INSTITUTE OF HYGIENE

Validation study of the ECDC Point Prevalence Survey of healthcare-associated infections and antimicrobial use in acute care hospitals in Lithuania /Report/

Vilnius

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Background information.

National PPS is performed each year in Lithuania using national protocol which differs from ECDC protocol but case definitions are the same. According to national legislation all the hospitals are obliged to perform PPS and send data to Institute of Hygiene. Institute of Hygiene is organising one day seminar for hospital staff. More that 90 percent of acute hospitals are participating. Nursing hospitals have different protocol and their participation is mandatory as well. National reports are available at www.hi.lt/hospitalines.

Euro-PPS protocol was accepted as national protocol in 2017 and 2 big training seminars were organised for hospital staff emphasizing changes of the protocol. So national protocol, used in 2017 did not differ from ECDC protocol, except coding of several variables (numbers were used instead of letters as it was usual in previous national PPS, e.g. coding of antibiotics, infections etc.)

It was second Euro-PPS validation in Lithuania. During the first EuroPPS validation in 2012 validation team consisted of 2 validators from Institute of Hygiene. The validation was performed in two tertiary level hospitals.

Validation teams.

Institute of Hygiene have started to compose the validation team in the end of February, 2017. We have succeeded to recruit 4 validators and only one of them with the validation experience in 2012. The minimal requirement for all validators was participation in national PPS, participation in national education seminar on PPS and at least two validators who have had long experience in infection control in national level hospitals and participated in ECDC PPS meetings/trainings. None of validators were able to dedicate enough time for validation in all selected hospitals so finally two validation teams were formed. Worth to mention, that it was quite complicated to recruit validators as most experience persons, working in university hospitals were performing PPS in their hospital and were not able to leave own hospital and travel to other hospitals.

Validation teams members:

First team:

1. J. Asembergiene - Head of Infection control department in National Institute of Oncology and specialist in Institute of Hygiene with more than 15 years experience in national PPS and validator in Euro-PPS in 2012; participated in ECDC PPS meetings.
2. V. Kanapeckiene – Head of Innovation department in Institute of Hygiene, 5 years experience in national PPS.

Second team:

1. I. Kisieliene - Head of Infection control department in Republican Vilnius university hospital and specialist in Institute of Hygiene; 3 years experience in national PPS, participated in ECDC PPS meetings, validation trainings.
2. A. Plentaite – specialist in Institute of Hygiene with 2 years experience in national PPS; participated in ECDC PPS meetings.

All the validators participated in webinars and had several meetings to discuss EuroPPS and Euro-PPS Validation protocols.

Hospitals staff did not participate in validation process. Head of Infection control in hospitals or deputy director escorted validators to units and presented to medical staff in clinical departments. If needed medical staff in clinical departments was consulted during validation process if information in medical documents was insufficient.

Data collection.

Totally 61 hospital participated in EuroPPS. Institute of Hygiene performed a random selection of hospitals for validation. There were 35 hospitals selected and invitation letters were sent. 20 hospitals have accepted the invitation and were included. These hospitals are representative for the total PPS, as these hospitals were randomly selected, represent different level hospitals and are distributed all over the Lithuania.

In each selected hospital 1-3 departments were selected for validation with minimum 30 patients per hospital. ICU and surgical departments were considered as priority.

There was no need for a privacy legislation procedure and/or an agreement of an ethical committee as national PPS is part of national surveillance system.

There were no deviations of national PPS protocol or validation protocol from the ECDC protocols except some coding in PPS (mentioned previously). Validators have used original English forms. Validation team haven't met and discuss with the primary PPS data collectors to avoid primary data 'corrections'.

The validation data collection took from five to eight hours in one hospital. Time spent in one hospital have differed depending on hospitals level (higher level – more serious patients, more antimicrobial treatment etc.). Validation data entering and creation of primary data basis lasted 2 weeks.

Factors that may have influenced the quality and/or validity of the data

The main reasons for false negative or false positive HAI detected during the validation study were misinterpretation of case definitions. In most of hospitals in Lithuania, especially in small local, diagnostic measures are inadequate especially microbiological tests and sometimes even X-ray examination. Sometimes there is a clear infection (e.g. pneumonia) and antimicrobial treatment prescribed, but there is no X-ray performed and no microbiological sample taken, and it is impossible report infection as HCAI. Main reasons for inappropriate AM use is lack of knowledge, lack of microbiological test and right interpretation of them.

Recommendations

Validation is a perfect tool not only to validate data but also to discuss PPS performance in general. Validation protocol in general is informative and clear. Have to mention that data about antimicrobial treatment were quite difficult to collect and interpret, especially escalation/de-escalation – it was too complex even for validation team. Training of validators is important tool and more detailed analysis of case-studies would be beneficial.

Validation planning should start earlier.