

Update Surveillances NSIH-EARS, NSIH-ICU, NSIH-SSI

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Overview



NSIH-EARS: European Antibiotic Resistance Surveillance

NSIH-ICU: Surveillance of Infections in Intensive Care Units

NSIH-SSI: Surveillance of Surgical Site Infections

European Antibiotic Resistance Surveillance (EARS-Net BE)



Main **European (EU) Surveillance** system for **antimicrobial resistance (AMR)**.

Results of **routine antimicrobial susceptibility (AST) tests** on **7 frequent pathogens** (STAAUR, ENCFAI, ENCFAE, ESCCOL, KLEPNE, PSEAER, ACISPP) isolated from **invasive clinical samples** (blood, cerebrospinal fluid);

BE Clinical laboratories performing AST

Unit of observation: **AST**; data extraction from **Lab system**

BE organisation by IPH, in EU European Center for Disease Control

Reporting on occurrence and spread of AMR in **EU**

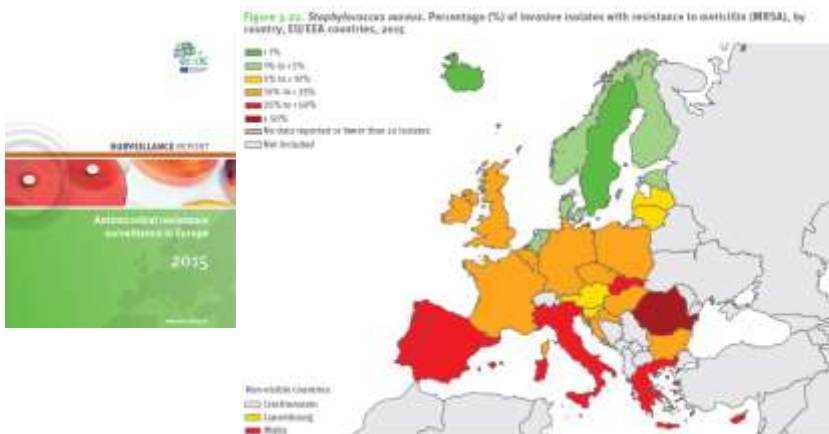
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European Antibiotic Resistance Surveillance (EARS-Net BE)



BE *Staphylococcus aureus*, R to meticillin (MRSA): **12.3%** (913 isolates)



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European Antibiotic Resistance Surveillance (EARS-Net BE)



BE *Staphylococcus aureus*, R to meticillin (MRSA): **12.3%** (913 isolates)



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European Antibiotic Resistance Surveillance (EARS-Net BE)



2016 data call:

- Deadline **15 May 2017**;
- BE protocol (inclusion criteria, tests, data definition, <http://www.nsih.be/>);
- Submit data through e-mail to nsihdata@wiv-isp.be; Validation report in 2017/6; Data submitting to EU in 2017/7; External Quality Assessment in 2017/9.
- Focus on: **Guidelines** for interpretation of clinical breakpoints (EUCAST, ..); Results of **confirmation tests** for detection of **mecA-gene** (PCR, STAAUR), **Penicillin Binding Protein 2a** (agglutination, STAAUR), **Extended Spectrum Beta-lactamase** (phenotypic, ESCCOL, KLEPNE), **Carbapenemase** (phenotypic, ESCCOL, KLEPNE, PSEAER, ACISPP).

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National Surveillance of Infections in Intensive Care Units (NSIH-ICU)



20 years! (1997-Now)

Since 2004: following **European standard** (ECDC);

Case definitions for *ICU-acquired Pneumonia (PN)*, *Bloodstream infections (BSI)*, *Urinary tract infections (UTI)*, *Catheter-related Infections (CRI)*;

3-month surveillance periods; choose at least one infection type

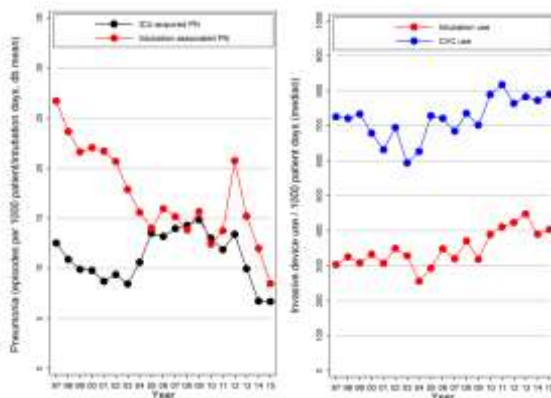
Registration options:

- **Level 1** (Unit-based): only infected patients with >2d stay + aggregated denominator
- **OR Level 2** (Patient-based): all patients with >2d stay

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National Surveillance of Infections in Intensive Care Units (NSIH-ICU)



Trends 97-15:

- ICU-acquired PN (L)
2015: 6.7 PN/1000pd
- Intubation-ass. PN (VAP, L)
2015: 8.5 PN/1000id
- Intubation use (R)
2015: 405id/1000pd

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National Surveillance of Infections in Intensive Care Units (NSIH-ICU)



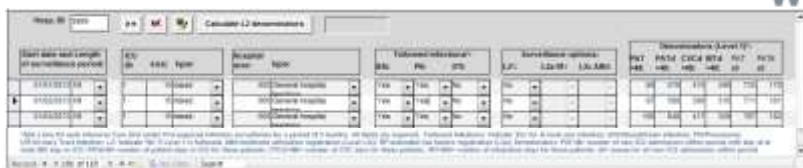
Data collection 2016: deadline 2017/9;

Protocol update 2017/4 (simplification):

- Removed case definitions 'BSI-B' (Single blood culture for skin contaminants in patients with CVC and adapted treatment), 'UTI-C' (asymptomatic bacteriuria);
- Removed Registration option « Patient-based CVC follow-up (L2b) »
- L1 Denominators include « Intubation days for patients >2d », merged with hospital & unit characteristics



National Surveillance of Infections in Intensive Care Units (NSIH-ICU)



NSIHwin V4.11:
 « Hospital, unit, denominators » (U)
 « ICU infection follow-up » (R)



National Surveillance of Surgical Site Infections (NSIH-SSI)



Following **EU/US standard** (ECDC, Center for Disease Control).

Recommended surgeries (choose at least one): *Coronary Bypass (CABG), Knee Prosthesis (KPRO), Hip Prosthesis (HPRO), Laminectomy (LAM), Ceasarian Section (CSEC), Cholecystectomy (CHOL), Colon Surgery (COLO).*

3-month surveillance periods; Follow patients for SSI during recommended post-surgery period.

Protocol updates:

- Case definition *Deep incisional, Organ/space*: 90 days (before: 365) recommended follow-up in case of implant (HPRO, KPRO, CABG)
- Patient-based registration
 - Required: administrative & demographic data + SSIs for all followed patients,
 - Optional: risk factors for calculation of Risk Index, Post-discharge follow-up.



National Surveillance of Surgical Site Infections (NSIH-SSI)



NSIHwin V4.11: Indicate way(s) of post-discharge surveillance (if any)

Start date of 3-month surveillance period	Operation category	Hospital site	Hospital type	Rt:	Surveillance options*					
					READM	LAB	DIRG/SPIC	GP	PAT	EMD†
01/10/2011	HPRO	400	General hospital, Academic	No	Yes	Yes	Yes	No	No	Yes
01/10/2011	KPRO	400	General hospital, Academic	No	Yes	Yes	No	No	No	Yes
01/10/2011	LAM	400	General hospital, Academic	Yes	Yes	Yes	Yes	No	No	Yes
01/10/2012	LAM	400	General hospital, Academic	Yes	Yes	Yes	Yes	No	No	Yes

*Add a line for each operation category under SSI surveillance for a period of 3 months. All fields are required. †Select 'No' for all options if no post-discharge surveillance is done. Rt=registration of risk factors to calculate Risk index; READM=re-admission data; LAB=laboratory data; DIRG/SPIC= data from consultations of surgeon or specialist; GP= data from (consultations of) General Practitioner; PAT= direct patient contact; EMD= registration for the surveillance period ended!

Records: 14 - 4 of 4



National Surveillance of Surgical Site Infections (NSIH-SSI)



NSIHwin V4.11: Monitoring of SSI

Patient:		Surgical intervention:					Post-intervention follow-up (PFIU):				Surgical site infection:				
Patient no.	Family name	Birth date	Gender	Date	NO	MSK Cat.	KCD Cl code	Discharge Date	Status	Last date	Post-discharge	patient contact	SSIU	Date	Type
004141811	nie	13/01/1971	F	14/02/2011	1	LAM	0038	21/02/2011	A	13/01/2012	SP	13/01/2012	SP	20/02/2011	II
004142910	nie	06/01/1971	M	25/02/2011	1	LAM	0038	28/02/2011	A	20/11/2011	SP	20/11/2011	SP		
004142913	nie	11/02/1981	F	25/02/2011	1	LAM	0038	28/02/2011	A	20/11/2011	SP	19/01/2012	SP	20/11/2011	II
004142918	nie	11/01/1982	F	26/02/2011	1	LAM	0038	01/03/2011	A	19/01/2012	SP	19/01/2012	SP		
004148071	nie	08/01/1984	M	26/02/2011	1	LAM	0038	26/02/2011	A	20/11/2011	SP	20/11/2011	SP		
004148073	nie	22/01/1982	F	27/02/2011	1	LAM	0038	02/03/2011	A	20/11/2011	SP	20/11/2011	SP		
004148082	nie	02/01/1978	F	27/02/2011	1	LAM	0038	02/03/2011	A	20/11/2011	SP	20/11/2011	SP		

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National Surveillance of Surgical Site Infections (NSIH-SSI)



ecdc SSI Cumulative Incidence

(cumulative incidence of SSI (superficial, deep incisional, organ/space) within one year (they incisional and organ/space infections) respectively 30 days (superficial infections) after the procedure, reporting year 2011 (look also below included))

Country	Total number of patients	Superficial SSI (%)	Deep incisional SSI (%)	Organ/space SSI (%)	Mean	PI1	PI2	PI3	PI4	PI5
Austria	57,400	18	0.27	0.4	1.2%	0.9%	1.6%	1.1%	0.8%	0.8%
Belgium	...	...	...	...	...	...	...	...	...	...
Denmark	10,400 (1,000,000,000)	100	0.03	0.06	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
Germany	...	...	...	...	...	...	...	...	...	...
Italy	...	...	...	...	...	...	...	...	...	...
Spain	...	...	...	...	...	...	...	...	...	...
United Kingdom
EU28

Recent ECDC reference data (sent with Feedback report):

HPRO 2015

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National Surveillance of Surgical Site Infections (NSIH-SSI)



Please, send us your SSI surveillance data!

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NSIHwin software V4.11



Data export function with automatic e-mail generation;

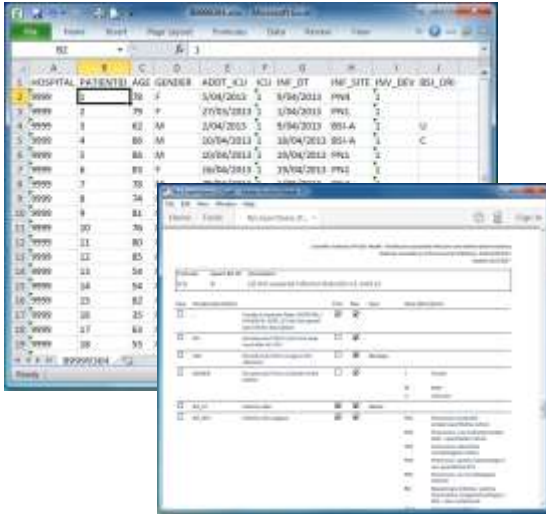


Obtain installation file by sending e-mail to nsih@wiv-isp.be or karl.mertens@wiv-isp.be

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Using the NSIH-ICU/SSI Data Definitions



Creating surveillance data **directly**; avoids the use of NSIHwin software

Data format: CSV, XLS, ..

Data definition = **Guideline**

Feedback report as **validation**



Thank you !



Further info:
<http://www.nsih.be>
 EARS-Net Be, ICU, SSI,
 NSIHwin webpages

Questions, remarks,... :
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