



# Development of a European enhanced CDI surveillance protocol at national level

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**ITS**  
**KISS**

**SARI**

**DEVICE**  
**KISS**

**HAND**  
**KISS**

**AMBU**  
**KISS**

**MRSA**  
**KISS**

**CDAD**  
**KISS**

**KISS**  
Krankenhaus-  
Infektions-  
Surveillance-  
System

[www.nrz-hygiene.de](http://www.nrz-hygiene.de)

**OP**  
**KISS**

**NEO**  
**KISS**

**ONKO**  
**KISS**



# Comparison with MRSA in Germany 2010

	MRSA KISS	CDAD KISS
Hospitals	268	122
Incidence density (per 10,000 patient days)	13.2 MRSA cases, not infections!	7.2
Incidence density of nosocomial cases (per 10,000 patient days)	2.1 MRSA cases, not infections	4.5

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# How many CDI do we have in Germany?

Disease	Year	Annual number of infections in Germany
Nosocomial CDI *	2009	58,000
Nosocomial S.aureus infections *	2009	55,000

\* Estimated number from surveillance data

# Surveillance

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... is information for action

- in the own hospital
- on a national/global level

# Surveillance

... is information for action

- in the own hospital:

- to observe the situation and to stimulate further infection control measures
- To stop outbreaks and perform risk factor analyses

# Surveillance

... is information for action

- on a national/global level:

- to survey the development in the whole country (including risk factor analysis)
- to analyse consequences of infections

# Methods of CDI surveillance systems

Depend

- on the objective of surveillance
- available resources
- background  
(e.g. size of the problem in the individual country)



# The most appropriate method should be selected according to these points

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However, in order to avoid too much variability a harmonized European protocol is needed.

ECDC HAI surveillance strategy in general:

- **A light version**
- **A full version**

# The light version (Minimal dataset)

- Unit based surveillance method (or hospital based ?)
- Only the total number of cases and denominator data are recorded for each unit (or hospital?)
- Denominator data will be derived from the hospital information system (patients, patient days)
- Distinguishing healthcare acquired healthcare onset cases and community acquired healthcare onset cases
- Endpoints:  
CDI incidence/CDI incidence density per unit (hospital)
- Integration into TESSY

Krankenhaus-Infektions-  
Surveillance-System (**KISS**)

**CDAD-KISS:**  
Surveillance-Protokoll  
Clostridium difficile  
assoziierte  
Diarrhö in Krankenhäusern

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- Hospital based surveillance
- summarized annual data
- Denominators:  
patients and patient days





## CDAD-KISS Bogen

KISS - Krankenhaus-Infektions-Surveillance-System

Formular zurücksetzen

Formular drucken

Per E-Mail senden

Folgende Liste ist jährlich für stationäre Patienten auszufüllen und bis zum 31. März des Folgejahres per E-Mail (s. Button oben) zu versenden.

Für das Jahr:  Gesamtzahl Patienten des Krankenhauses:  Krankenhaus-Kürzel:

Wann erfolgt die CDAD-Diagnostik in Ihrem Krankenhaus?

- ☐ Bei klinischem Verdacht
- ☐ Bei allen Patienten mit Durchfall, nach Aufenthalt > 3 Tagen in Krankenhaus
- ☐ Andere Kriterien (*Bitte angeben*):

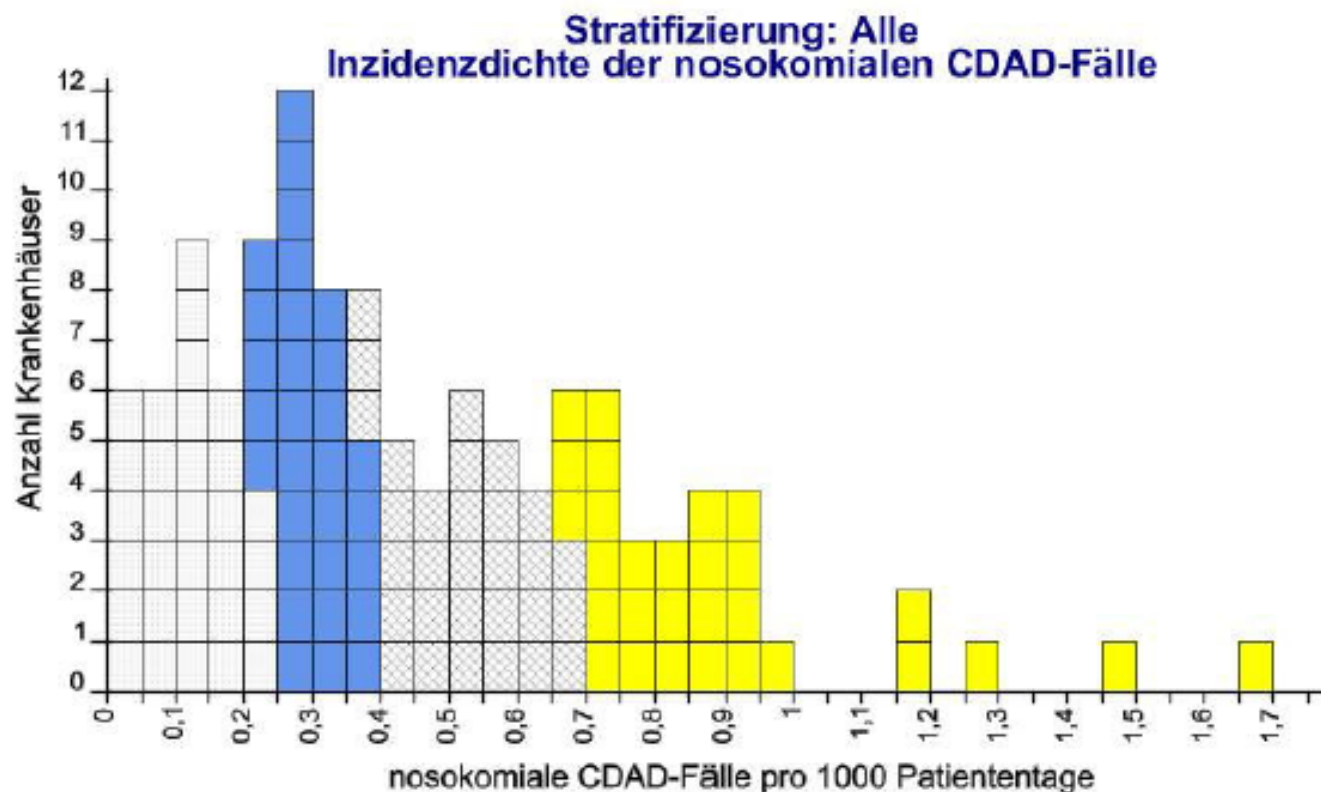
	CDAD-Fälle insgesamt	Anzahl der CDAD- Patienten	CDAD-Fälle (sofern Unterscheidung möglich)			Mitgebrachte Fälle	Nosokomiale Fälle	Schwere Fälle	Patiententage des Krankenhaus
			Kriterium 1	Kriterium 2	Kriterium 3				
Krankenhaus gesamt (alle Abteilungen)									

# Distribution of CDI in 122 KISS hospitals in 2010

Rate	Mean	25th percentile	Median	75th percentile
CDI incidence density (per 10,000 patient days)	7.2	4.5	7.1	11.1
Incidence density of healthcare onset CDI (per 10,000 patient days)	4.5	2.3	3.8	6.8
Incidence density of severe CDI (per 10,000 patient days)	0.3	0	0.1	0.3

# Distribution of nosocomial CDI incidence density

**CDAD**  
**KISS**



Q1: 0,23 Median: 0,38 Q3: 0,68

Legende

□ bedeutet Krh mit einer noso CDAD Inf. Rate  $\leq$  Q1, ■  $\leq$  Median, ▨  $\leq$  Q3 und ■  $>$  Q3.

# CDI incidence density in German hospitals 2007-10

Year	Hospitals	Incidence density (per 10,000 patient days)	Nosocomial incidence density (per 10,000 patent days)
2007	35	6.6	4.8
2008	59	6.8	4.7
2009	86	6.6	4.5
2010	122	7.2	4.5

400 severe cases in 2010

# The full version (enhanced protocol)

- Further data for patients with CDI:  
(e.g. antibiotic usage, earlier contact to healthcare facilities)
- Follow-up data (recurrent infections, need for ICU admission, colostomy, death)
- Information about the strains ?
- Endpoints: Risk factor analyses for outcomes such as death, recurrent infections (ECDIS survey)
- OPTIONAL:  
Laboratory component for ribotyping data (TESSY)  
(see workpackages 2 and 3)



# Workpackage 4

- Objective 1: Review methods and data of existing national CDI surveillance protocols  
-> review paper
- Objective 2: Call an expert meeting to develop a European enhanced CDI surveillance protocol with case based epidemiological and microbiological (typing) data for CDI -> protocol
- Objective 3: Perform a feasibility study by implementing the protocol in at least 6 member states (3 with high experience and 3 with no prior experience)

# Expert meeting in Berlin

- Epidemiologists and typing specialists from countries with existing systems
- Considering IT aspects (webbased systems)
- OPTIONAL:  
Laboratory component for ribotyping data (TESSY)  
(see workpackages 2 and 3)