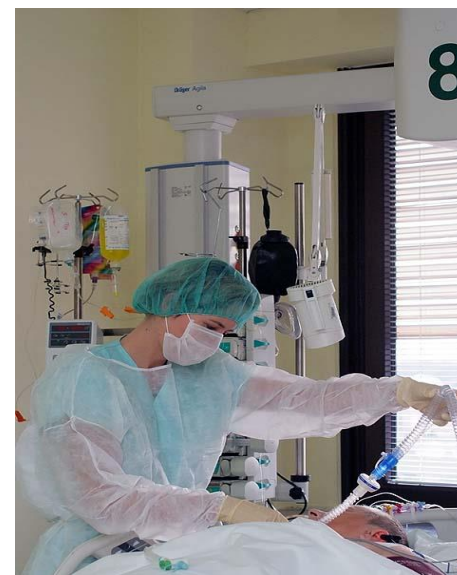




# Prevention and control of HAIs in the Czech healthcare system

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National Institute of Public Health, Prague, the Czech Republic



# Burden of six HAIs on european population health

yearly occurrence, number of attributable deaths and DALYs in EU/EEA

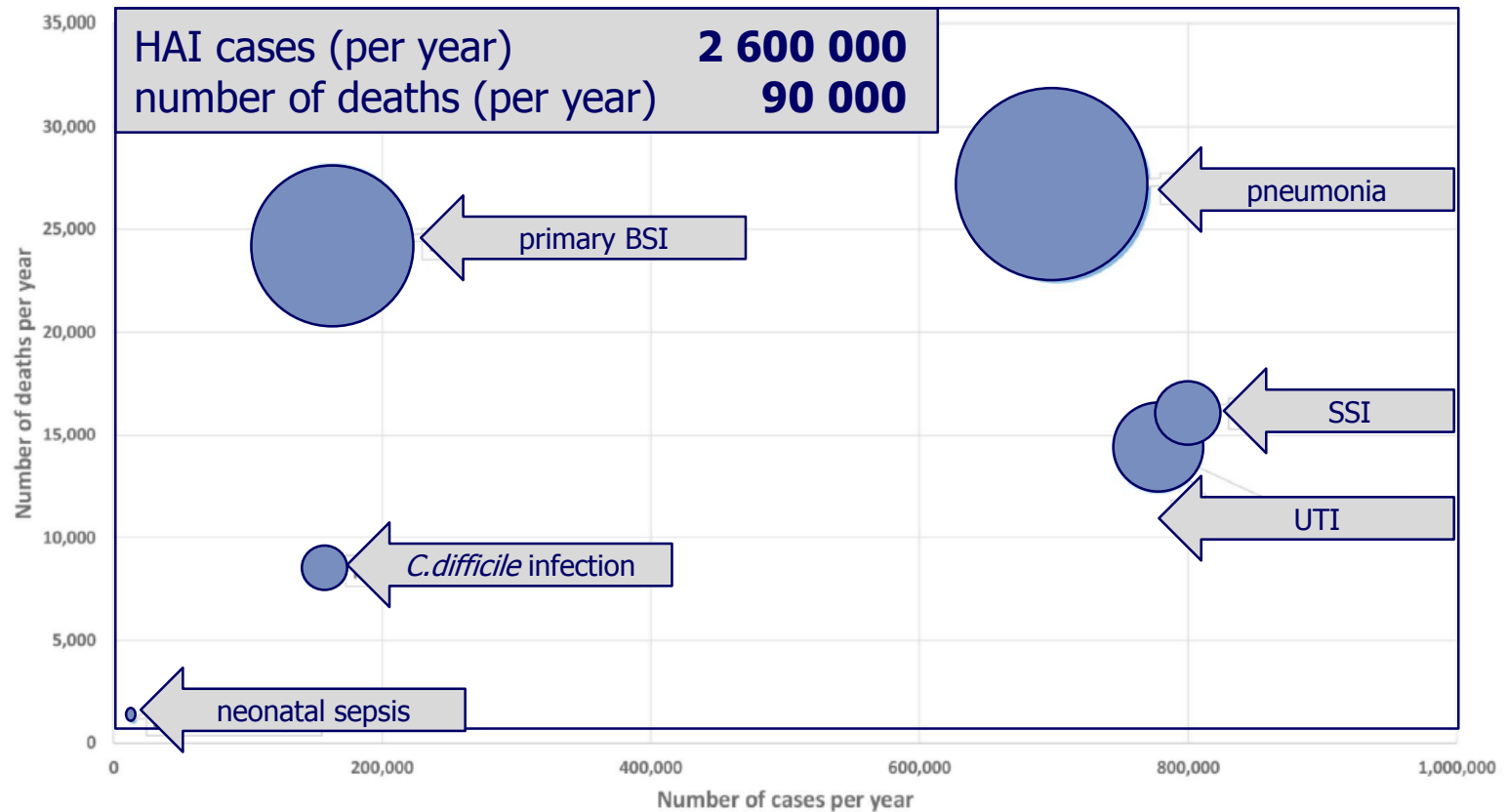
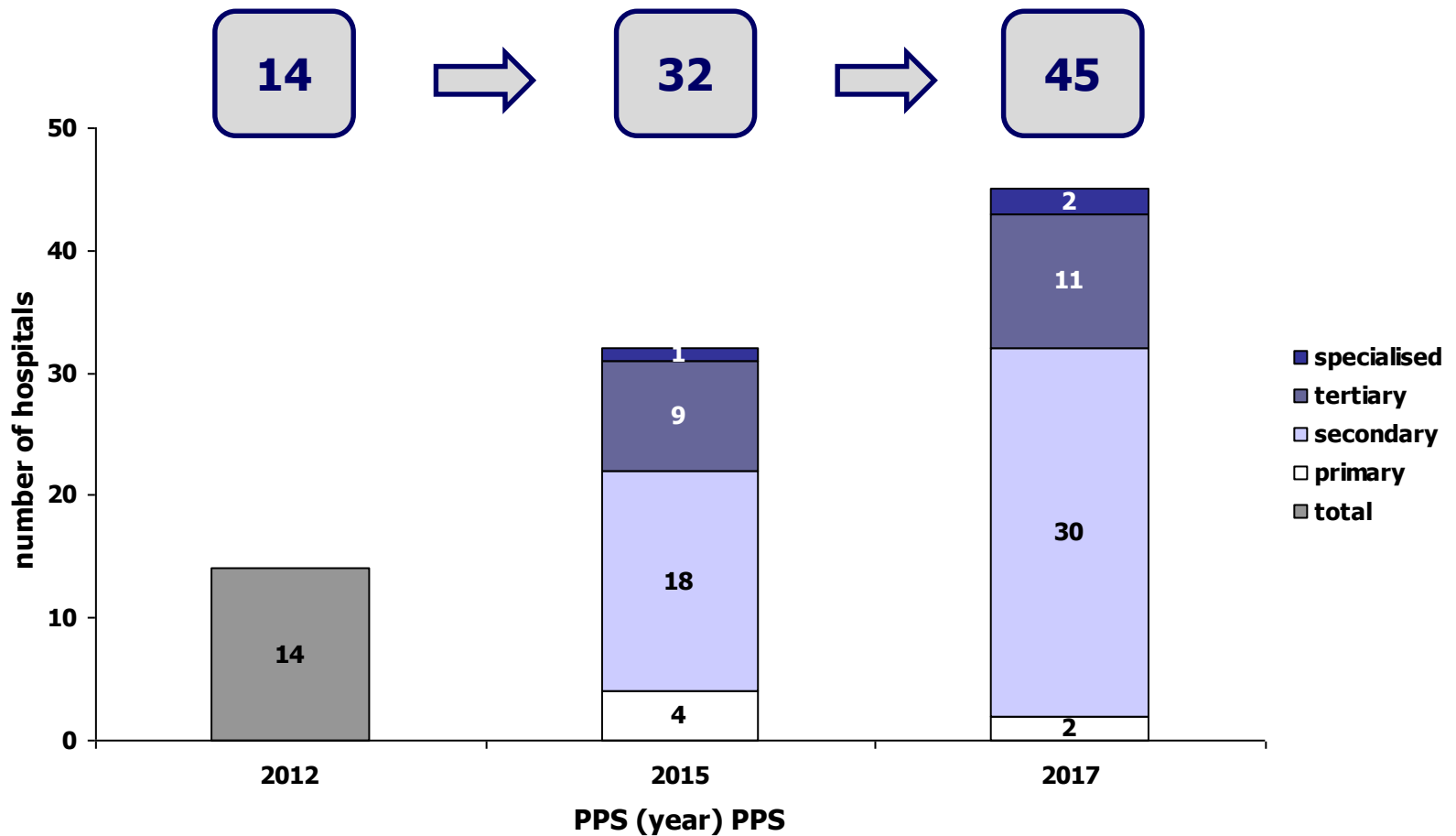
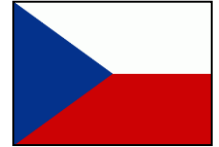


Fig 1. Six healthcare-associated infections according to their number of cases per year (x-axis), number of deaths per year (y-axis), and DALYs per year (width of bubble), EU/EEA, 2011–2012 (time discounting was not applied). DALY, disability-adjusted life year; HA, healthcare-associated.

Cassini A, et al. Burden of six healthcare-associated infections on european population health: Estimating incidence-based disability-adjusted life years through a population based prevalence-based modelling study. PLOS Medicine. 2016

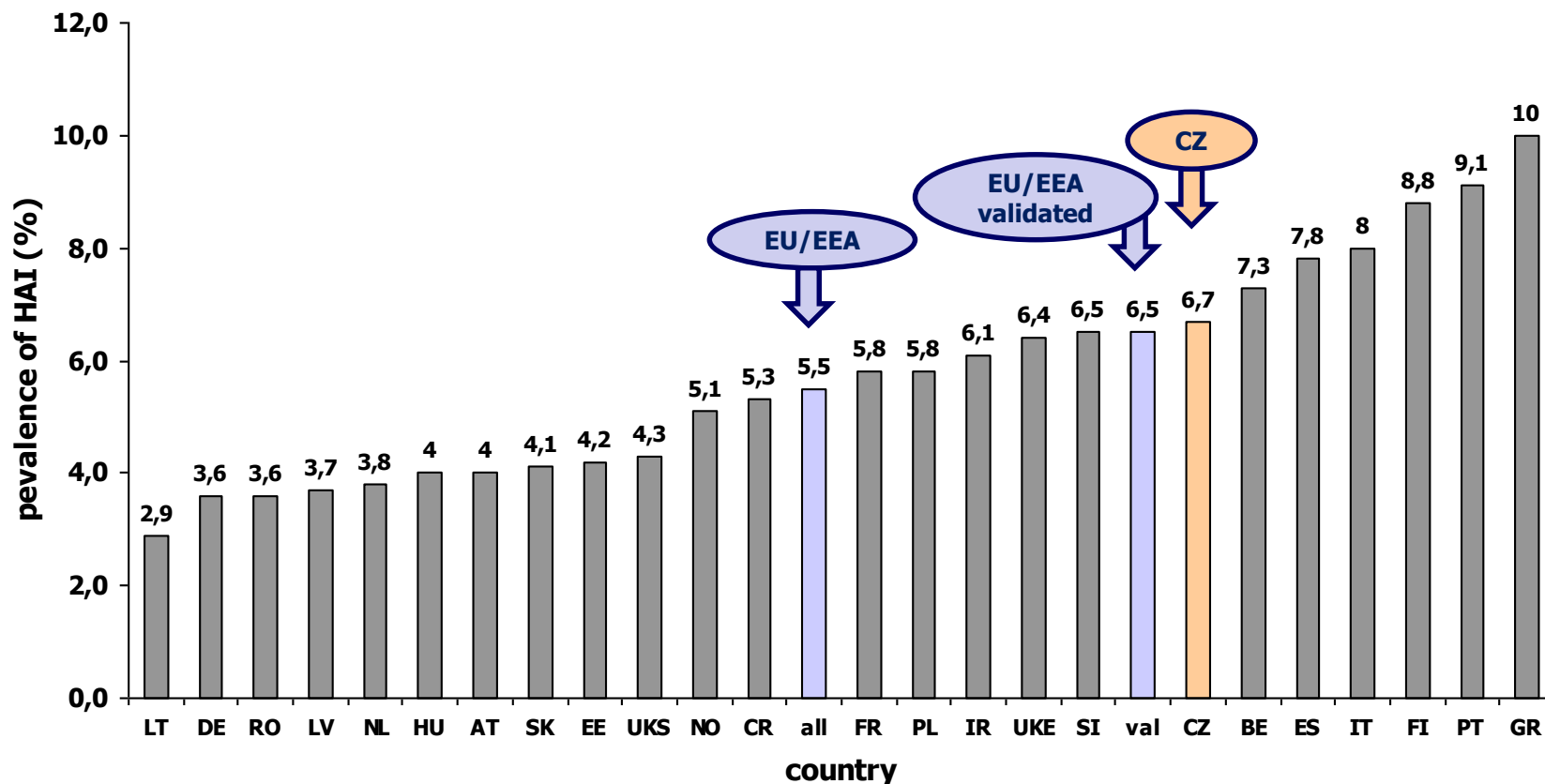
# CZ hospitals and national surveillance of HAIs

participation on European/national point prevalence surveys (HAI-Net)



# HAI prevalence in Europe and the Czech Republic

results of European point prevalence survey 2016-2017 (ECDC)



Suetens C, et al. Prevalence of healthcare-associated infections, estimated incidence and composite antimicrobial resistance index in acute care hospitals and long-term care facilities: results from two European point prevalence surveys, 2016 to 2017. Euro Surveill., 15. Nov 2018 (23)

# Estimated burden of HAIs in the Czech Republic

estimation of yearly occurrence and number of deaths



HAI	proportion (%) (according PPS)	cases /year (estimated)	number of deaths (estimated)
pneumonia	20%	20 000	1 000 – 1 500
primary bloodstream infections	10%	10 000	1 000 – 1 500
surgical site infections	20%	20 000	300 – 400
urinary tract infections	20%	20 000	100 – 200
<i>Clostridium difficile</i> infections	5%	5 000	250 – 350
other	25%	25 000	-
<b>total</b>	100%	<b>100 000</b>	<b>2 000 – 3 000</b>

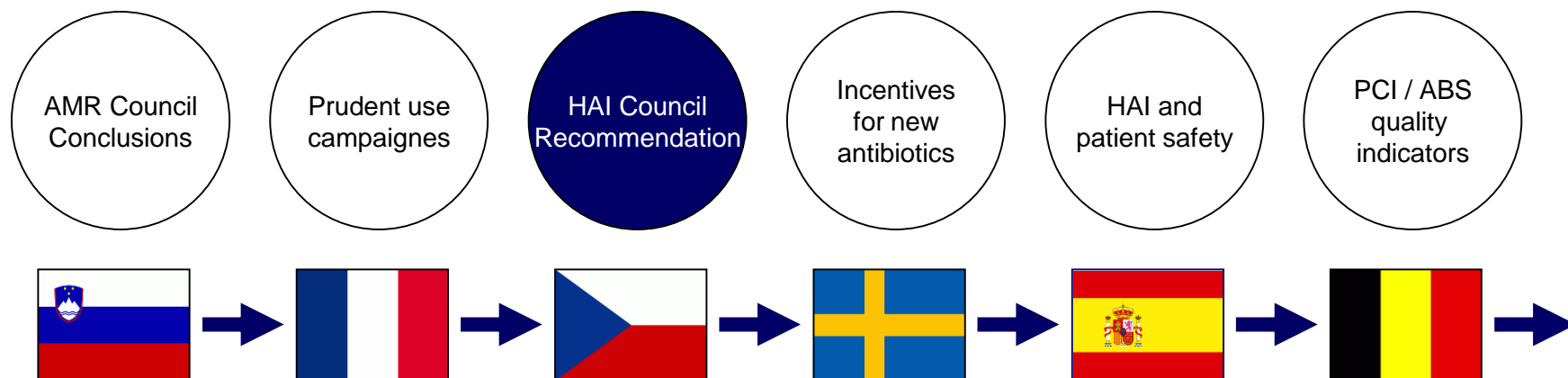
# Council Recommendation - 9.6. 2009

output of the Czech EU presidency



- **Council recommendation on patient safety, including prevention and control of healthcare associated infections**

- strategy and organisation of prevention and control of HAIs
- surveillance
- **education and training** (capacity building)
- information to the patients
- research



# CZ national healthcare legislation

obligatory hospital infrastructure on prevention and control of HAIs



- **Health services act 2012** – regulation to establish program on prevention and control of infections in CZ acute care hospitals
- **Ministerial (MoH) guidance** on „Hospital program on prevention and control of infections in acute care hospitals“ published **2013**

ČÁSTKA 2 ● VĚSTNÍK MZ ČR

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## METODICKÝ NÁVOD

**PROGRAM PREVENCE A KONTROLY INFEKČÍ VE ZDRAVOTNICKÝCH ZAŘÍZENÍCH  
POSKYTOVATELŮ AKUTNÍ LŮŽKOVÉ PÉČE**

- Coordination of **HAI surveillance** on the national and hospital levels
- Preparation of **guidance on prevention and control of HAIs**
- Assisting hospitals to create **HAI prevention and control programs**
- **Education and training** of infection control specialists
- Assisting hospitals on **outbreak investigation and control**
- Assisting hospitals to implement **antimicrobial stewardship**

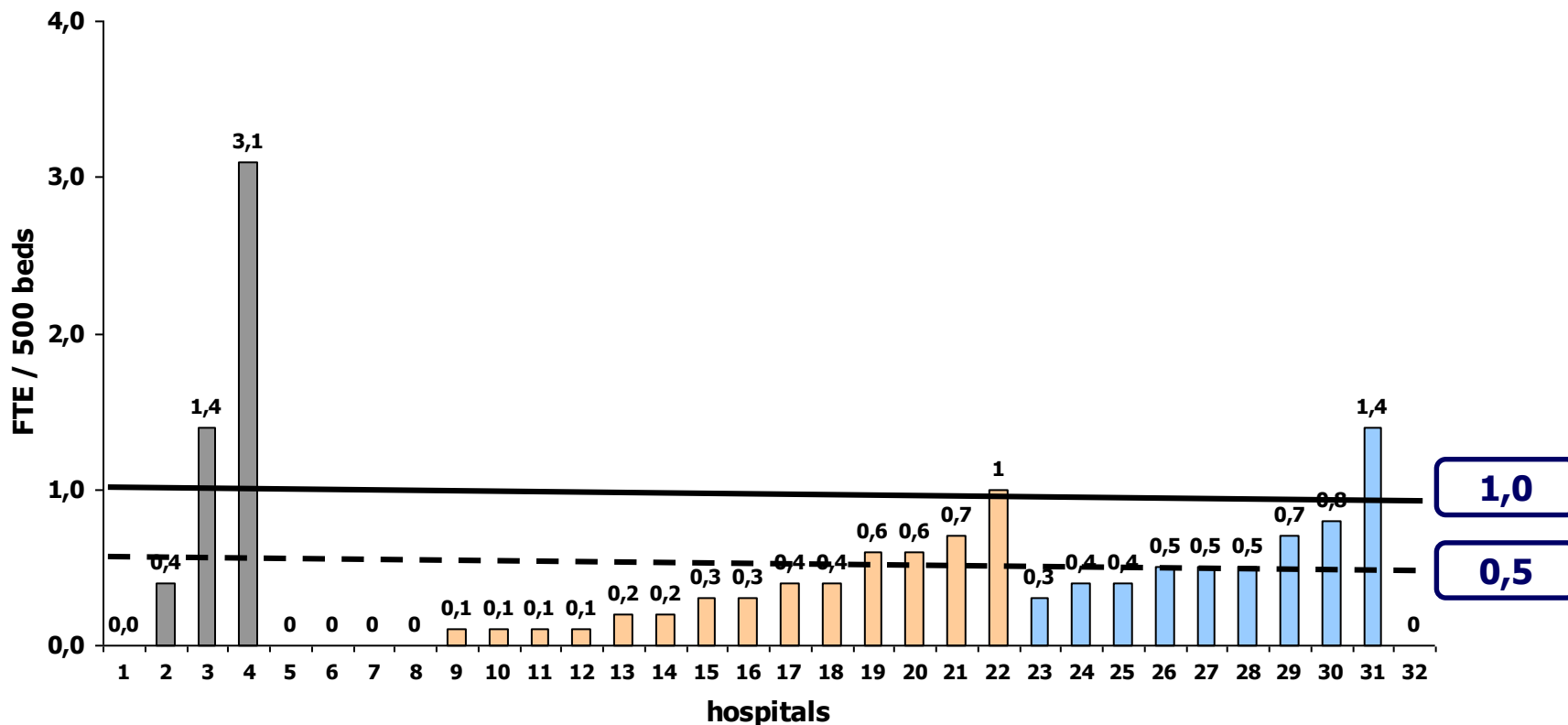


# Personal capacity: Infection control doctors

No. of full-time equivalents per 500 beds in 32 hospitals (PPS 2015)



average in PPS-CZ-2015: **0,5 FTE / 500 beds** (1,0 FTE recommended)

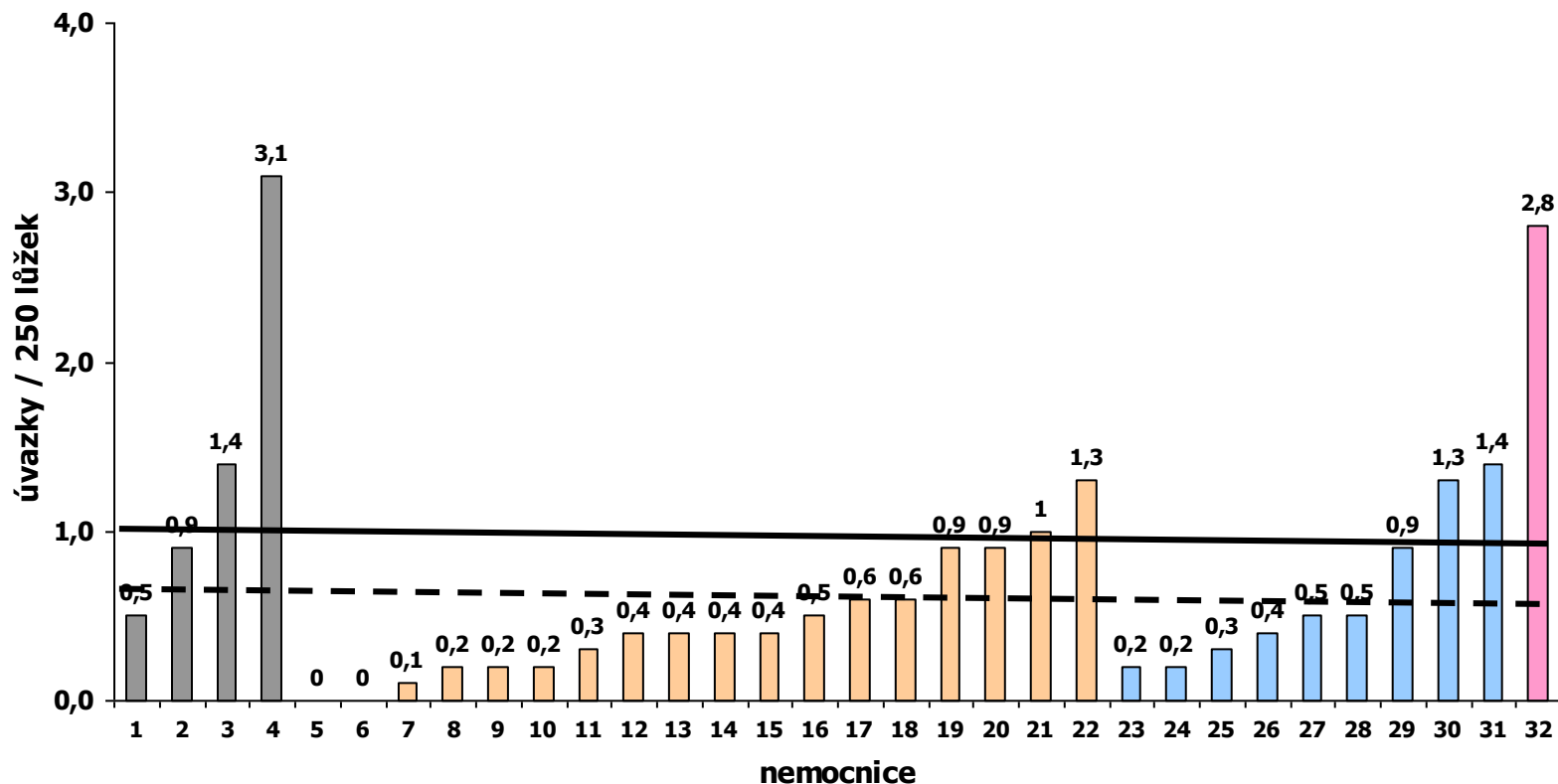


# Personal capacity: Infection control nurses

No. of full-time equivalents per 250 beds in 32 hospitals (PPS 2015)



average in PPS-CZ-2015: **0,7 FTE / 250 beds** (1,0 FTE recommended)



1,0

0,7



## **TECHNICAL** DOCUMENT

# Core competencies for infection control and hospital hygiene professionals in the European Union

# Training of infection control personnel in the CZ

ECDC evaluated course, registered at EU catalogue of IC/HH courses

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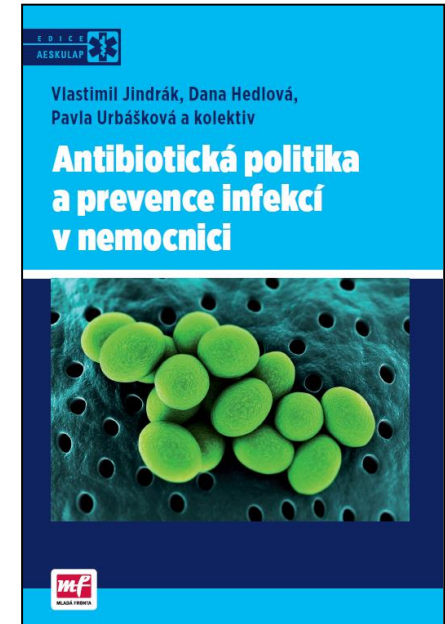


- Course: „**Prevention and control of infections in hospital setting**“
- Schedule: **3 semesters** (8 training blocks, 220 hours)
- Participants: **medical doctors, nurses, healthcare workers**
- **Training institutions:**
  - National Institute of Public Health (NRC-HAI), Prague
  - 3rd Medical Faculty, Charles University, Prague
  - Central Military Hospital, Prague
  - Na Homolce Hospital, Prague

# Training of infection control personnel in the CZ

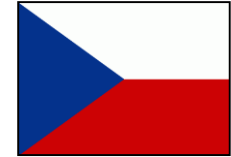
ECDC evaluated course, registered at EU catalogue of IC/HH courses

<b>INT</b>	<b>Introduction</b>
<b>ABS</b>	<b>Principles of hospital antimicrobial stewardship</b>
<b>CMI</b>	<b>Clinical microbiology and infection control</b>
<b>INF</b>	<b>Infections in the hospital setting</b>
<b>HEP</b>	<b>Methods of hospital epidemiology</b>
<b>NUR</b>	<b>Nursing of patients at infection risk</b>
<b>PCI</b>	<b>Prevention and control of infections in hospital setting</b>
<b>HYG</b>	<b>Hospital hygiene</b>
<b>PHP</b>	<b>Principles of public health</b>



# Training of infection control personnel in the CZ

## ECDC evaluated course, registered at EU catalogue of IC/HH courses



Implementation of a training strategy for infection control in the European Union



Dear Colleague,

We are very grateful to you and your Institution for participating to the first ECDC call of Infection Control/Hospital Hygiene (IC/HH) courses evaluation within the TRICE-Implementation Strategy project.

Your cooperation at this stage of the project was very useful, representing an opportunity for us to learn from your experience and to better understand the state of the art and future perspectives about IC/HH training initiatives in Europe.

Your course has been evaluated by reviewers, experts in IC/HH, through the following process:

- the presence of all inclusion criteria was verified for each course;
- each course was assigned to two different Reviewer Experts (REs) (neither of them was from the same country of course provider) and some member of is the project Core Staff was included as volunteers;
- the satisfaction of each evaluation criteria (essential and desirable) was assessed for each course;
- all other materials/documentation about IC/HH submitted course attached to the forms were included in the evaluation.

At the end of the process, we are delighted to inform you that your course was positively evaluated since all inclusion, exclusion and essential criteria were satisfied.



Certified course on infection prevention and control in healthcare facilities	
<b>Institution</b>	
Charles University in Prague Czech Republic	
<b>Course characteristics</b>	
Language	Czech
Target population	Nurses
Pre-requisites	Bachelor's or Master's degree, 3 years of bedside practice
Duration: hours (ECTS)	210 hours
Possibility of distance learning	No
Fellowships or grants available	No
Type of certification	Certificate from the Ministry of Health
<b>Course editions</b>	
Frequency	Every other year
Last edition	September 2015–January 2017
Next edition	September 2016–January 2018
<b>Learning objectives</b>	
Specific outcomes	<ul style="list-style-type: none"> <li>• Under supervision: surveillance of HAI, outbreak investigation, organisation of measures in serious epidemiological events, identification and assessment of HAI risk factors;</li> <li>• Without supervision: evaluation and implementation of good practice measures in nursing care; implementation of evidence-based infection control procedures.</li> </ul>
European IC/HH core competencies covered	<ul style="list-style-type: none"> <li>• Programme management</li> <li>• Quality improvement</li> <li>• Surveillance and investigation of healthcare-associated infections</li> <li>• Infection control activities</li> </ul>
<b>Website and contact information</b>	
Website	<a href="http://www.if3.cuni.cz/cs/pracoviste/osetrovatelestvi/kurzyl/">http://www.if3.cuni.cz/cs/pracoviste/osetrovatelestvi/kurzyl/</a>
Contact	<a href="mailto:vlastimil.jindrak@szu.cz">vlastimil.jindrak@szu.cz</a> ; <a href="mailto:nrc-hai@szu.cz">nrc-hai@szu.cz</a>