Punkt-Prävalenz Analysen zum Antibiotika-Verbrauch

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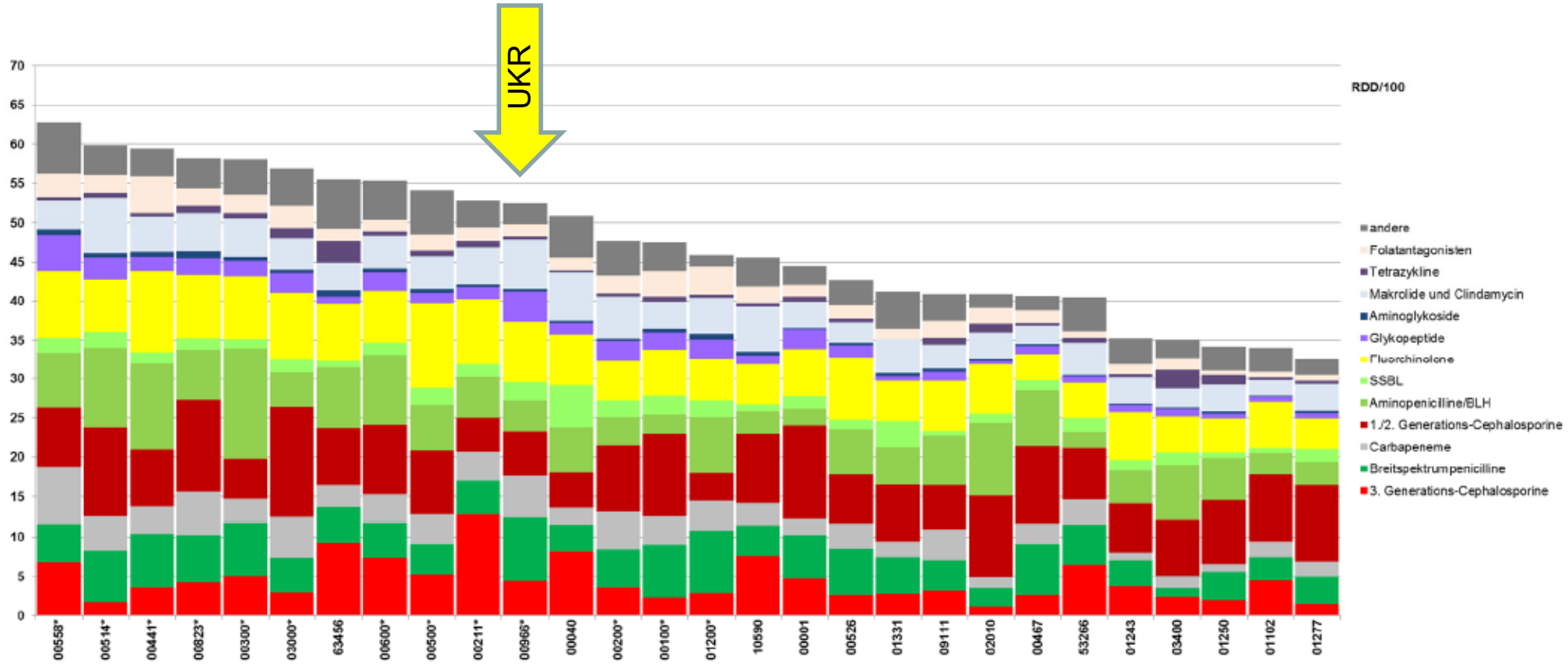
Verbrauchsreport 2014
Antibiotika gesamt



ESAC 2004

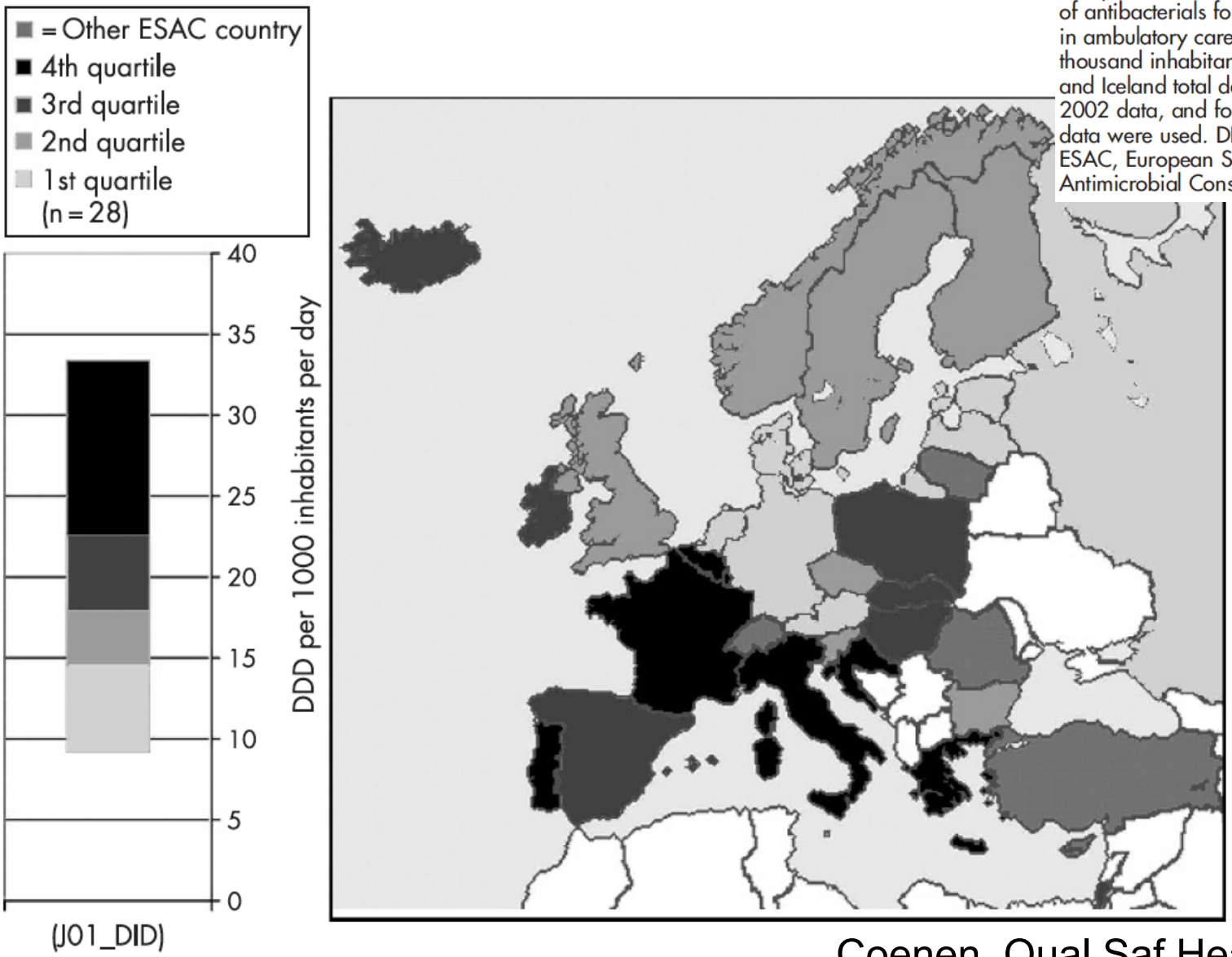


Figure 2 Outpatient antibiotic use in 28 European countries in 2004. †Consumption of antibacterials for systemic use (ATC J01) in ambulatory care is expressed in DDD per thousand inhabitants per day; for Greece and Iceland total data were used, for Poland 2002 data, and for Estonia and Italy 2003 data were used. DDD, defined daily dose; ESAC, European Surveillance of Antimicrobial Consumption.

Coenen, Qual Saf Health Care 2007

Messung Antibiotikaverbrauch vs. -einsatz

- Beurteilung Verbrauch
  - Kumulative Daten, stations- bzw. abteilungsbezogen
  - In der Regel erzeugt nach Lieferung der Apotheke aus SAP bzw. Warenhaltung
  - Welche Fehlerquellen?

- Beurteilung Einsatz:
  - Beurteilung der individuellen Situation
  - Welche Infektion? Welches Antibiotikum
  - Dosierung? Dauer?

Prävalenz/Punkt-Prävalenz

- Prävalenz: Vorhandensein eines Merkmals in einer Population (Rate, Prozentsatz)

- Punkt-Prävalenz
  - Vorhandensein eines Merkmals in Population zu einem spezifischen Zeitpunkt
  - Häufigkeit der Sepsis in Deutschland
    - Wie kann ich das messen?
    - Was will ich eigentlich messen`

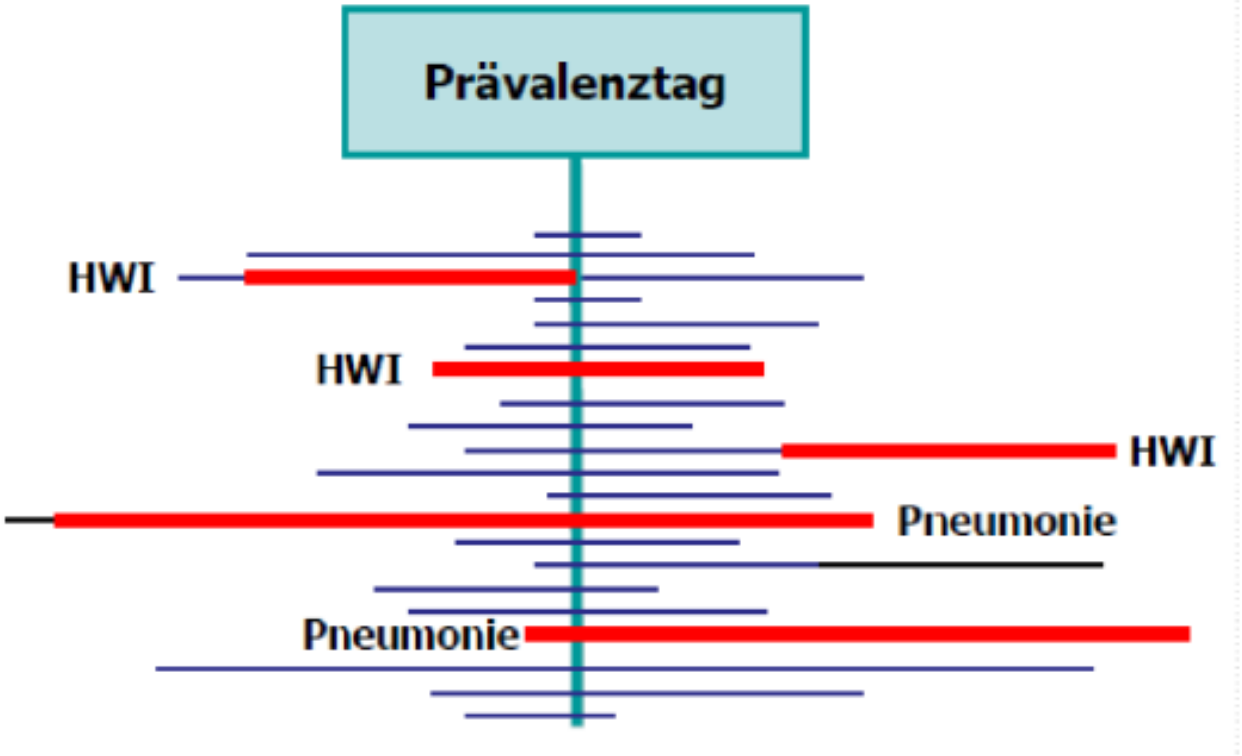
Prävalenzstudie zur Sepsis 2007

- Auswahl einer repräsentativen Gruppe von Krankenhäusern
  - 310 Krankenhäuser, 454 ICUs
- Training der Untersucher – klare Kriterien: Sepsis, schwere Sepsis, septischer Schock
- Messung der Prävalenz in jedem Krankenhaus am Stichtag
  - For all patients occupying an ICU bed between 6:00 a.m. of the study day and 6:00 a.m. of the following day, the presence of infection, SIRS, and organ dysfunction during this specific 24-h time period was assessed and documented

Engel, Intensive Care Med 2007

Punkt Prävalenz-Analyse Sepsis

- 1- Tages- Analyse



Prävalenzstudie zur Sepsis 2007

Characteristic	Total[a] $n = 3{,}877$ (100.0%)
Age, median years (IQR)	67 (56–76)
Gender, no. (%)	
Male	2235 (57.6)
Female	1624 (41.9)
Length of ICU stay (days)	
Mean	8.5
Median (IQR)	3 (2–9)
Infection, no. (%)	
Unknown	127 (3.3)
No	2402 (62.0)
Yes	1348 (34.8)
Inflammatory response, no. (%)	
Unknown	358 (9.2)
None	1638 (42.2)
SIRS	675 (17.4)
Sepsis	473 (12.2)
Severe sepsis or septic shock	415 (10.7)
Infection without SIRS	260 (6.7)
Severe sepsis or septic shock without SIRS	58 (1.5)

Engel, Intensive Care Med 2007

Inzidenz?

- Inzidenz und Prävalenz sind rechnerisch miteinander verknüpfbar, wenn die Dauer der Erkrankung bekannt ist. (P/(1-P) = I x D.
- Dauer hier mit ICU-Aufenthalt (12d) abgeschätzt:
  - Prävalenz von 12,6% Sepsis, 11,0 schwere Sepsis
  - Inzidenz von 58.000 bzw. 52.000 bzw. 85/100.000 oder 76/100.000

Engel, Intensive Care Med 2007

Punkt-Prävalenz-Analyse

- Nicht Methode der Wahl für Messung der Häufigkeit der Sepsis
- Nicht Methode der Wahl für Messung adäquater Antibiotikaeinsatz
  - Aber einfache Methodik
  - „Quick and dirty“
  - Nur dort anzuwenden, wo Antibiotikaeinsatz häufig genug ist

PP-Analyse: Begründung

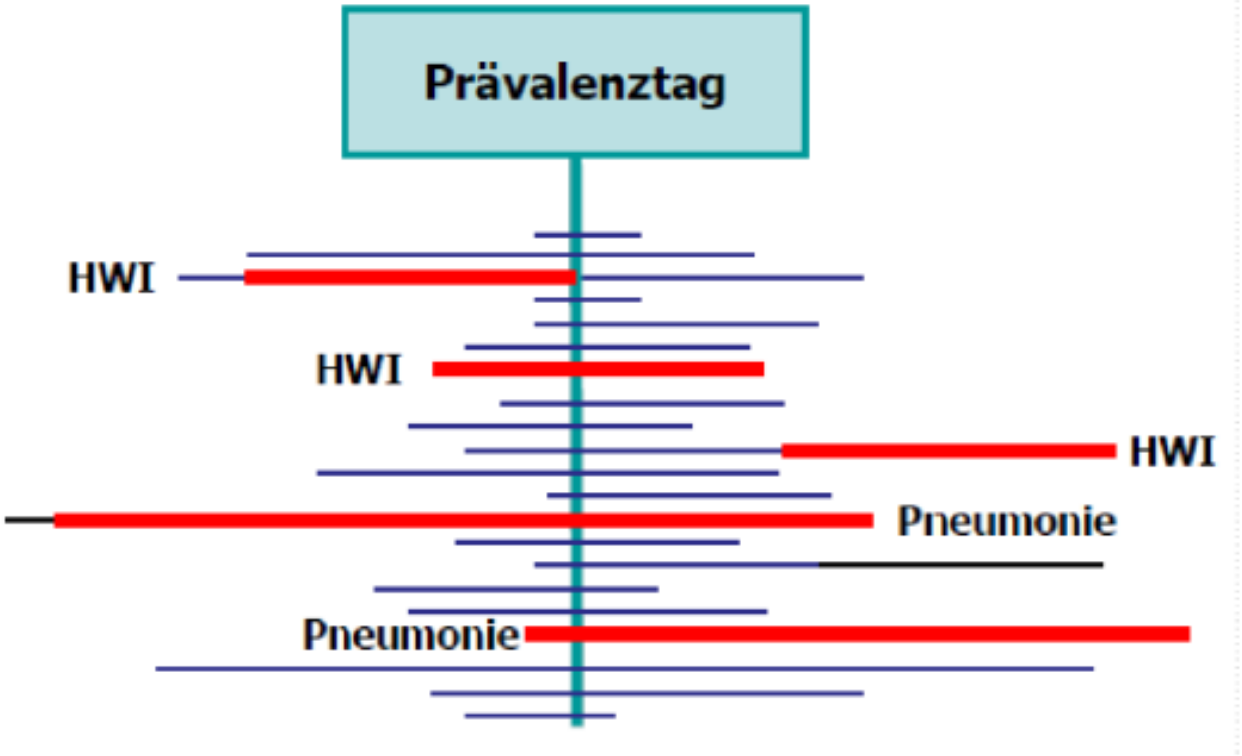
- Hoher Verbrauch (gesamt, lokal)
- Auffälligkeiten in der Liste der Top 15

Punkt-Prävalenz-Analyse Antibiotikaeinsatz

- Ziel: Erfassung Ist-Zustand
  - Prävalenz Antibiotikaeinsatz
  - Antibiotikaverordnung (Indikation, Substanz, Dosis)
- Ziel: ABS/QM
  - Infektionsdiagnostik nach LL
  - Antibiotikaeinsatz nach LL
  - Anpassung nach Erreger
- Ziel: Beurteilung von Intervention

Punkt Prävalenz-Analyse Antibiotikaeinsatz

- 1- Tages- Analyse



Wie ist die Prävalenz von Antibiotikaeinsatz im Krankenhaus?

- Welche Faktoren sind relevant?

ESAC II

- 20 Krankenhäuser, aus europäischer Kooperation (1 pro Land)
- Alles tertiäre Behandlungszentren, 13 Universitätskliniken
- Survey Antibiotikatherapie 1 Tag, perioperative Prophylaxe 1 Tag vorher

ESAC Point Prevalence Survey May 2006

Date of survey	
Auditor code	
Hospital	
Department (or Group or Division)	
Denominator: total patients in Department (including patients in Intensive Care Units or High Dependency Units) at 08.00	

Note: The aim is to find out what the physicians think they are treating. For this we will look at all patient records, and may request additional information from nurses, pharmacists or doctors. There will be no discussion about the appropriateness of prescribing. The staff should not have the feeling that we are checking them and there is no intention to change prescribing.

Include in survey: all patients who are receiving systemic (not topical) antibacterials (not antifungals or antivirals or TB treatment). All patients who are in the hospital at 8 am on the days of survey should be included in the study.

Prophylaxis: any patient who received one or more doses in the 24h prior to 8am on the day of the survey. NB, check doses received on the previous day as well in order to code as either 1 dose, 24hours or >24hours.

Diagnosis Group: by anatomical site of infection treated or prevented (prophylaxis).

Site	Codes	Examples
CNS	Proph CNS	Prophylaxis for CNS (neurosurgery, meningococcal)
	CNS	Infections of the Central Nervous System
EYE	Proph EYE	Prophylaxis for eye operations
	EYE	Endophthalmitis
ENT	Proph ENT	Prophylaxis for Ear, Nose or Throat (surgery or medical)
	ENT	Infections of ear, mouth, nose, throat or larynx
RESP	Proph RES	Pulmonary surgery, prophylaxis for respiratory pathogens
	Bron	Acute bronchitis or exacerbations of chronic bronchitis
	Pneu	Pneumonia
CVS	Proph CVS	Cardiac or vascular surgery, endocarditis prophylaxis
	CVS	Cardiovascular infections: endocarditis, vascular graft
GI	Proph GI	Surgery of the GI tract, liver or biliary tree, GI prophylaxis in neutropenic patients or hepatic failure
	GI	GI infections (salmonellosis, antibiotic associated diarrhoea)
	IA	Intra-abdominal sepsis including hepatobiliary
SSTBJ	Proph SBJ	Prophylaxis for plastic or orthopaedic surgery (bone or joint)
	SST	Cellulitis, wound, deep soft tissue not involving bone
	BJ	Septic arthritis (including prosthetic joint), osteomyelitis
UTI	Proph UT	Prophylaxis for urological surgery, recurrent UTI
	Cys	Lower UTI
	Pye	Upper UTI
GUOB	Proph GyOb	Prophylaxis for obstetric or gynaecological surgery
	OBGY	Obstetric or gynaecological infections, STD in women
	GUM	Prostatitis, epididymo-orchitis, STD in men
Not Defined	BAC	Bacteraemia (not endocarditis) with no clear anatomical site
	SIRS	Systemic inflammatory response with no clear anatomic site
	UND	Completely un-defined site with no systemic inflammation

Hospital	Department	Full Patient Identifier[a]	Survey Number[b]	Sex	Ward (including ICU)

[a]For example 10 digit unique hospital number, to allow local linkage to patient records for more detailed audit. This identifier is not included in the ESAC on-line database
[b]A unique but non-identifiable number for each patient entered in the survey by this hospital. This number will be included in the ESAC on-line database to allow queries about data entered on the web-site. It is suggested that patients are numbered consecutively before entry onto the database.

Essential Fields						Essential Fields				
Drug	Unit Dose[1]	Doses per day[2]	Route[3]	Diagnosis (site)[4]	Indication[5]	Immuno-suppression[6]	Foreign material[7]	Culture pre-therapy[8]	Reason in notes[9]	Assessment[10]
1										
2										
3										
4										
5										

[1]Dose per administration in grams: for combination products record the total dose prescribed (e.g. co-amoxiclav 1.2 G; co-trimoxazole 0.96 G.
[2]Provide fractions of doses if necessary, e.g. every 16h = 1.5 doses per day, every 36h = 0.67 doses per day, every 48h = 0.5 doses per day
[3]IV, oral, rectal
[4]See list on Page 1
[5]Indication codes:

A Community acquired infection	Symptoms or antibiotics started <48h after patient was admitted		
B Hospital acquired infection	B1 Post-operative infection (within 30 days after surgery or 1 year after implant surgery)		
	B2 Other intervention related infections (IV catheter, VAP, CAPD)		
Symptoms start 48h after admission to hospital	B3 *C difficile* associated diarrhoea >48h after admission or <30 days after previous admission		
	B4 Other hospital acquired infection		
	B5 Infection present on admission from another hospital		
C Surgical prophylaxis	C1 Single dose	C2 one day	C3 >1 day
D Medical prophylaxis			

[6]As defined by CDC contra-indication to live vaccines: cancer, leukaemia, HIV infection, primary immunodeficiency, cytotoxic chemotherapy, radiotherapy or high dose steroids (equivalent to prednisolone 15mg per day or more for 1 month or more, Yes or No.
[7]Infection associated with implanted device (prosthetic joint, pacemaker, IV line), Yes or No
[8]Relevant culture taken before antibiotic treatment was started, Yes or No
[9]A diagnosis or indication for treatment was recorded in the notes at the start of antibiotic treatment
[10]Assessment of concordance with local antibiotic policy

1. Concordant, culture positive
2. Concordant, culture negative (includes prophylaxis that is concordant with antibiotic policy)
3. Excessive but likely to be effective (e.g. meropenem for community acquired cellulitis)
4. Possibly ineffective (e.g. omission of treatment for anaerobic bacteria with intra-abdominal sepsis)Other faults, specify

From: The European Surveillance of Antimicrobial Consumption (ESAC) Point-Prevalence Survey of Antibacterial Use in 20 European Hospitals in 2006

Clin Infect Dis. 2009;49(10):1496-1504. doi:10.1086/644617

Clin Infect Dis | © 2009 by the Infectious Diseases Society of America

Protocol for registration of patient with ON-GOING antimicrobial treatment - Microsoft Internet Explorer

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Address https://www.neotide.fi/

Protocol for registration of patient with ON-GOING antimicrobial treatment

Patient number: 4748

Hospital	Department	Year of birth	Sex	ICU Admitt.dept Ward	Study
	cardiology				test

cardiology
chest/pulmonary medicine
dermatology
emergency dept
endocrinology
ENT
gastroenterology
general surgery
geriatrics
gynecology
hand surgery
hematology
infectious diseases
internal medicine
medicial rehabilitation
neonatal medicine
neonatal nursery
nephrology
neurological rehabilitation
neurology
neurosurgery
oncology
ophtalmology
orthopedics
pediatric habilitation
pediatric surgery
pediatric urology
pediatrics
plastic surgery

	Name of drug	Dose per administr	ation	Diagnose group	Immuno-suppres-sion	Foreign material assoc.	Indication for therapy	Relevant culture be-fore therapy	Indication for relevant therapy in records	Assessment of given treatment
1.										
2.										
3.										
4.										
5.										

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Back to the menu

The following treatments are registered ents against infections caused by bacteria and fungi. The following treatments are not registered: topical treatments against bacteria and fungi and antiviral treatments.

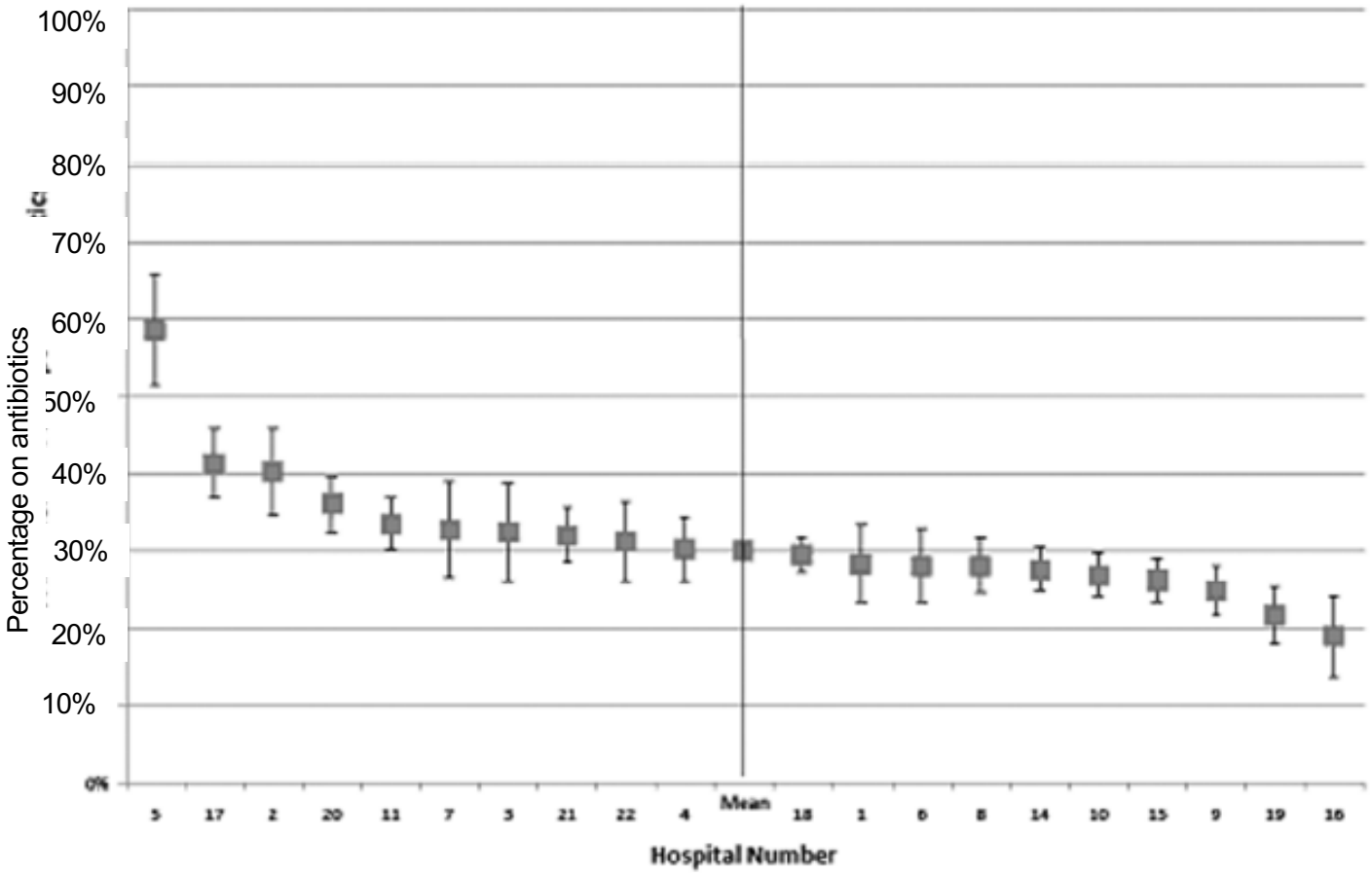
Dose per administration: Combinatio nbinations against TBC) are registered as number of tablets, ml mixture, or ml injection fluid, respectively.
Number of doses per day: Dose ever ery 18th hour = 1.3 doses/day, every 36th hour = 0.67 doses/day etc.
Diagnose group: Indication for antimic e indication set by the prescribing physician at initiation of therapy, according to records or interviews. Only one diagnose can be registered for each antimicrobial. For prophylaxis cho ation.
Immunosuppression: e.g. chemother neutropenia, dialysis, severe hepatic failure, HIV, primary immuno-deficiency, steroids for >1 month corresponding to prednisolon ≥15 mg/d.
Indication for therapy:
A. Community acquired infection
B. Hospital acquired infection B1. Pos t operation site, debut <30 days after surgery, or <1 year after surgery with implants)
B2. Other intervention related infections (e.g. CAD-, CVC- and PVC-related, VAP)
B3. C. difficile enterocolitis (debut in hospital or <30 days after discharge)
B4. Other hospital acquired infections, debut ≥48 h after admittance to hospital, incl infection from other dept., not B 1-3.
B5. Infection is present at admittance from another hospital.
C. Per-operative prophylaxis; prescribed for: C1. one dose C2. one day C3. >1 day
D. Medical prophylaxis (immunosuppression, HIV, prophylaxis against relapsing infections, e.g. uti, etc)

Hospital acquired means infection associated with treatments in hospitals. B 2-4 include infection debut during stay alt. <30 days after discharge.

Evaluation of given treatment:

From: Th
Antibacte
Clin Infect Dis. 2009;49(10):1490-1504. doi:10.1086/644617
Clin Infect Dis | © 2009 by the Infectious Diseases Society of America

ESAC II PP Survey 2006



Ansari, CID 2009

ESAC II PP Survey 2006

System	No (%) of antimicrobial uses		
	Diagnosis site (%) (n = 3599)	Prophylaxis (%) (n = 839)	Treatment (%) (n = 2760)
Respiratory	867 (24.1)	69 (8.2)	798 (28.9)
Skin, Bone & Joint	650 (18.1)	131 (15.6)	519 (18.8)
Undefined	569 (15.8)	103 (12.3)	466 (16.9)
Intra-abdominal	540 (15.0)	192 (22.9)	348 (12.6)
Urinary tract	471 (13.1)	99 (11.8)	372 (13.5)
Otorhinolaryngology	163 (4.5)	113 (13.5)	50 (1.8)
Genital	133 (3.7)	78 (9.3)	55 (2.0)
Cardiovascular	108 (3.0)	29 (3.5)	79 (2.9)
CNS	86 (2.4)	21 (2.5)	65 (2.4)
Eye	12 (0.3)	4 (0.5)	8 (0.3)

NOTE. The total number of reported antimicrobial uses (n = 3599) is greater than the number of patients treated (n = 3483) because some patients had antibacterials prescribed for >1 anatomic site.

Ansari, CID 2009

ESAC II PP Survey 2006

Department	Duration of prophylaxis, no of patients			Total no of patients	Duration of prophylaxis, % of total by department			Duration of prophylaxis, % of total by duration		
	1 Dose	1 Day	>24 h		1 Dose	1 Day	>24 h	1 Dose	1 Day	>24 h
General Surgery	66	36	137	244	27.0	14.8	56.1	51.2	42.9	46.8
Orthopedics	14	32	43	89	15.7	36.0	48.3	10.9	38.1	14.7
Gynecology	32	5	34	71	45.1	7.0	47.9	24.8	6.0	11.6
Urology	7	6	43	56	12.5	10.7	76.8	5.4	7.1	14.7
Otorhinolaryngology	2	1	27	30	6.7	3.3	90.0	1.6	1.2	9.2
Pediatrics	8	4	9	21	38.1	19.0	42.9	6.2	4.8	3.1
Overall (all departments)	129	84	293	511	25.2	16.4	57.3	100	100	100

Ansari, CID 2009

Prävalenz nach Fachdisziplin

Specialty	Surveyed patients		Patients with HAI[a]		Patients with antimicrobial use[b]	
	n[c]	%[d]	n[c]	%[e]	n[c]	%[e]
Surgery	6,653	33.5	518	7.8	2,584	38.8
Medicine	7,833	39.4	505	6.4	2,888	36.9
Paediatrics	1,024	5.1	38	3.7	310	30.3
Intensive care	915	4.6	257	28.1	562	61.4
Obstetrics and Gynaecology	1,711	8.6	32	1.9	313	18.3
Geriatrics	502	2.5	33	6.6	117	23.3
Psychiatry	828	4.2	2	0.2	18	2.2
Other/mixed	422	2.1	23	5.5	83	19.7
All specialties	**19,888**	**100**	**1,408**	**7.1**	**6,875**	**34.6**

Zarb, Eurosurveillance 2012

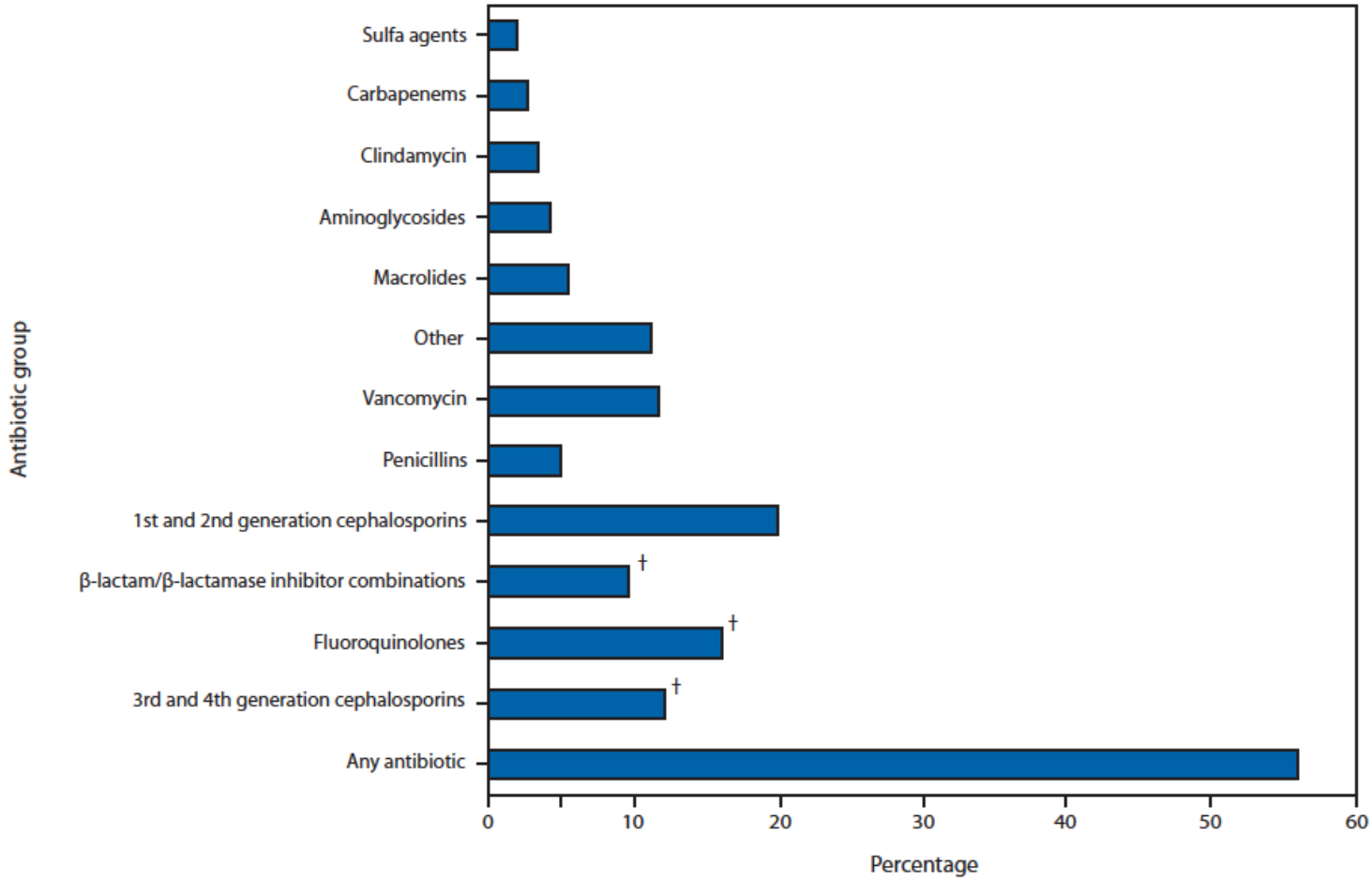
Wie bewerten unter ABS-Gesichtspunkten

Einsatz von PPA

- Wo stehen wir?
  - Messen als ein wichtiger Bestandteil von ABS
- Problemzonen genauer anschauen:
  - Stationen/Abteilungen mit auffälligen Verbrauchsparametern (Höhe des Verbrauchs, spezifische Substanzen)
  - Probleminfektionen anschauen:
    - Pneumonie
    - Harnwegsinfektionen
    - Staph. aureus Bakteriämien
    - Katheterinfektionen

Antibiotikaeinsatz pro Aufnahme- US

FIGURE 1. Percentage of hospital discharges with at least one antibiotic day, by antibiotic group — 323 hospitals, United States, 2010*



* Data provided by Truven Health MarketScan Hospital Drug Database.

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Antibiotikaeinsatz adäquat?

Antibiotic use assessment	No.	(%)
Total no. of patients in the survey	11,282	—
Patients on any antibiotic to treat an active infection	4,189	(37.1)
Treatment indication for antibiotic*	7,199	—
For LRI (community onset), with or without BSI	1,596	(22.2)
For UTI (health-care or community onset), with or without BSI	993	(13.8)
For presumptive resistant Gram-positive infection treated with vancomycin (intravenous), linezolid, or daptomycin	1,270	(17.6)
No. of antibiotics with one or more treatment indications above	3,592	(49.9)

Abbreviations: LRI = lower respiratory tract infection; BSI = bloodstream infection; UTI = urinary tract infection.
* Indications are not mutually exclusive.

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Antibiotikaeinsatz pro Aufnahme- US

TABLE 2. Assessment of antibiotic prescribing among inpatients in 36 hospitals treated for urinary tract infection (UTI) without indwelling catheter or treated with intravenous vancomycin — Emerging Infections Program health-care–associated infections and antimicrobial use prevalence survey, United States, 2011

Treatment	No.	(%)
Patients treated for UTI present on admission, without indwelling catheter	111	—
Urine culture was not ordered, although standard practice before treatment	18	(16.2)
Urine culture was positive, but no documented symptoms were present	23	(20.7)
Urine culture was negative, and no documented symptoms were present	3	(2.7)
No. of patients with potential for improvement in prescribing	44	(39.6)
Patients treated with intravenous vancomycin	185	—
No diagnostic culture obtained around antibiotic initiation, although standard practice with most infections	17	(9.2)
Diagnostic culture showed no Gram-positive bacterial growth, but patient still treated for long duration (>3 days) (excludes presumed SSTI, which often can be culture negative)	40	(21.6)
Diagnostic culture grew only oxacillin-susceptible *Staphylococcus aureus*, but patient still treated for long duration (>3 days) (likely missed opportunity to switch antibiotic based on culture result)	9	(4.9)
No. of patients with potential for improvement in prescribing	66	(35.7)
Combined UTI or vancomycin prescribing	296	—
Total no. of patients with potential for improvement in prescribing	110	(37.2)

Abbreviation: SSTI = skin and soft tissue infection.

Fridkin MMWR 201

Wie kommt man an die Daten?

- Adult and pediatric drug use data were obtained from the Truven Health MarketScan Hospital Drug Database (HDD). The HDD contains hospital discharge records for all patients dischargedfromparticipating acute care, general, nonfederal hospitals in the United States. These records include dischargespecific diagnostic and procedure codes, demographic information, inpatient drug usage data based on billing records, admission and discharge dates, and facility descriptors. We included visits fromcontributing hospitals for patients discharged fromJanuary 1, 2006, to December 31, 2012, including in-hospital deaths.

Genereller Erhebungsbogen

Stichtag

	Wirkstoff	Tages-dosis (g)	Applikation i.v.	Applikation p.o.	zu	Indikation (A/B1-5/C1-3/D/E)	Infektionsfokus (1-20)
1.					1.		
2.					2.		
3.					3.		
4.					4.		
5.					5.		

Immun-suppression?		Fieber? 1 (nein)	2 (=38°)	3 (=36°)	Device-assoziiert?*		zu	Erregernachweis vor Therapie?		Diagnose gesichert?	
Ja O	Nein O						1.	Ja O	Nein O	Ja O	Nein O
falls Ja:		Geschlecht:					2.	Ja O	Nein O	Ja O	Nein O
O Cortison		Gewicht:			Ja O	Nein O	3.	Ja O	Nein O	Ja O	Nein O
O andere Med.		Crea:					4.	Ja O	Nein O	Ja O	Nein O
O Neutropenie		Jahrgang:					5.	Ja O	Nein O	Ja O	Nein O

1 = >36°C und <38°C

*Fremdkörper/Katheter

Verlaufsmedikation über 6 Tage (vor Stichtagerhebung)

	Wirkstoff	Tages-dosis (g)	Applikation i.v.	Applikation p.o.	zu	Medikationsdauer bzw. -verlauf n Tage	A=Anfang, S=Switch, E=Ende
1.					1.		
2.					2.		
3.					3.		
4.					4.		
5.					5.		

S=Switch (z.B. i.v. zu p.o., Substanzklassenwechsel)

Spezifische Erhebungsbögen

- Generische Parameter für alle Infektionen?

- Spezialbögen für häufige Einsatzgebiete/ Infektionen
  - Perioperative Prophylaxe
  - CAP, nosokomiale Pneumonie, Katheterinfektion, Staph. aureus Bakteriämie

Spezialbogen perioperative Prophylaxe

- Generell: Perioperative Prophylaxe ab Vortag 8h

- Antibiotika Prophylaxe verabreicht?
  - Wirkstoff, Dosis, Verabreichung, Zeitpunkt
  - Einsatz nach lokaler Leitlinie? (Indikation, Substanz, Dosis)
  - Dosierung im Intervall 1h vor Inzision?
  - Prophylaxe beendet innerhalb 24h?
- Quelldokument: Anaesthesie-Protokoll

Ambulant erworbene Pneumonie

Welche Daten zum Patienten?

Welche Daten zur Pneumonie?

-Klinik, Diagnostik

Welche Daten zur AB-Therapie?

Sonst noch etwas?

Basisdaten 2010

- 146 Pneumonien
  - 87m / 59w
  - Medianes Alter 67 J. (Bayern: 77J)
  - Mediane Verweildauer 8d, Mittelwert 11,4d (Vorjahr 8d, 11,1), 24 (16,4% beatmet)
  - Risikoklassifikation CRB 65 (Bayern)
    - 0: 42 (29%) 17%
    - 1: 55 (38%) 52%
    - 2: 31 (21%) 24%
    - 3: 6 (4%) 5%
    - 4: 12 (8%) 2,5%

Erstversorgung

	2010	2008
• BGA/Oxymetrie		
– Keine	3 (2%)	9 (7%)
– Innerhalb 4h	141 (96%)	106 (86%)
– 4-8h	0	0
– >8h	2(1,4%)	9 (7%)
• Antibiotikatherapie		
– Innerhalb 4h	124 (85%)	96 (77%)
– 4-8h	7 (5%)	6 (5%)
– >8h	13 (9%)	17 (14%)

Stat. Aufenthalt

- CRP-Kontrolle am Tag 4 bzw. 5:
  - Bei 92% (2009 84, 2008 59%) vs. 84% bayernweit
- Mobilisation innerhalb 24h nach Aufnahme
  - 97% vs. 83% bayernweit
- Stabilitätskontrolle vor Entlassung
  - AF bei 12% (2009:30, 2008 41%) nicht bestimmt
  - HF bei 0% (2008 23% nicht bestimmt
  - Temperatur bei 0% (2008:24%) nicht bestimmt
  - Sauerstoffsättigung bei 6% (2008: 91%) nicht bestimmt

Outcome

- Letalität insgesamt
  - 2008: 5,7% vs. 12,1% bayernweit
  - 2009: 9,2% vs. 13.1% bayernweit
  - 2010:11% vs. 12,5% bayernweit

•	Med. I	Bayern
– CRB65 0	2,4	2,5
– CRB65 1	14,6	9,7
– CRB65 2	16,1	18,4
– CRB65 3	33,3	34,8
– CRB65 4	0	37,8

Bakteriämie - Spezialbogen

- Welche Items sind von Bedeutung

Bakteriämie - Beispiele

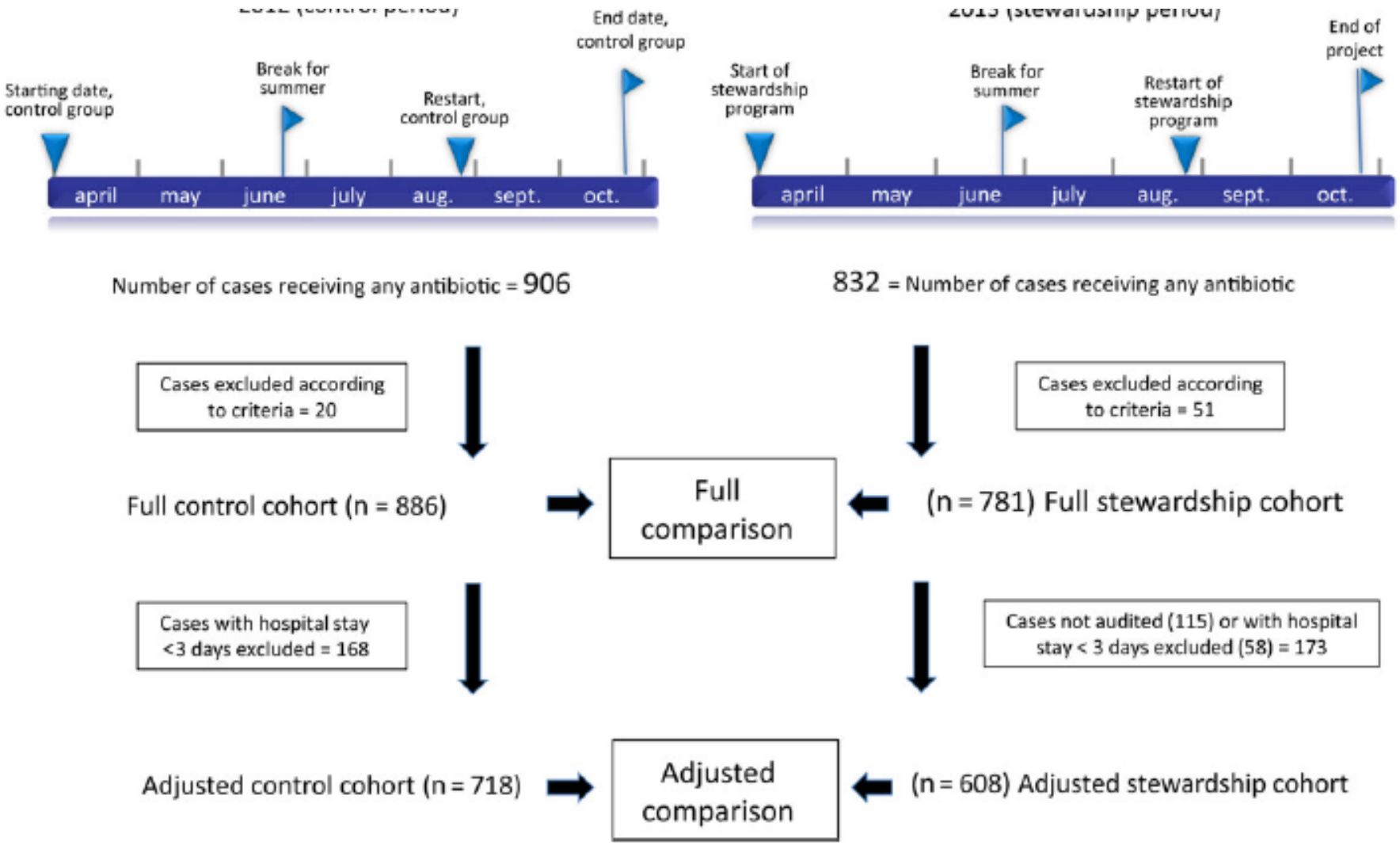
- Blutkulturdiagnostik adäquat?
  - Initial mindestens 2 BKs?
  - Folgeblutkulturen – essential bei SAB und Candidämie ?
- Antibiotikatherapie
  - Initial adäquat?
  - Deeskaliert nach MiBi-Befund?
  - Angepasst auf Nierenfunktion?
  - Dauer richtig geplant?

PPA/Audit und Intervention

- Studie in KH in Schweden
- Zweimal wöchentlich Audit auf internistischer Station bei allen Patienten mit Antibiotika
- Individuelle Therapieempfehlung durch Infektiologen
- Vergleich mit historischer Kohorte

Nilholm, Open Forum Inf Dis 2015

PPA/Audit und Intervention



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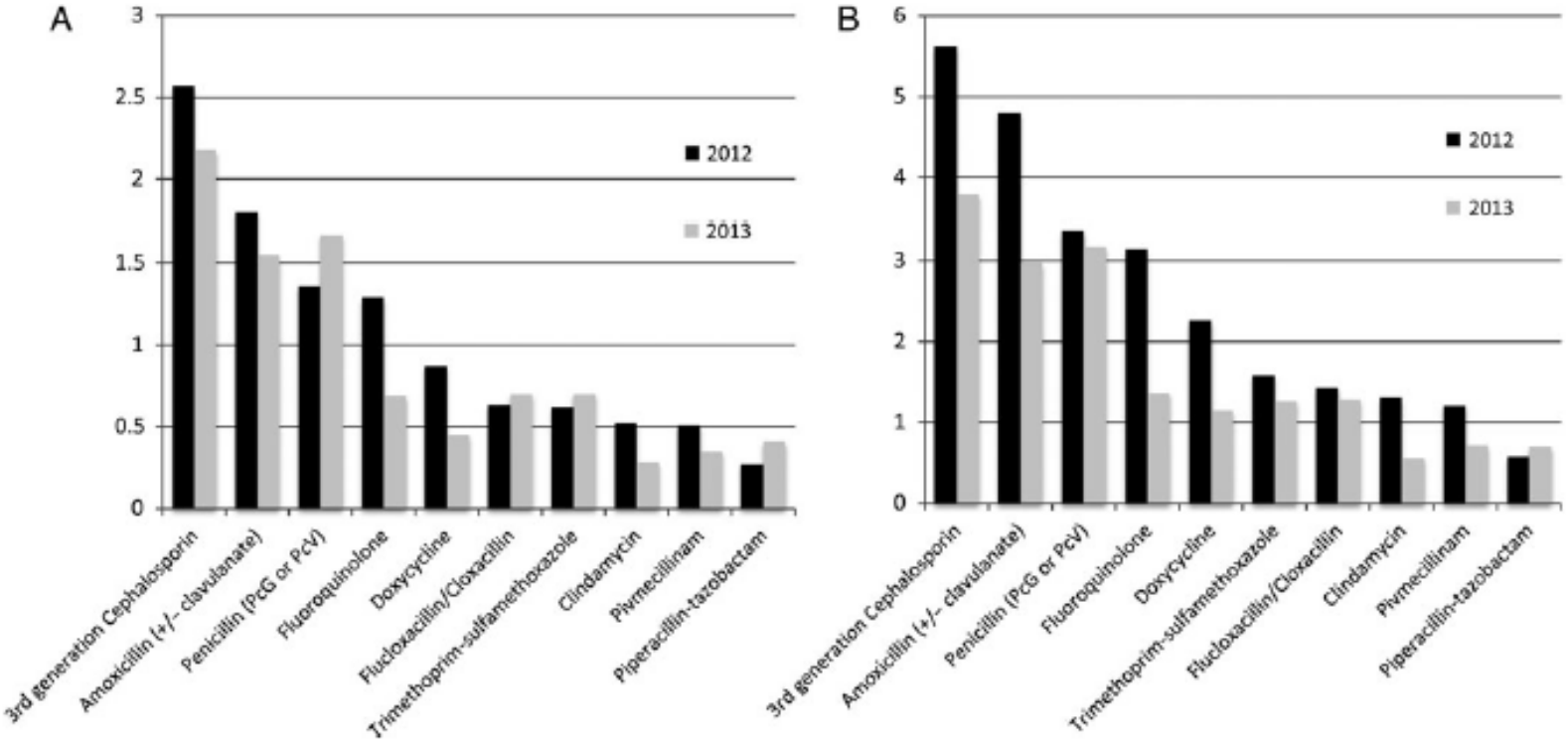
PPA/Audit und Intervention

- Reduktion Antibiotika-Einsatz um 27%
- Verkürzung der Therapiedauer
- Frühere Oralisierung
- Keine negativen Auswirkungen auf Outcome

Nilholm, Open Forum Inf Dis 2015

PPA/Audit und Intervention – Auswirkungen auf die Top 10 Antibiotika



Mittlere Zahl an Therapietagen In der Kohorte

Therapietage pro KH-Bett pro Monat

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Zusammenfassung

- Punkt-Prävalenz-Analysen zum Antibiotikaeinsatz
  - Nachvollziehbare und akzeptierte Methodik – geeignet für interne und externe Vergleiche
  - Einsatz für einfache und komplizierte Fragen
    - Antibiotikaeinsatz, Indikation, Substanzen, Indikationen
  - Bei entsprechendem Design auch mit Intervention zu verknüpfen
    - Rückkopplung, Fortbildung
    - Audit mit klinischer Beratung