



# Czech Republic Country Report 2022

## Influencing Adult Pneumonia Vaccination Policy

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## Background

Approximately 26% of the population in Czech Republic is over the age of 60 years. This number is expected to rise to 35.5% by 2050.<sup>1</sup> Parallel to the population ageing is the increased burden of non-communicable diseases (NCDs). In Czech Republic, NCDs account for 90% of all deaths, with cardiovascular disease, chronic respiratory disease and diabetes attributing 44%, 4% and 4% of all deaths, respectively.<sup>2</sup> Older people and those with chronic conditions are at-risk of serious complications from vaccine-preventable diseases such as pneumococcal pneumonia that give rise to increases in morbidity and mortality.<sup>3</sup>

Those aged 70 years and over in Czech Republic have the greatest mortality rate due to pneumonia, with an incidence of approximately 180 per 100 000 people, followed by the 50–69-year age group (24.08 per 100 000 people).<sup>4,5</sup> A study examining clinical and economic burden of community-acquired pneumonia (CAP) found that the burden of CAP increases with age as does the incidence of hospitalization.<sup>6</sup>

In Czech Republic, pneumococcal vaccination is recommended for those 65 years and older and adults of any age with predisposing risk factors.<sup>7</sup> The PneuVUE study, which examined adult pneumonia vaccination across nine European countries, found that only 18% of high-risk adults are aware of pneumonia vaccination.<sup>8</sup> Even more concerning, only 4% of those at high risk of pneumonia have been vaccinated.<sup>8</sup>

## Pneumonia Vaccine Policy in in Czech Republic

In Czech Republic, mandatory vaccinations and schedules are outlined by the Ministry of Health, based on recommendations by the National Immunization Commission (*Národní imunizační komise*).<sup>7,9</sup> Pneumococcal vaccination is recommended for those 65 years and older in the form of the 13-valent conjugate vaccine, followed by the 23-valent polysaccharide vaccine.<sup>7</sup> Revaccination with the 23-valent polysaccharide vaccine is recommended after 5 years. Adult groups with chronic conditions, such as those who may reside in long-term care facilities or have immune deficiencies, are recommended to receive either the 13-valent conjugate vaccine or the 23-valent polysaccharide vaccine.<sup>7</sup> The Czech Republic State Institute of Public Health notes that those with chronic respiratory diseases, chronic heart diseases or diabetes, are recommended to receive vaccination when living in long-term care facilities and further pneumococcal vaccination should be performed according to the “Summary of Product Characteristics”.<sup>10</sup> Pneumococcal vaccination for those 65 years and over and specified high-risk groups is covered by public health insurance.<sup>10</sup>

## Government Pneumonia Vaccine Information

### The State Institute of Public Health

The State Institute of Public Health (*Státní zdravotní ústav* [SZU]) is an organization within the Ministry of Health, responsible for the protection and promotion of public health.<sup>11</sup>





## Vaccination Calendar

The Institute conveys information and messages through its website such as a vaccination calendar for adults that outlines recommendations from the Czech Vaccinological Society<sup>7</sup> (Figure 1), national immunization policy and vaccinations funded under public health insurance.

## Web pages

Specific information about vaccines to protect older adults against *Streptococcus pneumoniae* are noted. A web page provides technical details on the 13-valent conjugate vaccine and the 23-valent polysaccharide vaccine and their indications for adults.<sup>12</sup>

The main web page on vaccines and vaccinations provides information, news and educational materials, and details plans for the most recent European Vaccination Week.<sup>13</sup>

Overall, the information on pneumococcal vaccination is lacking on this web page.

## Poster


The State Institute of Public Health website provides some health education materials. These include a poster with the adult vaccination schedule, indicating that adults should be vaccinated with a single dose of the 13-valent conjugate vaccine (Figure 2). This information does however contradict the vaccination calendar, which indicates that adults should receive a dose of both the 13-valent conjugate vaccine and the 23-valent polysaccharide vaccine.<sup>15</sup>

The poster was last updated in 2014 and does not reflect most recent changes to the vaccination schedule and may add to confusing public facing messages.

## Online Presentation

A slideshow on the State Institute of Public Health website explains that vaccination is not only for children but also for the adult population. Also, that the immune system weakens with age, making older people vulnerable to infectious diseases and vaccination can prevent severe disease, such as pneumococcal pneumonia.<sup>16</sup>

## Očkovací kalendář pro dospělé - podle věku



ČESKÁ REPUBLIKA

POŠTOVNÍ ČÍS. 67

Nemoc	Věková kategorie					Přeočkování	Poznámka
	18-26 let	27-49 let	50-59 let	60-64 let	65+ let		
Tetanus	booster po 10-15 letech			booster po 10 letech		po 10-15 letech	očkování také v rámci úrazů a poranění
Pertuse	minimálně 1 dávka 1x za život					po 10-15 letech	zejména rodinné kontakty dětí do 1 roku věku, těhotné ženy, možné v rámci očkování proti tetanu
Varicella	2 dávky					nestanoveno	pro vinné (bez historie nemoci nebo séro negativní) + práce v riziku + rizikové skupiny
VHA	2 dávky					nestanoveno	pro vinné a neočkované v dětství + práce v riziku + rizikové chování; možné aplikovat kombinovanou VHA/VHB vakcínu
VHB	3 dávky					nestanoveno	pro vinné a neočkované v dětství + rizikové skupiny + rizikové chování; možné aplikovat kombinovanou VHA/VHB vakcínu
HPV	3 dávky					nestanoveno	pro ženy i muže neočkované v dětství
Herpes zoster	1 - 2 dávky dle použité vakcíny					nestanoveno	očkování se doporučuje zahájit co nejdříve
Klíšová encefalitida	3 dávky, první přeočkování po 3 letech, další po 5 letech			3 dávky, přeočkování po 3 letech		po 3-5 letech, max. po 10 letech	rizikové skupiny + práce v riziku;
Pneumokokové nákazy	1 dávka PCV nebo PPV			1 dávka PPV nebo PCV	1 dávka PCV + 1 dávka PPV23	PPV: po 5 letech pouze 1 x	osoby umístěné v léčebnách pro dlouhodobě nemocné a v domovech pro seniory + osoby se zdravotním postižením nebo v domovech se zvláštním režimem s chronickým nespécifikým onemocněním + u jedinců po transplantaci hematopoetických kmenových buněk (HSC) + osoby se závažnými primárními nebo sekundárními imunodeficity
Meningokokové nákazy	2 dávky MenB, 1 - 2 dávky Men A, C, W, Y					podle SPC vakcíny	rizikové skupiny + práce v riziku + cestovatelé + osoby v ohrožení IMO + osoby se zdravotní indikací; přeočkování pouze pro osoby s přetrvávajícím rizikem infekce
Chřipka	1 dávka					každoročně	očkování se týká zdravých osob + osoby s rizikovými faktory + práce v riziku
Hib	1 dávka					nestanoveno	rizikové skupiny
Vzteklina	5 dávek postexpozice / 3 dávky preexpozice					po 2-5 letech pouze při práci v riziku	cestovatelé, rizikové skupiny (např. spetelologové), práce v riziku
Spalničky	1 dávka					nestanoveno	zdravotníci dle legislativy, cestovatelé

Vysvětlivky:

MenB meningokoková vakcína proti séro skupině B

Men A, C, W, Y meningokoková konjugovaná tetravalentní vakcína proti séro skupině A, C, W, Y

PCV pneumokoková konjugovaná vakcína

PPV pneumokoková polysacharidová vakcína

VHA virová hepatitida typu A

VHB virová hepatitida typu B

HbB Haemophilus influenzae typ b

HPV lidský papilomavirus

doporučeno všem dané věkové kategorie

doporučeno v případě rizikových faktorů

Figure 1. Vaccination calendar for adults from the Czech Vaccinological Society.

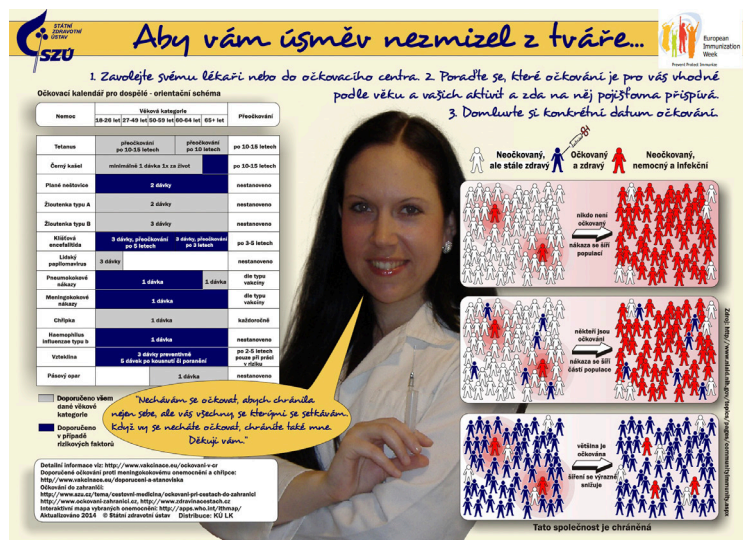


Figure 2. Poster with the adult vaccination calendar from the State Institute of Public Health.

A press release on invasive pneumococcal disease highlights that children under 5 years of age, adults over 65 years of age and those with a weakened immune system are most at-risk for pneumococcal infection and serious disease.<sup>17</sup> The press release indicates that “vaccination is an effective and widespread tool for the prevention of serious infectious diseases”.<sup>17</sup>

## Czech Vaccinological Society

The Czech Vaccinological Society (*Česká vakcinologická společnost*) on their website provides a link to the adult vaccination calendar valid as of 2019.<sup>18</sup> Questions and answers on this site focus on the importance and effectiveness of pneumococcal vaccination yet only mention its recommendation for young children.<sup>19</sup>

## Ministry of Health

The Ministry of Health provides very few messages in plain language on vaccination. On the “Ministry Agenda” there is only a 2010 technical document on regimens and contraindications of the pneumococcal conjugate vaccine.<sup>20</sup>

## Non-Government Organisations

### Life 90

Life 90 (Zivot 90) is a non-profit organization which aims to enable older people to live a full life.<sup>21</sup>

#### Event and Press Release

In 2017 an educational event entitled “Pneumococcus is not for the elderly” was held to inform older people on the importance of prevention and that pneumococcal vaccination is covered by public health insurance. The associated press release emphasised the importance of being vaccinated, and the risk of morbidity and mortality due to pneumococcal pneumonia.<sup>21</sup>

Earlier in 2015, Zivot 90 released a statement supporting public insurance coverage of pneumococcal vaccination for people over the age of 65 years old.<sup>22</sup>

### Anamneza

Anamneza is a medical server project which aims to bridge information between patients and healthcare professionals.<sup>23</sup>

On the organisational website a section on pneumococcal infections provides details on causes, diagnosis, therapy and vaccination.<sup>24</sup> The page indicates that vaccination is recommended for adults with pre-disposing conditions and older people in long-term care settings.

A second web page on pneumonia mentions that older people may have a weakened immune system and therefore have a higher risk of developing pneumonia and recommends that vulnerable persons are vaccinated.<sup>25</sup>

## Czech Civic Association against Lung Diseases

The main goal of the Czech Civic Association against Lung Diseases (*Český občanský spolek proti plicním nemocem* [ČOPN]) is to improve knowledge of lung conditions amongst patients and their families and facilitate cooperation between medical professionals and patients.<sup>26</sup>

“Basic Principles for Lung Patients” is a page on the organisational website that lists prevention as a key principle for improving the quality of life for people with lung disease.<sup>27</sup> Influenza vaccination is recommended as a preventative measure but there is no information on pneumococcal vaccination.

# Status of National Pneumonia Vaccination Messaging

Changing the Conversation on Adult Influenza Vaccination identifies seven components of effective adult influenza campaigns<sup>28</sup> These components are presented in Table 1 to evaluate pneumonia vaccination messaging in Czech Republic.

**Table 1.** Status of pneumonia vaccination messaging in Czech Republic.

■ Well-developed
 ■ Partially developed
 ■ Not yet developed/No evidence

	Description	Pneumonia Vaccination
Comprehensive policies and programs	Vaccination is recommended by government and advisory bodies for at-risk populations including older adults and people with chronic diseases.	<span style="color: green;">■</span> Pneumococcal vaccination is recommended by the National Immunization Commission, government and Czech Vaccinological Society for those 65 years and older in addition to those with some chronic medical conditions and those living in long-term care settings.
	Vaccination is funded under the National Immunization Program (NIP) and administered through the state program for at-risk populations including older adults and people with chronic disease.	<span style="color: green;">■</span> Pneumococcal vaccination is free to recommended populations.
Clear communication strategy	Published context-specific communication strategy and action plan which defines communication goals, target audiences, expected roles of partner organizations, communication tools and timeline.	<span style="color: red;">■</span> No evidence of a published action plan for communication on pneumococcal vaccination for at-risk groups.
Well-defined audience	Universal message distributed to undifferentiated populations (general audiences regardless of age and underlying health condition).	<span style="color: red;">■</span> Pneumococcal vaccination messaging is directed to at-risk groups, particularly those 65 years of age and older.
	Dedicated and tailored information for specific at-risk audience.	<span style="color: orange;">■</span>
Multiple tools and channels	Online communication such as web content, digital technology, social media, online publications, email.	<span style="color: orange;">■</span> Information on pneumococcal vaccination, is most often found on web pages, however the information is both difficult to locate and limited on pneumococcal vaccination (e.g. who should be vaccinated, why they should be vaccinated and how to be vaccinated).
	Messages are disseminated offline by TV, radio, printout (e.g. leaflet, poster, brochure, outdoor ads).	<span style="color: red;">■</span>
	Interactive communication including individual consultation, street campaign and face-to-face mobilization.	<span style="color: red;">■</span> There are a very few examples of interactive communication, apart from an event held by Zivot 90.



### Realistic timeline

Timely vaccination reminder.

National/regional events scheduled for intensive awareness campaign such as national vaccination day/week/month.

There is little evidence of timely vaccination reminders and pneumococcal vaccination is not included in resources for European Vaccination Week.

### Regular updates of information

Information is updated on a regular basis to reflect the most recent evidence and policy, such as recommending newly licensed vaccines for specific recipient.

It appears that the vaccination recommendations have been recently updated, however many web pages and messages appear to be outdated.

### Engagement of civil society

Communication by patient associations, ageing organizations and advocacy groups.

Zivot 90, an organization that serves older people exhibits some communication on pneumococcal vaccination, however there is little engagement with other at-risk groups such as people with chronic cardiovascular diseases and chronic respiratory diseases.



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