0.82)	
Strongly disagree	48 (3.3)	0.18 (0.10-0.34)	
How effective do you think the COVID-19 vaccine is in preventing you from getting sick with COVID-19?			<0.0001
Extremely effective	283 (19.4)	1	
Very effective	391 (26.8)	1.18 (0.81-1.72)	
Somewhat effective	660 (45.2)	0.66 (0.47-0.91)	
Not effective	93 (6.3)	0.26 (0.16-0.43)	
Not at all effective	32 (2.2)	0.17 (0.07-0.37)	
If you are unable to or don't get a COVID-19 vaccination, what do you think your chance of getting COVID-19 will be?			<0.0001
Almost zero	217 (14.9)	1	
Very small	227 (15.6)	1.11 (0.70-1.78)	
Small	431 (29.5)	0.58 (0.39-0.86)	
Moderate	484 (33.2)	0.59 (0.4-0.87)	
Large chance	74 (5.1)	0.58 (0.32-1.03)	
Very large chance	26 (1.8)	0.22 (0.09-0.51)	

- Those who believe the vaccine is unsafe are less likely to be vaccinated
- Those who believe the vaccine is ineffective are less likely to be vaccinated
- Those who believe they will still become ill with COVID-19 after vaccination are significantly less likely to be vaccinated

Among Healthcare workers – Медицинские работники

Factors	AOR (95% CI)	P-value
Age Group		
<35	1	0.06
35-59	1.82 (1.21-2.7)	
60+	1.68 (1.02-2.8)	
Influenza vaccine in 2019-20		
No	1	<0.0001
Yes	2.3 (1.6-3.2)	
Overall health status- self assessed		
Excellent	1	0.03
Very Good or Good	0.58 (0.32-1.0)	
Fair or Poor	0.47 (0.25-0.89)	
Previous COVID-19 infection		
Yes	1	<0.0001
No	9.8 (7.3-13.2)	
COVID-19 vaccination is safe		
Strongly agree	1	0.001
Mildly agree	0.78 (0.52-1.2)	
Neutral	0.59 (0.41-0.86)	
Mildly disagree	0.69 (0.37-1.2)	
Strongly disagree	0.34 (0.15-0.74)	
How effective do you think the COVID-19 vaccine is in preventing you from getting sick?		
Extremely effective	1	0.006
Very effective	1.6 (0.99-2.4)	
Somewhat effective	1.0 (0.71-1.64)	
Not effective	0.45 (0.2-0.85)	
Not at all effective	0.41 (0.15-1.1)	
If I get a COVID-19 vaccination, I will be less likely to miss work because of getting sick		
Strongly agree	1	0.08
Mildly agree	1.2 (0.77-1.9)	
Neutral	0.75 (0.53-1.0)	
Mildly disagree	0.5 (0.24-1.2)	
Strongly disagree	0.59 (0.2-1.7)	

- Vaccination is associated with increasing age
- С возрастом вероятность вакцинации растет

- Those who previously had flu vaccine are more than twice as likely to be vaccinated against COVID
- Вероятность вакцинации людей, получивших вакцину против гриппа в 2 раза выше

- Belief in the vaccines safety and effectiveness is strongly associated with uptake
- Вера в безопасность и эффективность вакцин является очень сильным фактором, влияющим на вакцинацию