

# Influenza Diabetes Community

COMMITMENT PAPER OF  
THE INFLUENZA/DIABETES COMMUNITY

16 DECEMBER 2019

European  
Scientific  
Working group on  
Influenza

## Scientific background

Diabetes mellitus imposes a significant and increasing burden on society, with major consequences for human health, welfare and the economy worldwide. Persons with diabetes mellitus are at increased risk of developing severe complications after influenza virus infection and guidelines advise vaccination.

The present evidence for influenza vaccine effectiveness in persons with diabetes mellitus is mainly based on observational studies with clinical endpoints like hospitalization and death, indicating a beneficial reduction of morbidity and mortality. Further supportive evidence comes from serological studies, in which persons with diabetes mellitus usually develop similar antibody levels after vaccination as healthy people. Observational studies may be prone to selection bias, and serological studies may not completely mirror vaccine effectiveness in the field.

Although more controlled trials in persons with diabetes mellitus with laboratory-confirmed, influenza-specific outcomes would be desirable to better estimate the effect of vaccination, the currently available data justify routine influenza vaccination in persons with diabetes mellitus. As in this risk group, the use of influenza vaccine is far below target worldwide, efforts should be made to increase vaccination coverage.<sup>1</sup>

## Why an Influenza/Diabetes community?

People with diabetes face a higher risk for influenza and its complications and national and international guidelines therefore advise that diabetes patients be annually vaccinated against influenza. The attention for the impact of influenza on diabetes patients, however, is low and so is the vaccine uptake in this group.

Leading diabetes organizations, healthcare professional organizations and ESWI joined forces to forge an active influenza/diabetes community, implementing an action plan to better protect people with diabetes against influenza.

The action plan:

- The creation of specific diabetes/influenza awareness raising materials to be shared with members and to be used at conferences and meetings – also useful for patients (leave-behind-leaflets)
- Inclusion of tailored influenza vaccination information in existing communication channels of the partners
- Creation of a dedicated influenza/diabetes section on the ESWI portal website that will serve as a virtual reference center on diabetes and influenza
- To plug in influenza messages at existing meetings and congresses of the organisations working in the field of diabetes.


<sup>1</sup> Vaccine. 2017 Sep 12;35(38):5095-5101. doi: 10.1016/j.vaccine.2017.07.095. Epub 2017 Aug 12. Benefits of flu vaccination for persons with diabetes mellitus: A review. Goeyenbier M<sup>1</sup>, van Sloten TT<sup>2</sup>, Slobbe L<sup>3</sup>, Mathieu C<sup>4</sup>, van Genderen P<sup>5</sup>, Beyer WEP<sup>5</sup>, Osterhaus ADME<sup>6</sup>.

*Commitment Paper of the Influenza/Diabetes Community*

**Members**

- The International Diabetes Federation (IDF Europe)
- Foundation of European Nurses in Diabetes (FEND)
- Pharmacist Group to the European Union (PGEU)
- Diabetes UK
- Primary Care Diabetes Europe (PCDE)
- Immunology of Diabetes Society (IDS)
- European Association for the Study of Diabetes (EASD)
- Nurse Practitioner Healthcare Foundation (NPHF)
- American Association of Diabetes Educators (AADE)
- American Pharmacists Association (APhA)
- European Coalition for Diabetes (ECD)
- Ministry of Public Health of the Sultanate of Oman
- Federación Española de Diabetes (FEDE)
- European Scientific Working group on Influenza (ESWI)






**Influenza  
Diabetes  
Community**


[www.influenzadiabetescommunity.org](http://www.influenzadiabetescommunity.org)

<b>1.</b>	Influenza is a highly contagious respiratory illness	<b>2.</b>	People with diabetes have a higher risk of getting very ill	<b>3.</b>	3 to 6 times more likely to be hospitalized	<b>4.</b>	Higher rate of death	<b>5.</b>	Diabetes is more difficult to manage
-----------	--	-----------	---	-----------	---	-----------	----------------------	-----------	--------------------------------------



**World Health Organization**

World Health Organization recommends **yearly influenza vaccination** for high-risk patients, including those with diabetes



## Facts about Influenza and diabetes

- Diabetes estimates have been on the rise for several decades and diabetes is a growing global problem. Some 425 million people worldwide, or 8.8% of adults 20-79 years, are estimated to have diabetes. About 79% live in low-and middle-income countries. If these trends continue, by 2045, 693 million people 18-99 years, or 629 million people 20-79 years, will have diabetes.<sup>2</sup>

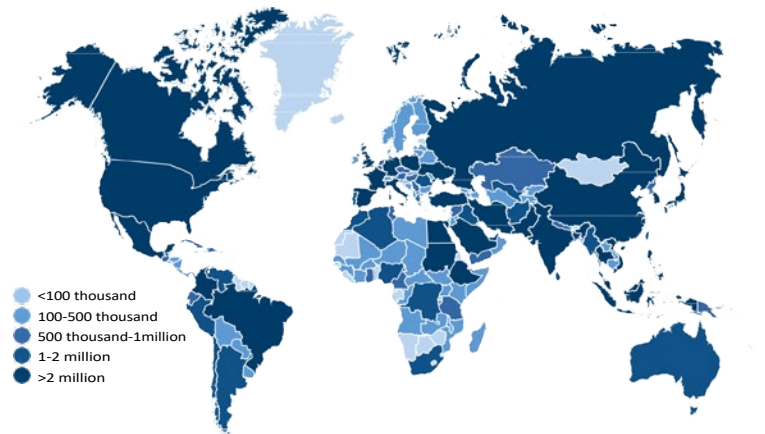


Figure 1: Estimated total number of adults (20-79 years) living with diabetes, 2017

- Between 2015 and 2017 there were 18 million new cases of people with diabetes, 8 million of whom are 65 years old and over.<sup>3</sup>

### HIGHLIGHTS:

**10 million more adults with diabetes than 2015**

**34 million more adults are at risk of developing diabetes than 2015**

**8 million more adults above 65 years old with diabetes than 2015**

**USD 54 billion more is spent on diabetes than 2015**

**19 million more adults with diabetes are undiagnosed than 2015**

**1 in 6 live births is affected by hyperglycaemia in pregnancy**

**Over a million children and adolescents have type 1 diabetes**

Figure 2: IDF Diabetes Atlas, Eight edition 2017

- Diabetes is one of the world's fastest growing chronic diseases and influenza virus represents a constant and pervasive threat to human health.
- Influenza is a highly contagious viral infection and a serious threat to people with diabetes.
- Influenza and its complications have a profound socio-economic impact in terms of direct (e.g. treatment and hospitalization) and indirect costs (e.g. absenteeism and presenteeism).
- Diabetes is one of the largest global health emergencies of the 21st century. It is among the top 10 causes of death globally.<sup>4</sup> A major contributor to the challenge of diabetes is that 30-80% of people with diabetes are undiagnosed.<sup>5</sup>
- The WHO estimates that annually 3.7 million deaths can be attributed to diabetes and high blood glucose.<sup>6</sup>

2 International Diabetes Federation. IDF Diabetes Atlas, 8th edn. Brussels, Belgium: International Diabetes Federation; 2017.

3 International Diabetes Federation. IDF Diabetes Atlas, 8th edn. Brussels, Belgium: International Diabetes Federation; 2017.

4 GBD 2015 Risk Factors Collaborators. Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet* 2016; 388: 1659-1724; DOI: [http://dx.doi.org/10.1016/S0140-6736\(16\)31679-8](http://dx.doi.org/10.1016/S0140-6736(16)31679-8).

5 Beagley J, Guariguata L, Weil C, et al. Global estimates of undiagnosed diabetes in adults. *Diabetes Res Clin Pract* 2014; 103: 150-160; DOI: <http://dx.doi.org/10.1016/j.diabres.2013.11.001>.

6 Global Report on Diabetes, World Health Organization 2016

## Influenza vaccination for people with diabetes

### KEY FACTS

People with diabetes are more susceptible to contracting influenza or other viral infections. Their immune system is more vulnerable to severe complications from influenza, like pneumonia. An influenza infection can increase blood sugar levels and make diabetes more difficult to manage. People with diabetes are 3 to 6 times more likely to be hospitalized with influenza during influenza outbreaks.<sup>7</sup>

Specific high-risk population groups are at higher risk of influenza-related complications, among others, older adults and individuals with chronic disease, like diabetes. Vaccination of high-risk groups lowers risk for adverse health outcomes<sup>8</sup> including influenza-associated complications. Vaccination of high-risk groups is therefore recommended by the World Health Assembly (WHA) as well as by national guidelines of most European countries.<sup>9,10</sup> The WHO recommends to routinely vaccinate 75% of all people at high risk.

Diabetes guidelines issued by national and international organizations such as the World Health Organization (WHO), the American Diabetes Association (ADA), US Centers for Disease Control and Prevention, Diabetes UK and the European Association for the Study of Diabetes (EASD) recommend that people with diabetes

get vaccinated against influenza at the start of every influenza season.

The attention for the impact of influenza on diabetes patients, however, is low and so is the influenza vaccine uptake in this group, despite the scientific evidence that influenza vaccination is beneficial and the sensible thing to do for people with diabetes (see scientific background) and that influenza vaccines are safe and effective tools to protect from influenza infection and its complications.

Influenza vaccination coverage rates among high-risk groups, like people with diabetes, vary considerably between European countries. People with diabetes seem to be unaware of the potential risk of an influenza infection.<sup>11</sup>

These disparities can at least partly be explained by the rise in vaccine hesitancy as well as therapeutic inertia and public health policy. National health care systems perform very differently with regard to the effective implementation and adherence to national vaccination guidelines as well as reimbursement policies and availability of the influenza vaccines.

7 [https://www.cdc.gov/diabetes/projects/pdfs/eng\\_brochure.pdf](https://www.cdc.gov/diabetes/projects/pdfs/eng_brochure.pdf)

8 Nicoll A, Ciancio B, Tsovala S, Blank P, Yilmaz C. The scientific basis for offering seasonal influenza immunisation to risk groups in Europe. *Euro Surveill.* 2008;13:7.

9 Mereckiene J, Cotter S, Nicoll A, et al. National seasonal influenza vaccination survey in Europe, 2008. *Euro Surveill.* 2008;13:2. [PubMed] [Google Scholar]

10 Ryan J, Zoellner Y, Gradl B, et al. Establishing the health and economic impact of influenza vaccination within the European Union 25 countries. *Vaccine.* 2006;24:6812–22

11 Influenza vaccination coverage among high-risk groups varies considerably between European countries. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3402715/>) 2011

## Commitment of Health Care stakeholders

There is a clear need for all the health care stakeholders, general practitioners, nurses, pharmacists, paediatricians, patient organizations as well as public health policy makers to get involved and commit to a joint strategy.

All health care workers play a specific and crucial role in protecting people with diabetes against influenza. They need to provide their patients with clear, uniform messages and advice, preferably in personal, one-to-one counseling sessions. They also need to lead by example and get vaccinated themselves.

Efforts should be made to increase influenza vaccination coverage. Conventional vaccination programs did not succeed in reaching people with diabetes and increasing influenza vaccine uptake. Other strategies should therefore be considered, i.e. replicate and model existing and proven best practices like the Diabetes UK campaign which resulted in 74% influenza vaccination coverage among people with diabetes.

## Commitment of the Influenza/Diabetes Community

The members of the Influenza/Diabetes Community commit themselves to developing and implementing a joint strategy

- to continue raising awareness about the impact of influenza on people with diabetes by plugging the influenza message into their meetings and conferences
- to disseminate good practices about influenza vaccination in people with diabetes,
- to convince/encourage health care workers and clinicians treating people with diabetes
  - to lead by example and get vaccinated themselves and
  - to recommend annual influenza vaccination to their patients.





**Influenza  
Diabetes  
Community**

[www.inflenzadiabetescommunity.org](http://www.inflenzadiabetescommunity.org)