



- TURKU UNIVERSITY HOSPITAL/TUH (2016)**
- Tertiary medical center
  - 3875 Employees
  - 886 Beds
  - 207045 Patient days
  - 60866 Treatment periods
  - 39530 Inpatient surgery
  - 15912 Ambulatory surgery



## Point prevalence Surveys of Healthcare-Associated infections (HAI) in Southwest Finland

Kurvinen, Tiina RN, ICN, MNsc, Terho, Kirsi RN, ICN, MNsc, Marttila, Harri MD, PhD, Rintala, Esa MD, PhD.  
Turku University Hospital, Hospital District of Southwest Finland



Table. 1 Characteristics of the study population and prevalence of total number of HAI during years 2007-2016 in the TUH.

	Total number of patients n=7228	(%)	Total number of HAI n=946	(13.1%) %
<b>Male</b>	3572	<b>49,4</b>	521	<b>55,1</b>
<b>Female</b>	3656	<b>50,6</b>	425	<b>44,9</b>
<b>Age (md)</b>	56	-	56	-
<b>Antimicrobial treatment</b>	3067	<b>42,4</b>	912	<b>96,4</b>
<b>Carriage of multi-resistant organism (MRO)</b>	56	<b>0,7</b>	5	<b>0,5</b>
<b>Surgery</b>	1421	<b>19,7</b>	340	<b>35,9</b>
<b>Urinary catheter</b>	1409	<b>19,5</b>	318	<b>33,6</b>
<b>Central venous cath.</b>	781	<b>10,8</b>	301	<b>31,8</b>
<b>Mechanical ventilation</b>	146	<b>2,0</b>	62	<b>6,6</b>
<b>Specialty</b>				
Surgical	2006	<b>27,8</b>	276	<b>29,2</b>
Medical	2079	<b>28,8</b>	333	<b>35,2</b>
Paediatric	522	<b>7,2</b>	87	<b>9,2</b>
ICU (mix adults)	186	<b>2,6</b>	73	<b>7,7</b>

### INTRODUCTION

Healthcare-associated infections (HAIs) are critical and mostly preventable complications that occur in hospitalized patients. Over a 10-year period the incidence surveillance data collection is made alongside prevalence data (PPS) in the Turku University Hospital (TUH). Collection of both data is made by using an electronic program, linked to all of the hospital's electronic databases.

### OBJECTIVES AND METHODS

The objectives were to assess the magnitude and characteristics of HAIs. Annual PPS and continuous incidence surveillance of HAIs was performed in a Finnish tertiary care hospital with 747 beds.

A PPS was conducted in each March from 2007 to 2016 to estimate HAI prevalence and associated risk factors.

### RESULTS

The ten year incidence of HAI was 7.2 per 1000 patient-days and 2.5 % of all discharged patients at risk (95% confidence interval 2.09-2.94), while the prevalence of infected patients was 12.24% (95% CI 11.59-12.88) with large interdepartmental differences.



Figure 1. Trends of annual HAI PPS in TUH 2007-2016 and results of the National (ECDC) prevalence survey in Finland.

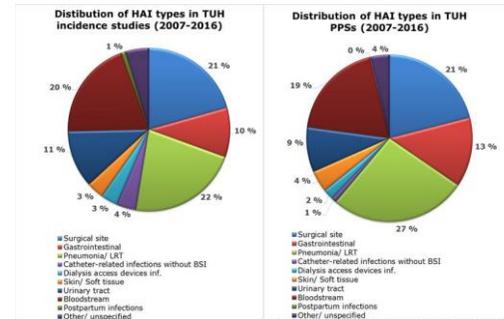


Figure 2. Long-term distribution of HAI types in both TUH incidence and in PPS in years 2007-2016 were similar.

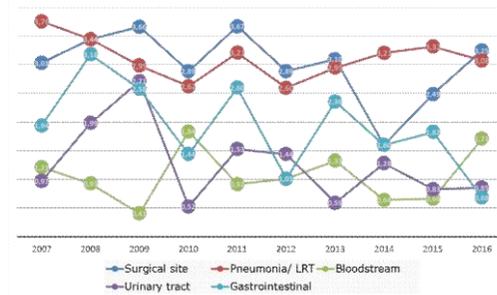


Figure 3. Annual trends (infection %) of the most common infections in PPS in years 2007-2016

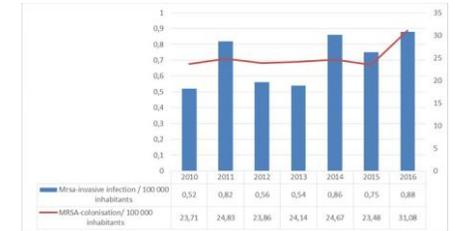


Figure 4. Community and hospital acquired MRSA colonisation and invasive infection rates in the hospital district of Southwest Finland (2010-2016) has remained low.

### CONCLUSIONS

The PPS showed that the long-term distribution of HAIs were strikingly similar in PPSs and in incidence surveys, indicating that incidence survey is as reliable method for HAI surveillance as PPS. These two methods are complementary to each other and increase the capturing of all HAIs.

More primary prevention efforts are necessary to address HAIs associated to prevent surgical site infections and with the use of invasive devices. There is a need to consider the prevalence of HAI and risk factors of units, when planning the implementation of preventive interventions. Targeted infection control programmes to reduce infections are essential in hospital level.

### ACKNOWLEDGEMENTS

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