

INFECTION 2018 – Forum Di Terapia Antinfettiva
Hotel Leon D'Oro, Verona
14-16 marzo 2018



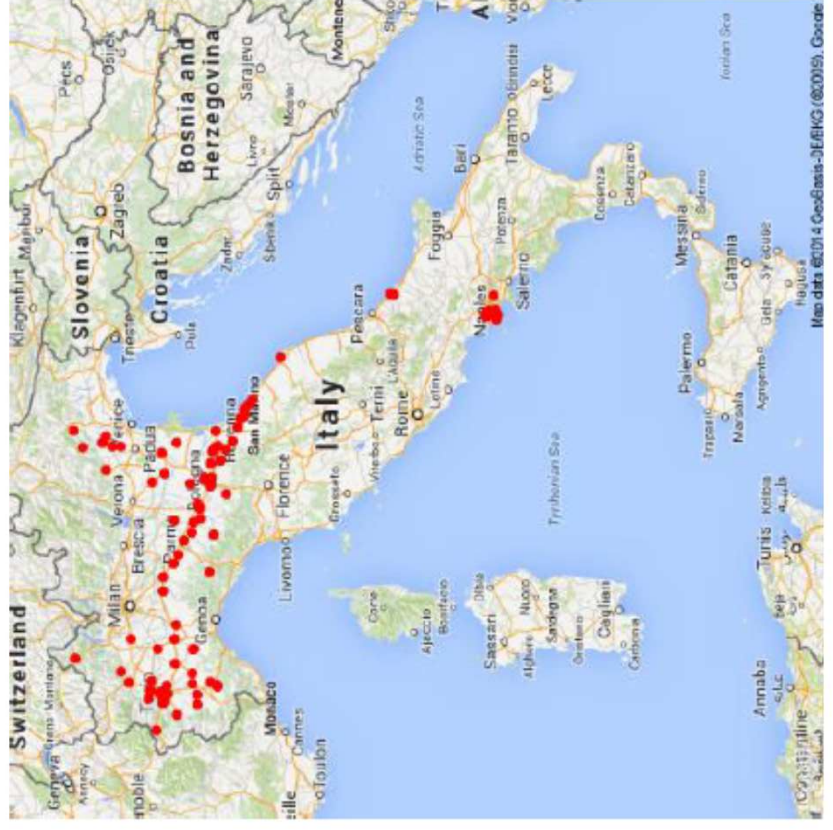
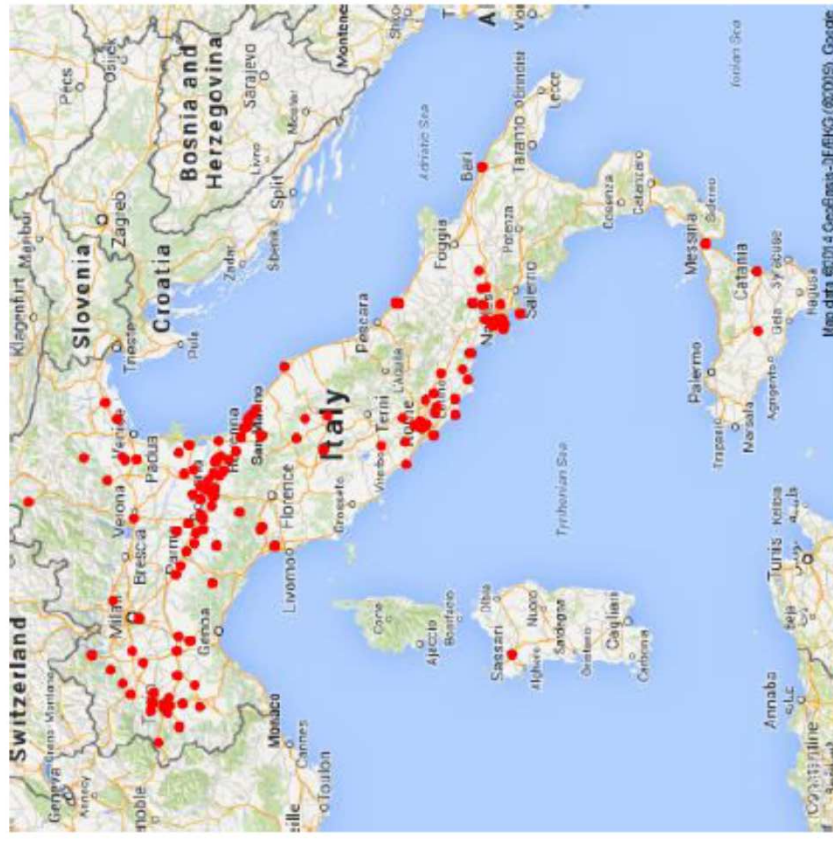
Profilassi antibiotica in chirurgia nei pazienti colonizzati da batteri multi-farmaco resistenti

Dott. Fabio Soldani
U.O.C. di Malattie Infettive e Tropicali
Az. Ospedaliera Universitaria Integrata di Verona

Sorveglianza delle infezioni del sito chirurgico in Italia

Interventi ortopedici anno 2012

Interventi non ortopedici anno 2013



Molecole utilizzate per la profilassi antibiotica

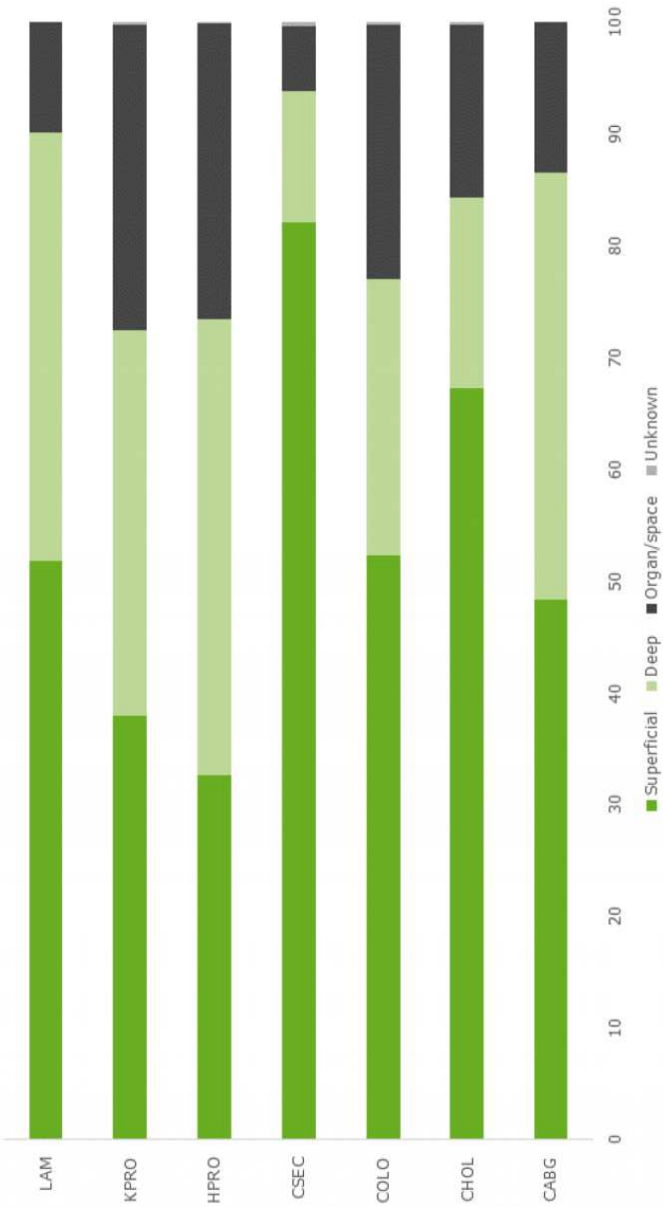
(interventi non ortopedici 2013)

Principio attivo	Interventi	Percentuale su interventi con molecola indicata (n. 9.177) *
Cefazolina	3.626	40%
Ampicillina e inibitori enzimatici	1.512	16%
Metronidazolo	976	11%
Cefuroxima	891	10%
Ceftriaxone	804	9%
Cefoxitina	468	5%
Ampicillina	344	4%
Amoxicillina e inibitori enzimatici	272	3%
Ceftazidima	235	3%
Piperacillina	152	2%
Vancomicina	130	1%
Ciprofloxacina	120	1%
Cefotaxima	117	1%
Gentamicina	114	1%
Piperacillina e inibitori enzimatici	106	1%
Meropenem	93	1%
altro	528	6%

Molecole utilizzate per la profilassi antibiotica (interventi ortopedici 2012)

Principio attivo	Interventi	Percentuale su interventi con molecola indicata (n. 3.532) *
Cefazolina	1.989	56%
Vancomicina	1.187	34%
Cefuroxima	190	5%
Cefepima	129	4%
Gentamicina	122	3%
Teicoplanina	110	3%
Ceftriaxone	79	2%
Ampicillina e inibitori enzimatici	57	2%
altro	160	5%

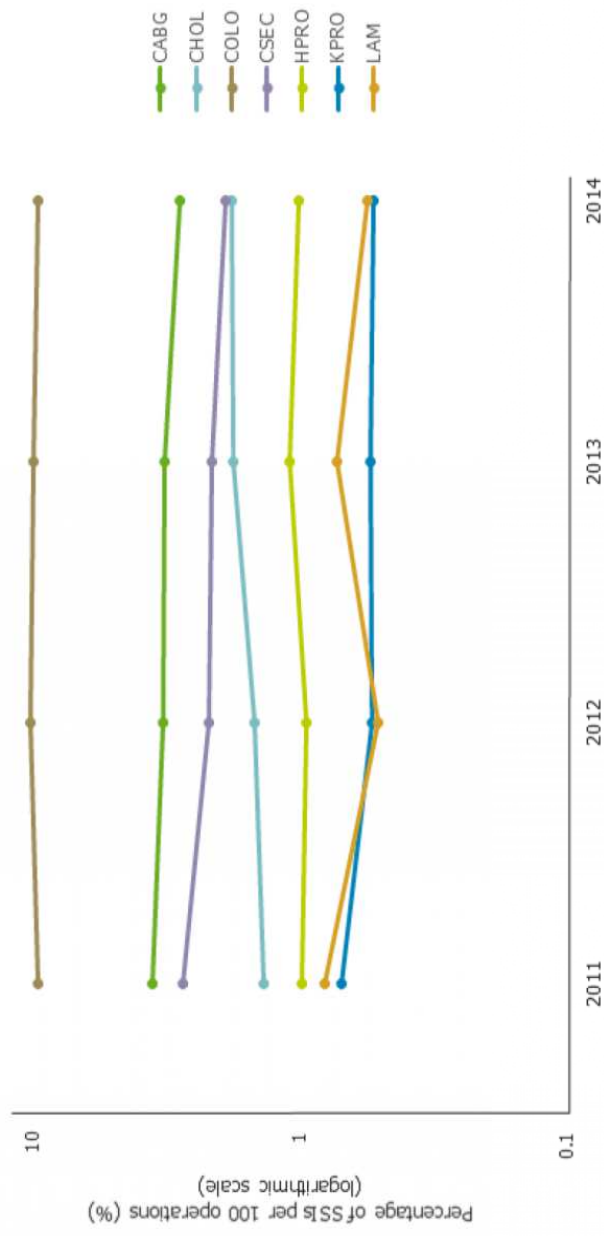
Figure 2. Number of reported SSI cases, EU/EEA, 2014



Source: Country reports from: Austria, the Czech Republic, Estonia, Finland, France, Germany, Hungary, Italy, Lithuania, Malta, the Netherlands, Norway, Portugal, Romania, Slovakia and the United Kingdom (England, Northern Ireland, Scotland and Wales).

Suggested citation: European Centre for Disease Prevention and Control. Annual epidemiological report 2015. Surgical site infections. Stockholm: ECDC; 2016.
© European Centre for Disease Prevention and Control, 2016. Reproduction is authorised, provided the source is acknowledged

Figure 3. Trends of percentage of SSIs by year and surgical procedure type, EU/EEA, 2011–2014



Source: Country reports from Austria, Czech Republic, Estonia, Finland, France, Germany, Hungary, Italy, Lithuania, Malta, Netherlands, Norway, Portugal, Romania, Slovakia and United Kingdom (England, Northern Ireland, Scotland and Wales).

Suggested citation: European Centre for Disease Prevention and Control. Annual epidemiological report 2015. Surgical site infections. Stockholm: ECDC; 2016.

© European Centre for Disease Prevention and Control, 2016. Reproduction is authorised, provided the source is acknowledged

Microorganisms	CABG (n=1 059)	CHOL (n=743)	COLO (n=4 066)	CSEC (n=528)	HPRO (n=2 507)	KPRO (n=814)	LAM (n=141)	Total (n=9 858)
Gram-positive cocci	61.0	35.1	31.1	50.0	65.3	69.2	61.0	47.9
<i>Staphylococcus aureus</i>	19.4	9.8	4.3	25.8	30.8	34.4	29.1	17.0
Coagulase-negative staphylococci	33.2	2.8	2.1	10.0	18.8	22.7	18.4	12.1
<i>Enterococcus</i> species	7.6	19.4	21.9	7.2	11.3	6.3	9.2	15.2
<i>Streptococcus</i> species	0.3	3.0	2.4	5.7	3.5	3.8	3.5	2.8
Other Gram-positive cocci	0.5	0.1	0.3	1.3	1.0	2.0	0.7	0.7
Gram-positive bacilli	1.2	0.7	0.4	1.5	2.2	2.8	0.7	1.2
Gram-negative bacilli, Enterobacteriaceae	23.5	45.8	48.5	32.8	18.7	15.4	22.7	34.1
<i>Escherichia coli</i>	4.3	22.1	28.6	17.4	6.1	4.1	9.2	16.9
<i>Citrobacter</i> species	2.1	2.8	2.0	0.9	0.4	0.4	1.4	1.5
<i>Enterobacter</i> species	4.5	5.8	4.6	3.8	3.2	3.2	0.7	4.1
<i>Klebsiella</i> species	4.6	10.4	5.0	3.6	2.2	2.3	5.0	4.4
<i>Proteus</i> species	3.9	1.9	3.2	4.2	3.5	2.6	3.5	3.3
<i>Serratia</i> species	1.3	0.7	0.6	0.6	0.7	0.9	2.1	0.8
Other Enterobacteriaceae	2.7	2.2	4.5	2.3	2.7	2.0	0.7	3.3
Gram-negative non-fermentative bacilli	6.3	5.9	9.1	4.7	6.0	6.5	9.9	7.3
<i>Acinetobacter</i> species	0.5	2.0	0.5	0.2	0.7	0.7	1.4	0.7
<i>Haemophilus</i> species	0.2	0.1	0.0	0.6	0.0	0.1	0.0	0.1
<i>Pseudomonas aeruginosa</i>	4.5	3.8	7.8	3.0	4.3	4.3	8.5	5.8
Pseudomonadaceae family, other	0.7	0.0	0.2	0.2	0.8	0.6	0.0	0.4
<i>Stenotrophomonas maltophilia</i>	0.4	0.0	0.1	0.0	0.1	0.5	0.0	0.2
Other gram-negative non-fermentative bacilli	0.1	0.0	0.3	0.8	0.1	0.2	0.0	0.2
Anaerobes	1.4	3.4	4.3	4.7	1.2	1.1	3.5	2.9
<i>Bacteroides</i> species	0.3	1.6	3.5	1.7	0.5	0.2	0.0	1.8
Other anaerobes	1.1	1.7	0.8	3.0	0.7	0.9	3.5	1.0
Other bacteria	5.5	7.7	3.6	5.2	6.0	4.0	1.4	4.0

ORIGINAL ARTICLE

Antimicrobial-Resistant Pathogens Associated With Healthcare-Associated Infections: Summary of Data Reported to the National Healthcare Safety Network at the Centers for Disease Control and Prevention, 2011–2014

Lindsey M. Weiner, MPH; Amy K. Webb, MPH, CHES; Brandi Limbago, PhD; Margaret Jean Patel, PhD; Alexander J. Kallen, MD, MPH; Jonathan R. Edwards, MStat; Dawn J.

Pathogen	Total no. (%) of pathogens
<i>Staphylococcus aureus</i>	30,902 (20.7)
<i>Escherichia coli</i>	20,429 (13.7)
Coagulase-negative staphylococci	11,799 (7.9)
<i>Enterococcus faecalis</i>	11,156 (7.5)
<i>Pseudomonas aeruginosa</i>	8,458 (5.7)
<i>Klebsiella (pneumoniae/oxytoca)</i>	7,067 (4.7)
<i>Bacteroides</i> spp.	7,041 (4.7)
<i>Enterobacter</i> spp.	6,615 (4.4)
Other <i>Enterococcus</i> spp.	6,410 (4.3)
<i>Proteus</i> spp.	4,196 (2.8)
<i>Enterococcus faecium</i>	4,140 (2.8)
<i>Candida albicans</i>	3,351 (2.2)
Viridans streptococci	2,639 (1.8)
Group B streptococci	1,879 (1.3)
<i>Serratia</i> spp.	1,857 (1.2)
Other pathogen	21,070 (14.1)
Total	149,009 (100)

Percent of Pathogens Reported From Surgical Site Infections That Tested Resistant to Selected Antimicrobial Agents, by Period, 2011–2014

	2011		2012		2013		2014	
	N ceppi testati	% resistenti	N ceppi testati	% resistenti	N ceppi testati	% resistenti	N ceppi testati	% resistenti
S. aureus	5152		8435		8577		8738	
oxacillina		42.7		44.7		44.2		42.6
E. faecium	414		1123		1261		1342	
vancomicina		64.0		59.7		60.6		58.4
E. faecalis	1192		2936		3474		3554	
vancomicina		5.3		3.9		3.7		3.5
K. pneumoniae/oxytoca	831		1874		2043		2319	
cefalosporine III-IV gen		10.6		9.7		9.6		11.3
carbapenemi		4.6		3.0		3.4		3.3
MDR*		5.8		4.6		3.4		4.6
E. coli	1940		5307		6366		6816	
cefalosporine III-IV gen		13.3		13.1		14.0		15.3
fluorochinoloni		29.1		29.1		31.4		30.9
carbapenemi		0.9		0.9		0.7		0.7
MDR*		6.1		6.0		6.7		6.5

* resistente ad almeno un farmaco in tre delle seguenti cinque classi: cefalosporine di III-IV gen., fluorochinoloni, amino glicosidi, carbapenemi, piperacillina/tazobactam.

Patogeni più frequenti per categoria di intervento

Type of surgery	Likely Pathogens
Placement of all grafts, prostheses, or implants	<i>S. aureus</i> , coagulase negative staphylococci
Cardiac	<i>S. aureus</i> , coagulase negative staphylococci
Neurosurgery	<i>S. aureus</i> , coagulase negative staphylococci
Breast	<i>S. aureus</i> , coagulase negative staphylococci
Ophthalmic (limited data, however, commonly used in procedures such as anterior segment resection, vitrectomy, and scleral buckles)	<i>S. aureus</i> , coagulase negative staphylococci, streptococci, gram-negative bacilli
Orthopedic (Total joint replacement, closed fractured/use of nails, bone plates, other internal fixation device, functional repair without implant/device trauma)	<i>S. aureus</i> , coagulase negative staphylococci, gram-negative bacilli
Non-cardiac thoracic (lobectomy, pneumonectomy, wedge resection, other non-cardiac mediastinal procedures) Closed tube thoracotomy	<i>S. aureus</i> , coagulase negative staphylococci, <i>S. pneumoniae</i> , gram-negative bacilli
Vascular	<i>S. aureus</i> , coagulase negative staphylococci
Appendectomy	Gram-negative bacilli, anaerobes
Biliary tract	Gram-negative bacilli, anaerobes
Colorectal	Gram-negative bacilli, anaerobes
Gastroduodenal	Gram-negative bacilli, streptococci, oropharyngeal anaerobes (e.g. peptostreptococci)
Head and neck (majorly procedures with incision through oropharyngeal mucosa)	<i>S. aureus</i> , streptococci, oropharyngeal anaerobes (e.g. peptostreptococci)
Obstetric and gynecologic	Gram-negative bacilli, enterococci, group B streptococci, anaerobes
Urologic	Gram-negative bacilli

Antibiotic prophylaxis for the prevention of methicillin-resistant *Staphylococcus aureus* (MRSA) related complications in surgical patients (Review)

Gurusamy KS, Koti R, Wilson P, Davidson BR



- Le infezioni post-operatorie da MRSA possono interessare il sito chirurgico, il polmone, il sangue (batteriemia)
- L'incidenza delle SSI da MRSA varia da 1% al 33%, dipendendo dal tipo di chirurgia e dallo stato di portatore dell'individuo
- **Obiettivi**
 - Comparare i rischi e benefici di metodi di profilassi antibiotica per la prevenzione delle infezioni post-operatorie da MRSA e le relative complicanze
- **Criteri di selezione**
 - Inclusi solo trial randomizzati controllati che comparavano un regime di antibiotico-profilassi per le SSI con un altro regime o con nessuna profilassi antibiotica e che riportavano la meticillino-ressitenza dei germi isolati

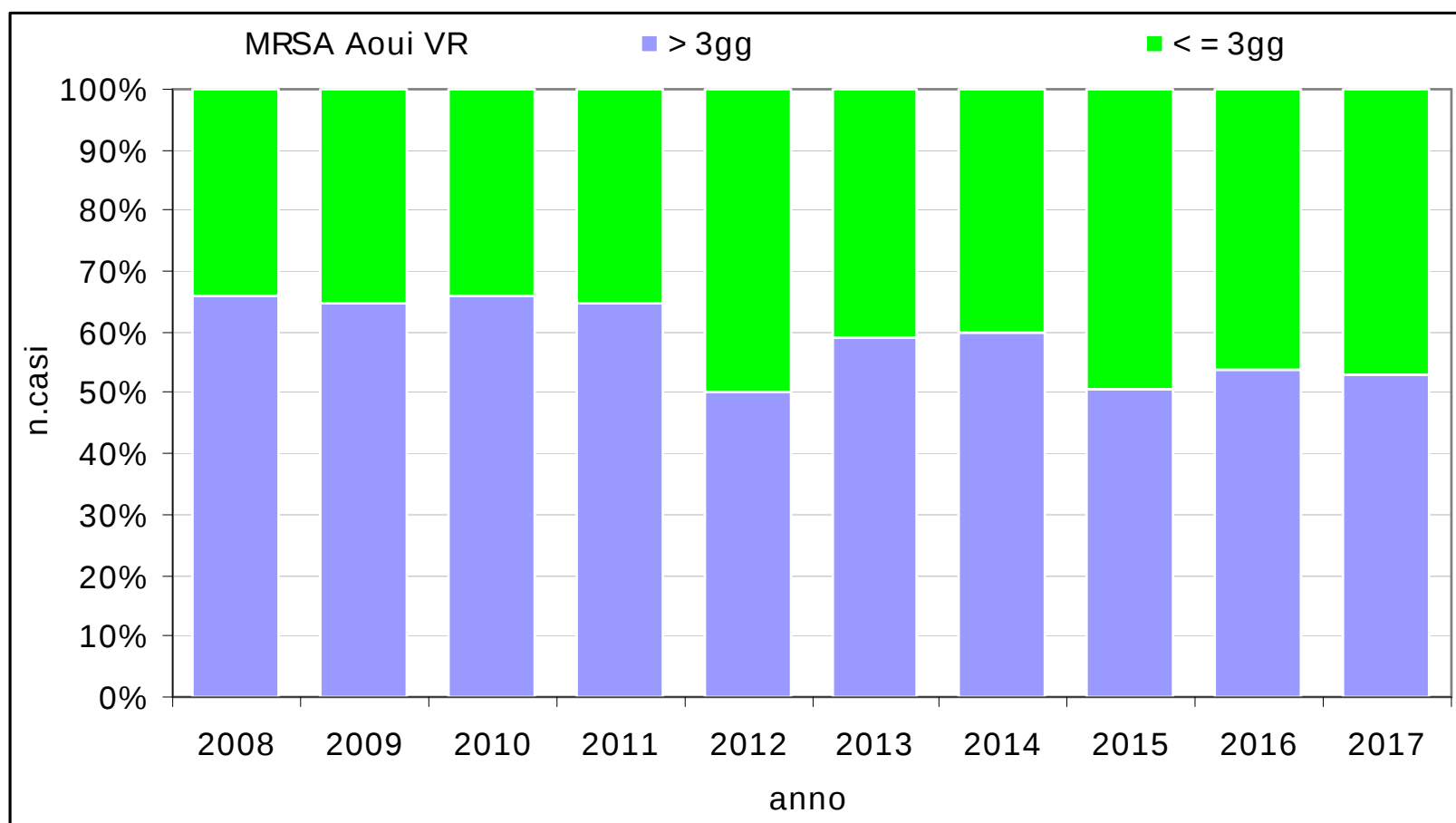
- 12 RCT, 4704 partecipanti
- 11 trials comparavano 16 regimi profilattici, 1 comparato con nessuna profilassi
- A parte uno studio in cui tutti i partecipanti erano portatori di MRSA, negli altri lo status prima dell'intervento dei partecipanti non era noto (non era noto se erano portatori, se avevano avuto infezioni da MRSA precedenti o se provenissero da popolazioni ad alta prevalenza di MRSA)
- Nessuna differenza tra i gruppi sulla mortalità
- Nessun evento avverso grave
- Complessivamente, 221 SSI in 4032 persone (6%), e 46 SSI da MRSA in 4704 persone (1%).
- Nessuna differenza nell'insorgenza di SSI tra i 15 regimi comparati (un antibiotico con un altro)
- 74% di riduzione di tutte le SSI e 95% di riduzione per le SSI da MRSA nel gruppo profilassato con amoxi-clavulato rispetto nessuna profilassi

Prevenzione delle Infezioni da MRSA

	Farmaci	Tipo di chirurgia	SSI	
Salminen 1999	Ceftriaxone vs vancomicina	cardiochirurgia		Nessuna differenza
Tacconelli* 2008	Cefazolina vs vancomicina	Neurochirurgia	14% vs 4%	0,03
Tyllianakis* 2010	Cefuroxime vs Ac fusidico vs vancomicina	Ch. ortopedica protesica		Nessuna differenza

* contesto con alta prevalenza di meticillino-resistenza

Nuovi casi di colonizzati/infetti da MRSA riscontrati entro i primi tre giorni dall'ingresso in Ospedale



Portatori di *S. aureus*

- la prevalenza dei portatori è del 25-35%
- Le colture microbiologiche eseguite per motivi clinici non sono in grado di rilevare la presenza di MRSA non noto all'ingresso nel 70-85% dei pazienti
- I pazienti con **lesioni cutanee** sono ad un rischio più alto di essere colonizzati a livello nasale:
 - Diabete insulino-dipendente
 - Pazienti emodializzati o in dialisi peritoneale
 - tossicodipendenti
 - Pazienti con infezioni ricorrenti cutanee da *S. aureus*
 - Infezione da HIV
 - Sottoposti a ripetute iniezioni intramuscolari
- Fattori associati all'essere portatori di MRSA:
 - Precedente esposizione ad antibiotici
 - Prolungata ospedalizzazione
 - Chirurgia
 - Degenza in UTI
 - Vivere in una struttura
 - Presenza di ulcere croniche
 - Vicinanza con un portatore di MRSA

Portatori di *S. aureus*

- Lo screening per la ricerca di MRSA è un argomento molto discusso e le conoscenze sono ancora non completamente consolidate, con livelli di evidenza non sempre forti
- Si raccomanda di organizzare un programma di screening in particolare **se si sono identificati casi di trasmissione nosocomiale nonostante un livello elevato di adesione alle precauzioni da contatto**
- Il sistema di screening dovrebbe essere mirato in primo luogo al controllo delle infezioni da MRSA e dovrebbe porsi come obiettivo l'identificazione di pazienti ad alto rischio di sviluppare un'infezione da MRSA **pazienti sottoposti a interventi chirurgici nei quali un'infezione post-chirurgica può rappresentare un rischio per la vita o comunque un problema di difficile cura**, quali i soggetti sottoposti a interventi di cardiocirurgia o di chirurgia protesica in questi soggetti colonizzati è raccomandabile eseguire una bonifica.

Gram negativi MDR

Infection rates in various patient groups in relation to patient's antibiotic-resistant colonization status

Author Year Country	Sample Target organisms	Patient cohort	Resistance type	Outcome measure	Prophylaxis	Outcome rate with resistance	
						Present	Absent
Bert <i>et al.</i> ¹³ 2001–2010 France	Preoperative rectal screen. Enterobacteriaceae	Liver transplant	Extended spectrum beta-lactamase (ESBL)	ESBL infections within four months of surgery (note: overall infection rate not reported)	Cefoxitin	13/29 (44.8%)	26/682 (3.8%)
Giannella <i>et al.</i> ¹⁴ 2011–2013 Italy	Preoperative rectal screen. <i>Klebsiella pneumoniae</i>	Liver transplant	Carbapenem resistance	Carbapenem-resistant <i>Klebsiella</i> infection (note: not stated which carbapenem or which mechanism)	Not stated	1/10 (10%)	1/20 (5%)
Lubbert <i>et al.</i> ¹⁵ 2010–2013 Germany	Not specified. <i>Klebsiella pneumoniae</i>	Liver transplant	<i>Klebsiella pneumoniae</i> carbapenemase	Invasive infection after transplantation (note: matched controls)	Not stated	8/9 (89%)	5/18 (28%)
Roberts <i>et al.</i> ¹⁶ Meta-analysis	Pre-biopsy rectal screen. Not stated	Transrectal ultrasound (TRUS) biopsy	Ciprofloxacin	Post-biopsy infection	Ciprofloxacin	7.1%	1.1%
Reddy <i>et al.</i> ¹⁷ 2000–2005 USA	Weekly rectal screen. Enterobacteriaceae	High-risk hospital units	ESBL	ESBL bloodstream infection (note: overall infection rate not reported)	Not applicable	35/413 (8.5%)	11/17,459 (0.1%)
Arnan <i>et al.</i> ¹⁸ 2006–2007 Spain	Weekly rectal screen. <i>E. coli</i>	Acute leukaemia or stem cell transplantation, and neutropenia	ESBL	Febrile episodes	None	61/63 (97%)	145/154 (94%)
Ben-Ami <i>et al.</i> ¹⁹ 2003 Israel	Admission stool samples. Enterobacteriaceae	Hospital admissions	ESBL	Cephalosporin resistant bacteraemia within three months of admission (note: overall infection rate not reported)	Not applicable	4/26 (15.4%)	1/200 (0.5%)

Preoperative surveillance rectal swab is associated with an increased risk of infectious complications in pancreaticoduodenectomy and directs antimicrobial prophylaxis: an antibiotic stewardship strategy?

HPB 2018, in press

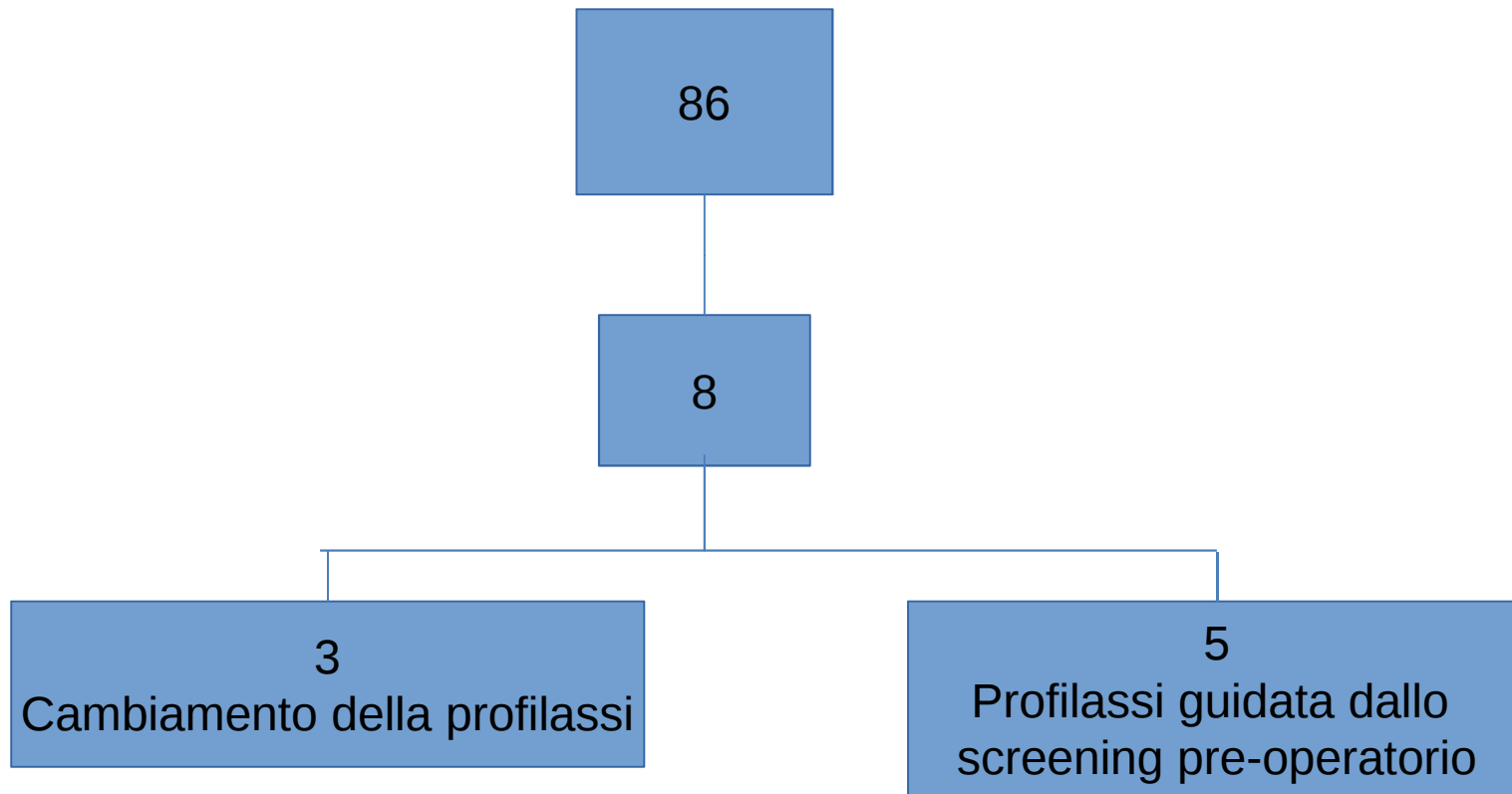
Matteo De Pastena^{1,*}, Salvatore Paiella^{1,*}, Anna M. Azzini², Giovanni Marchegiani¹, Giuseppe Malleo¹, Debora Ciprani¹, Annarita Mazzariol^{2,3}, Erica Secchetin¹, Deborah Bonamini¹, Clizia Gasparini¹, Ercole Concia², Claudio Bassi¹ & Roberto Salvia¹

¹General and Pancreatic Surgery Department, Pancreas Institute, University and Hospital Trust of Verona, ²Diagnostic and Public Health Department, University of Verona, and ³Microbiology and Virology Unit, University of Verona Hospital Trust, Verona, Italy

Postoperative outcomes

Study population N° = 338					
	Total n° (%)	RS+ 50 (14.8%)	RS- 288 (85.2%)	P value	MVA P value OR CI (95%)
Overall morbidity	215 (63%)	38 (76%)	177 (61.5%)	0.049 ^a	0.733
CR-POPF	68 (20.1%)	11 (22%)	57 (19.8%)	0.719	
Biliary fistula	22 (6.5%)	3 (6%)	19 (6.6%)	0.874	
Abdominal collection	116 (34.3%)	23 (46%)	93 (32.3%)	0.050 ^a	0.587
DGE	33 (9.8%)	5 (10%)	28 (9.7%)	0.951	
PPH	69 (20.4%)	9 (18%)	60 (20.8%)	0.646	
Infectious complications	164 (48.5%)	41 (82%)	123 (42.7%)	0.001 ^a	0.013 ^a 2.9 (1.3–6.7)
Sepsis	70 (20.7%)	18 (36%)	52 (18.1%)	0.004 ^a	0.341
Pulmonary complications	84 (24.8%)	18 (36%)	66 (22.9%)	0.048 ^a	0.994
Clavien–Dindo Score $\geq$ III	51 (15.1%)	10 (20%)	41 (14.2%)	0.293	
Length of Stay (days, IQR)	9 (7–19)	10 (7–23)	9 (7–19)	0.802	
Reoperation	30 (8.8%)	8 (16%)	22 (7.6%)	0.045 ^a	0.907
Mortality	10 (2.9%)	5 (10%)	5 (1.7%)	0.001 ^a	0.009 ^a 3.4 (1.8–14.9)

extended spectrum beta lactamase (surgical OR perioperative)
(antibiotic OR antimicrobial) prophylaxis



Cambiamento del regime
profilattico standard

Letter to the Editor

Antibiotic prophylaxis for cardiac surgery in a setting with high prevalence of extended-spectrum beta-lactamase-producing Gram-negative bacteria

Available online at www.sciencedirect.com

Journal of Hospital Infection

journal homepage: www.elsevierhealth.com/journals/jhin



A. Phuphuakrat*

A. Choomai

S. Kiertiburanakul

K. Malathum

Department of Medicine, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

- Setting con alta prevalenza di ESBL (non indicata)
- Intervento: profilassi con carbapenemico vs cefazolina o cefuroxime
- Procedure: 157 CABP, 83 riparazioni valvolari, 19 CABP+valvola, 7 altri interventi

Letter to the Editor

Antibiotic prophylaxis for cardiac surgery in a setting with high prevalence of extended-spectrum beta-lactamase-producing Gram-negative bacteria



	Standard N = 132	Carbapenems N = 134	P-value
Overall infection	16 (12.1)	8 (6.0)	0.090
Surgical site infection	3 (2.3)	2 (1.5)	0.683 ^a
Pneumonia	11 (8.3)	2 (1.5)	0.011
Cost of antibiotics (Baht) ^b	726 (436–2237)	8868 (7735–11,083)	<0.001
Total length of stay	10.0 (9.0–13.5)	11.5 (10.0–15.0)	<0.001
ICU-days	3.0 (2.0–5.0)	4.0 (3.0–6.0)	0.027
Ward-days	6.0 (5.0–8.0)	7.0 (5.0–10.0)	0.013

Reduction in Hospital Admission Rates Due to Post-Prostate Biopsy Infections After Augmenting Standard Antibiotic Prophylaxis

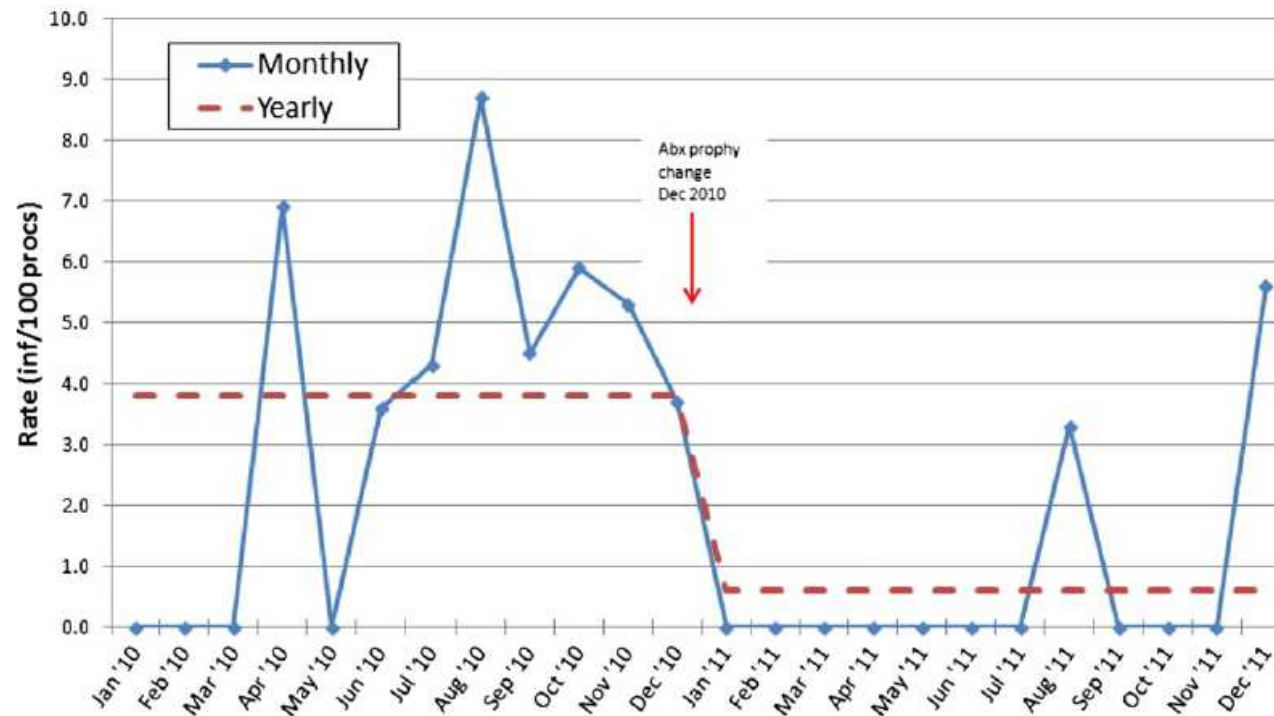
Mehrad Adibi,* Brad Hornberger,† Deepa Bhat,* Ganesh Raj,‡ Claus G. Roehrborn§ and Yair Lotan||,¶

From the University of Texas Southwestern Medical Center, Dallas, Texas

J of Urology 2013

Standard profilassi: 3 giorni di ciprofloxacina o cotrimossazolo

Intervento: aggiunta di singola dose di gentamicina i.m



Tasso di ri-ospedalizzazioni dopo la procedura

Reduction in Hospital Admission Rates Due to Post-Prostate Biopsy Infections After Augmenting Standard Antibiotic Prophylaxis

Mehrad Adibi,* Brad Hornberger,† Deepa Bhat,* Ganesh Raj,‡ Claus G. Roehrborn§ and Yair Lotan||,¶

From the University of Texas Southwestern Medical Center, Dallas, Texas

J of Urology
2013

		Days from TRUSBx to Hospital Admission	Culture		Sensitivity		
			Urine	Blood	Ciprofloxacin	Gentamicin	Bactrim
2010 Pt No.—Age:							
1—66	1	E. Coli	No growth	Resistant	Sensitive	Resistant	
2—68	1	E. Coli	No growth	Resistant	Sensitive	Resistant	
3—68	3	E. Coli	No growth	Resistant	Sensitive	Resistant	
4—67	2	E. Coli	No growth	Resistant	Sensitive	Resistant	
5—68	1	E. Coli	E. Coli	Resistant	Sensitive	Sensitive	
6—69	1	E. Coli	E. Coli	Resistant	Resistant	Sensitive	
7—67	2	E. Coli	E. Coli	Sensitive	Sensitive	Resistant	
8—75	7	Pseudomonas	No growth	Sensitive	Sensitive	Not tested	
9—55	1	Enterococcus	No growth	Resistant	Not tested	Not tested	
10—75	3	No growth	Bacteroides	Resistant	Resistant	Not tested	
11—68	7	No growth	No growth	—	—	—	
2011 Pt No.—Age:							
1—53	2	E. Coli	E. Coli	Resistant	Resistant	Resistant	
2—62	1	No growth	No growth	—	—	—	

Isolamenti e sensibilità dei batteri isolati dopo la procedura

A Statewide Intervention to Reduce Hospitalizations after Prostate Biopsy

Paul R. Womble, Susan M. Linsell, Yuqing Gao, Zaojun Ye, James E. Montie,*
Tejal N. Gandhi, Brian R. Lane, Frank N. Burks and David C. Miller†,‡
for the Michigan Urological Surgery Improvement Collaborative

*From the Department of Urology (PRW, SML, YG, ZY, JEM, DCM) and Division of Infectious Disease (TNG),
University of Michigan, Ann Arbor, Department of Urology, Spectrum Health Medical Group, Grand Rapids (BRL),
and Department of Urology, Oakland University William Beaumont School of Medicine, Royal Oak (FNB), Michigan*

J of Urology 2015

- Obiettivo: ridurre le ri-ospedalizzazioni dovute ad infezioni dopo biopsia prostatica
- Profilassi standard: fluorochinolone
- Intervento: profilassi guidata da tampone di screening vs potenziamento con un altro farmaco (scelto in base all'epidemiologia locale)

A Statewide Intervention to Reduce Hospitalizations after Prostate Biopsy

Paul R. Womble, Susan M. Linsell, Yuqing Gao, Zaojun Ye, James E. Montie,*
Tejal N. Gandhi, Brian R. Lane, Frank N. Burks and David C. Miller†,‡
for the Michigan Urological Surgery Improvement Collaborative

From the Department of Urology (PRW, SML, YG, ZY, JEM, DCM) and Division of Infectious Disease (TNG), University of Michigan, Ann Arbor, Department of Urology, Spectrum Health Medical Group, Grand Rapids (BRL), and Department of Urology, Oakland University William Beaumont School of Medicine, Royal Oak (FNB), Michigan

J of Urology 2015

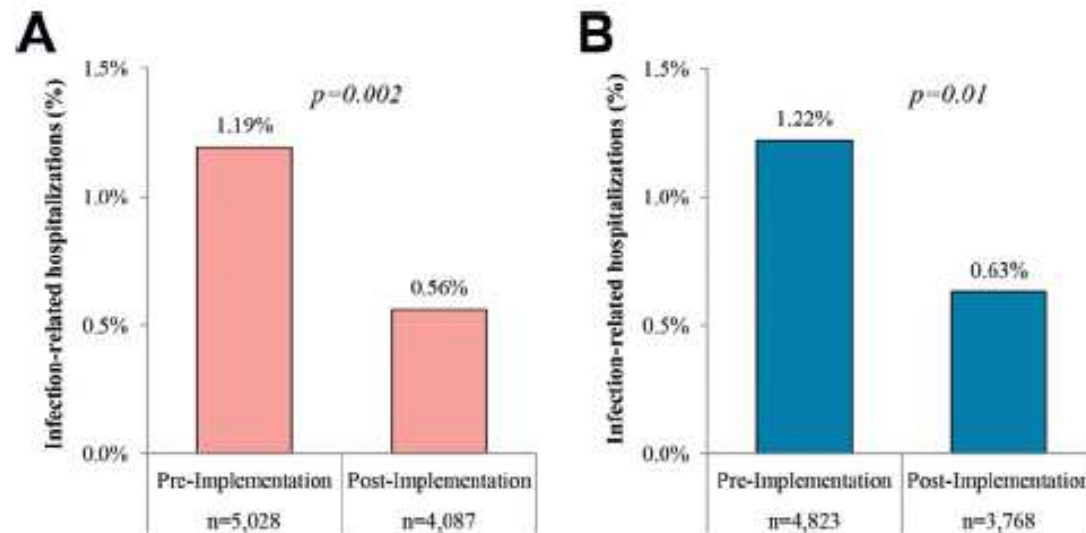
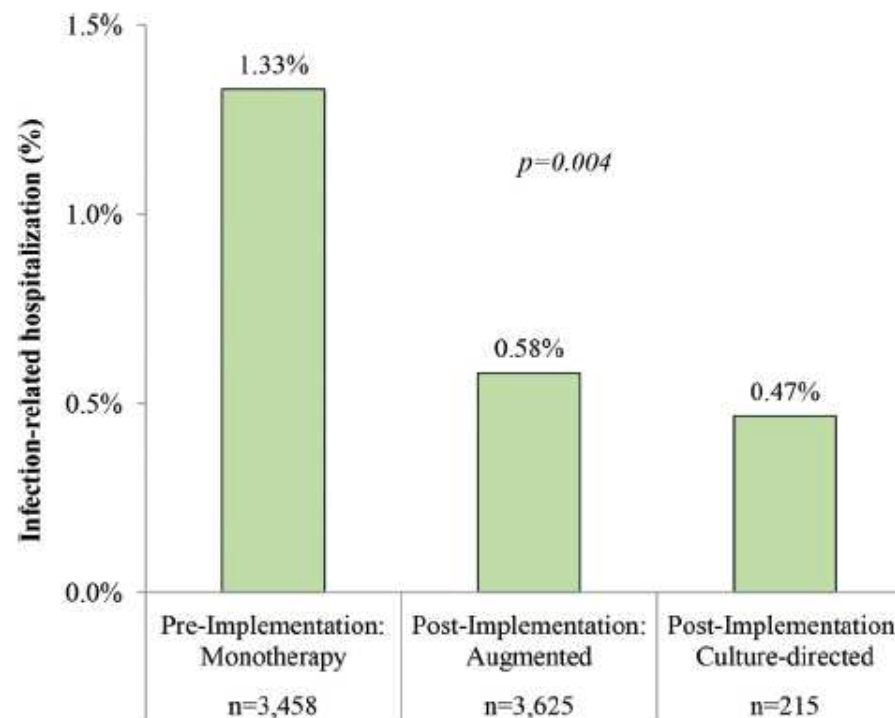


Figure 1. Unadjusted (A) and risk adjusted (B) rate of infection related hospitalizations before and after implementation of QI intervention (adjusted for age, history of prior biopsy, prostate size and PSA). Patients were excluded from model if covariate values were missing.

A Statewide Intervention to Reduce Hospitalizations after Prostate Biopsy

Paul R. Womble, Susan M. Linsell, Yuqing Gao, Zaojun Ye, James E. Montie,*
Tejal N. Gandhi, Brian R. Lane, Frank N. Burks and David C. Miller†,‡
for the Michigan Urological Surgery Improvement Collaborative

From the Department of Urology (PRW, SML, YG, ZY, JEM, DCM) and Division of Infectious Disease (TNG), University of Michigan, Ann Arbor, Department of Urology, Spectrum Health Medical Group, Grand Rapids (BRL), and Department of Urology, Oakland University William Beaumont School of Medicine, Royal Oak (FNB), Michigan



J of Urology 2015

Figure 2. Unadjusted infection related hospitalizations after prostate biopsy by MUSIC pathway.

Cambiamento del regime
profilattico guidato dai tamponi
di sorveglianza

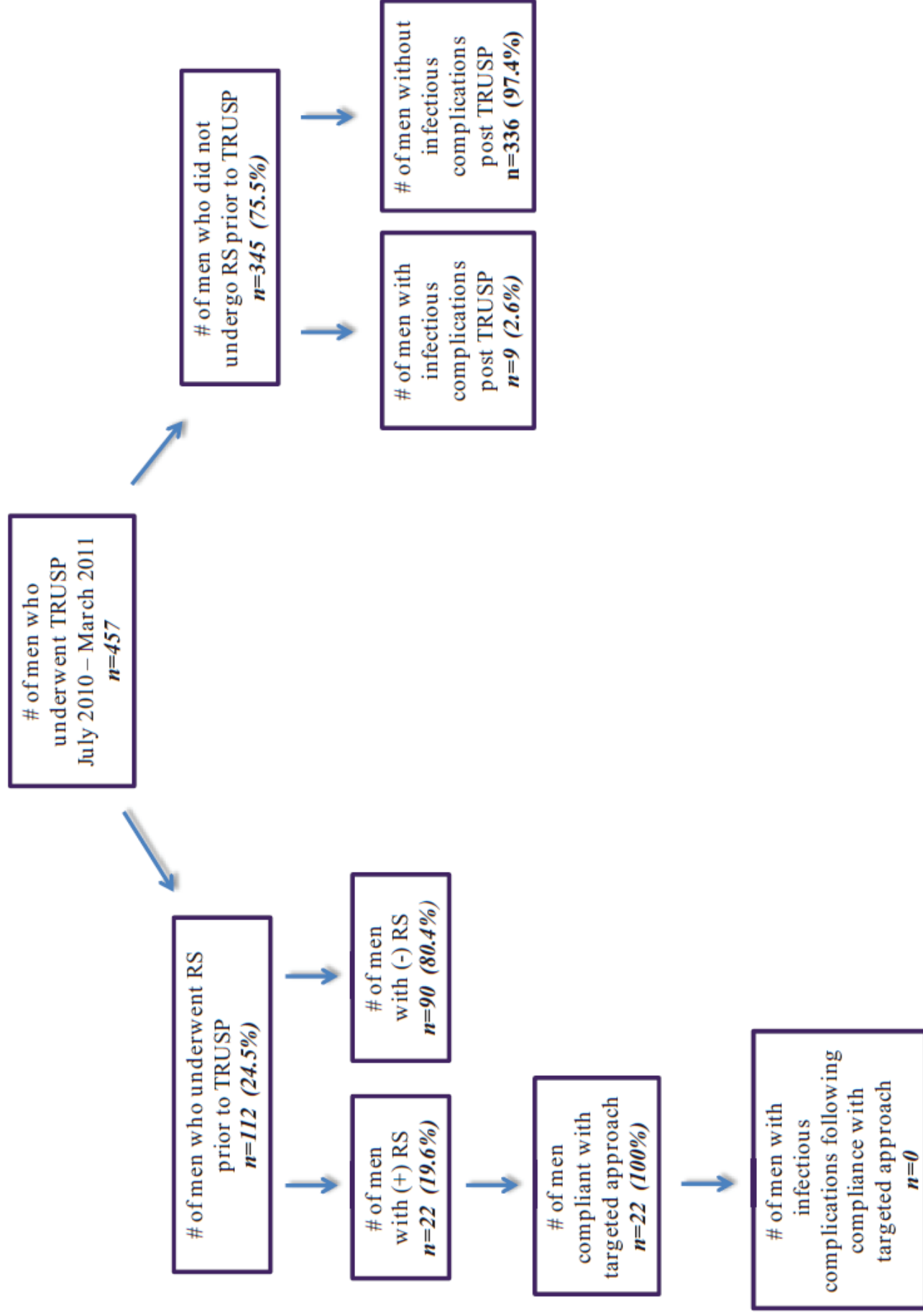
Targeted Antimicrobial Prophylaxis Using Rectal Swab Cultures in Men Undergoing Transrectal Ultrasound Guided Prostate Biopsy is Associated With Reduced Incidence of Postoperative Infectious Complications and Cost of Care

Aisha K. Taylor, Teresa R. Zembower, Robert B. Nadler, Marc H. Scheetz, John P. Cashy, Diana Bowen, Adam B. Murphy, Elodi Dielubanza and Anthony J. Schaeffer*,†

From the Department of Urology (AKT, RBN, JPC, DB, ABM, ED, AJS) and Department of Medicine, Division of Infectious Diseases (TRZ), Northwestern University Feinberg School of Medicine, Department of Pharmacy, Northwestern Memorial Hospital (MHS), Chicago, and Department of Pharmacy Practice, Midwestern University Chicago College of Pharmacy (MHS), Downers Grove, Illinois

- Valutare l'impatto sulle complicanze infettive della biopsia prostatica su uomini che ricevevano una profilassi "target" vs il regime standard con cirpofloxacina
- La profilassi target era guidata dall'esito del tampone rettale pre-operatorio
- Antibiotici usati per la profilassi target:

	E. Coli	Klebsiella spp.	X. maltophilia	Acinetobacter spp.
No. pts	17	2	2	1
TMP-SMX	9		1	1
Cefixime		1	1	
Cefuroxime	1	1		
Cephalexin	4			
Amoxicillin clavulanate	1			
Ceftriaxone	1			
Gentamicin	1			



Rectal swab culture-directed antimicrobial prophylaxis for prostate biopsy and risk of postprocedure infection: a cohort study

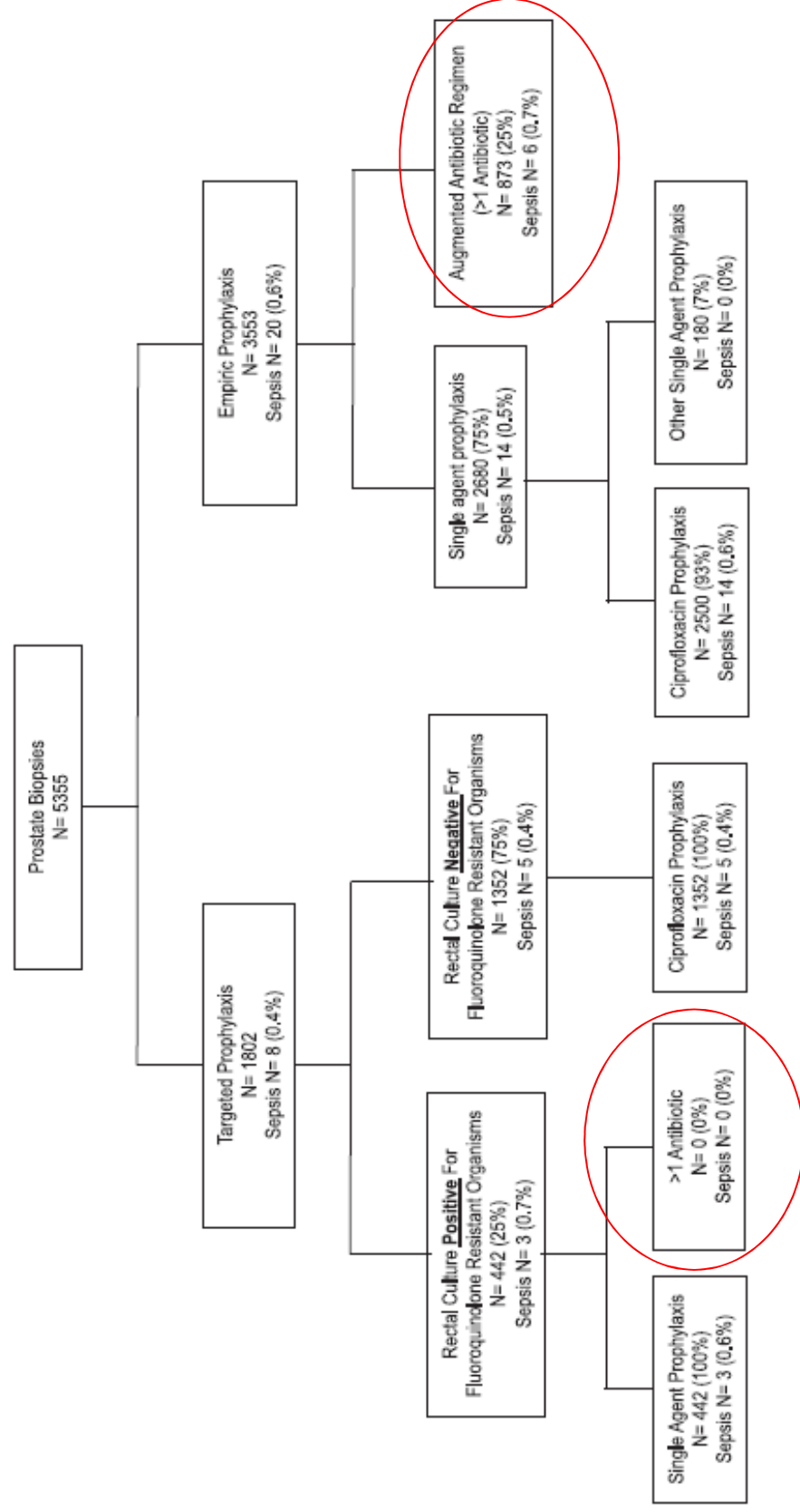
Dai, Urology 2015

- Obiettivo: valutare l'efficacia di una profilassi guidata dal tempone rettale vs la profilassi standard con fluorochinolone
- 487 pazienti: 314 RS, 173 standard
- RS:
 - Prevalenza FQ-R 12,1%, ESBL 0,64%
 - più frequente l'aggiunta di gentamicina
 - Meno complicazioni infettive (1,9% vs 2,9%, $p=0,5$)

Comparative Effectiveness of Targeted vs Empirical Antibiotic Prophylaxis to Prevent Sepsis from Transrectal Prostate Biopsy: A Retrospective Analysis

Michael A. Liss, William Kim, Dena Moskowitz and Richard J. Szabo*

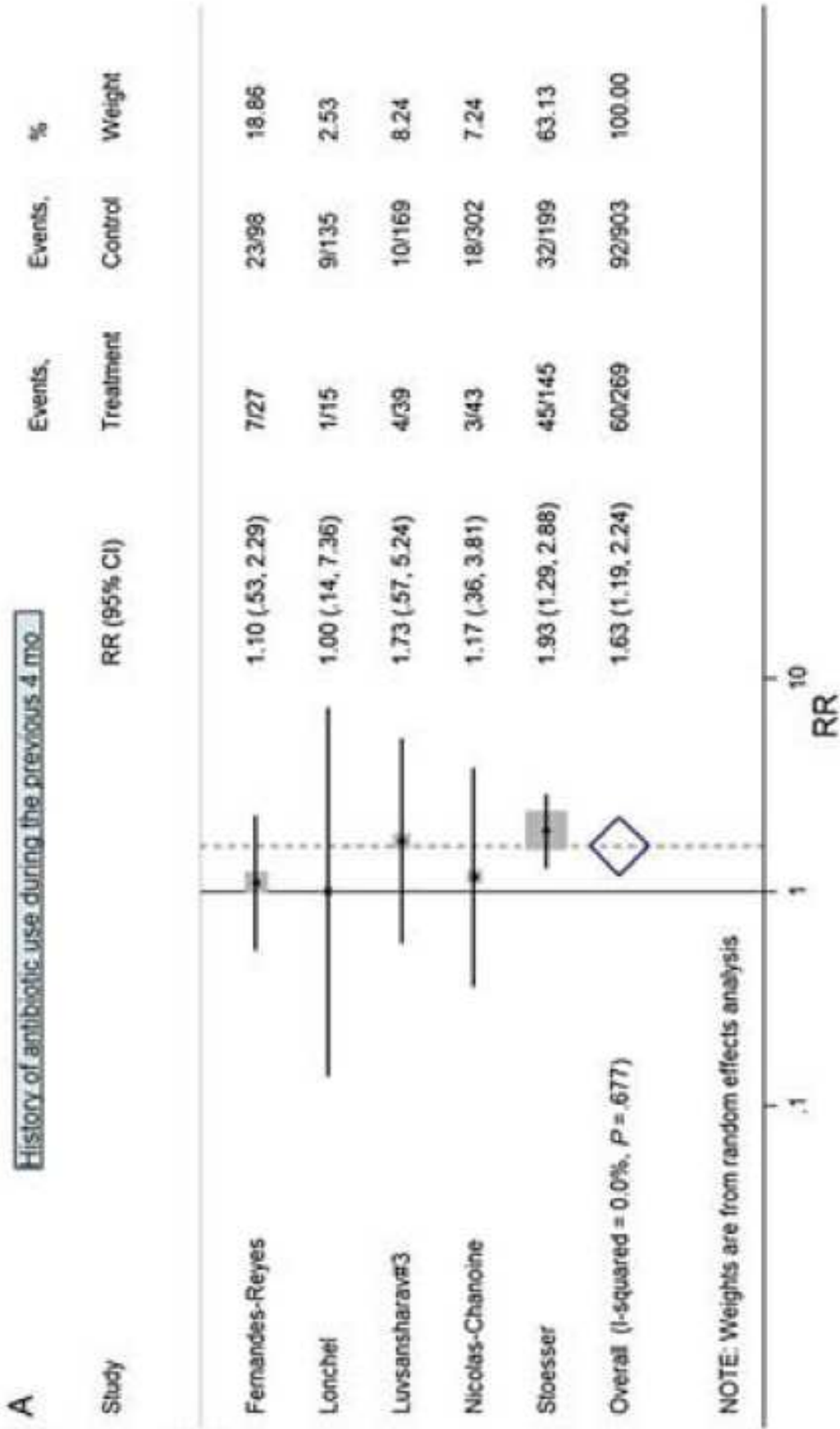
From the Departments of Urology, University of Texas Health Science Center San Antonio (MAL), San Antonio, Texas, and University of California-Irvine (WK, DM) and Department of Urology, Southern California Kaiser Permanente, Orange County (RJS), Irvine, California



Fecal Colonization With Extended-spectrum Beta-lactamase– Producing *Enterobacteriaceae* and Risk Factors Among Healthy Individuals: A Systematic Review and Metaanalysis ^{FREE}

Styliani Karanika, Theodoros Karantanos, Marios Arvanitis, Christos Grigoras, Eleftherios Mylonakis
Author Notes

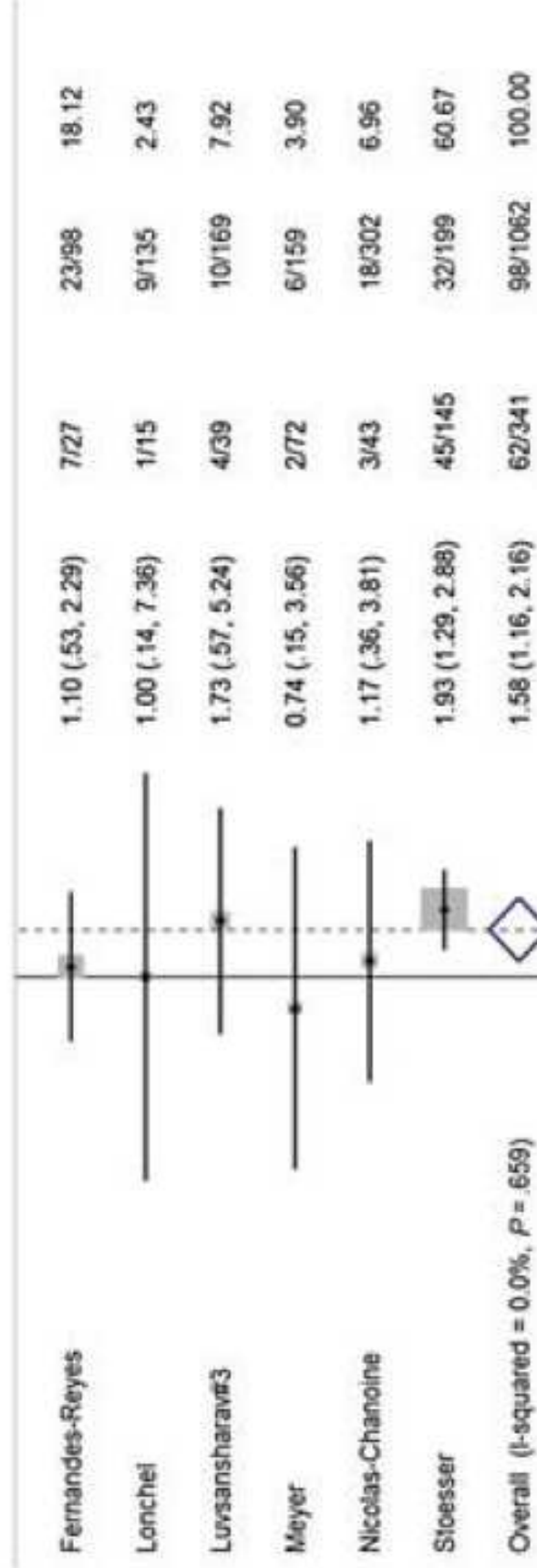
Clinical Infectious Diseases, Volume 63, Issue 3, 1 August 2016, Pages 310–318,



B

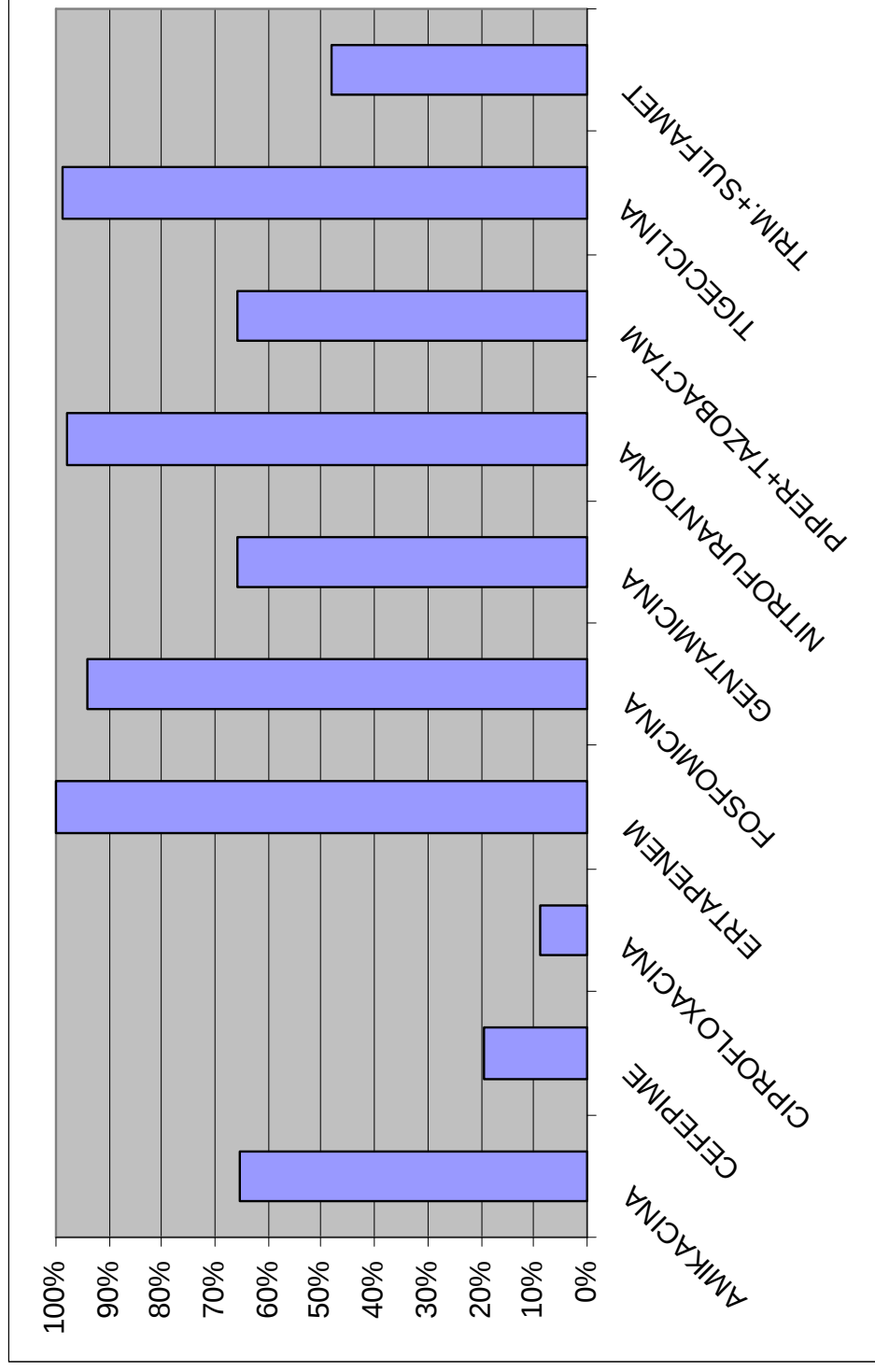
History of antibiotic use during the previous 12 mo

Study RR (95% CI) Events, Treatment Events, Control Weight



NOTE: Weights are from random effects analysis

Sensibilità di E. coli R a cefalosporine 3gen



((carbapenemase producing) or (carbapenem resistant)) (enterobacteriaceae or Klebsiella or escherichia or proteus or enterobacter) (surgical or perioperative) (antibiotic or antimicrobial) prophylaxis



<u>Chirurgia di digiuno-ileale (comprese le anastomosi bilio-digestive).</u> <u>Chirurgia colo-rettale</u> <u>Appendicite non complicata</u> <u>Chirurgia pancreatica con anastomosi digestiva</u> <u>* aggiungere gentamicina solo se paziente noto per colonizzazione intestinale o faringea da batteri gram negativi con ridotta sensibilità ai carbapenemi</u> <u>** da impiegare solo in pazienti colonizzati a livello intestinale o faringeo da batteri gram negativi produttori di beta -lattamasi a spettro esteso</u>	<u>Ampicillina /Sulbactam</u> <u>Oppure</u> <u>Amoxicillina /Ac.clavulanico</u> <u>+/-</u> <u>*Gentamicina</u> <u>**Ertapenem</u> <u>Se allergia</u> <u>Metronidazolo</u> <u>+/-</u> <u>gentamicina</u>	<u>3 g</u> <u>2 g</u> <u>5 mg/kg</u> <u>1 g</u> <u>1 g</u> <u>5 mg/kg</u>	<u>1.5 g dopo 3h</u> <u>1 g dopo 2h</u> <u>No</u> <u>No</u> <u>500 mg dopo 4h</u> <u>No</u>	<u>No</u> <u>No</u> <u>No</u> <u>No</u> <u>No</u> <u>No</u>
---	---	---	---	---

Conclusioni

- Sia il potenziamento del regime di profilassi che la sua modifica in base ai tamponi di sorveglianza sono strategie promettenti per la prevenzione delle SSI da germi MDR
- Il potenziamento del regime profilattico deve essere stabilito in base al profilo di resistenza dei germi isolati a livello locale
- L'implementazione dei tamponi rettali di sorveglianza implica una modifica delle procedure pre-operatorie e interventi di formazione

Conclusioni

La durata della profilassi è la stessa che nei non portatori di MDR?

La colonizzazione rettale è sufficiente per portare al cambiamento del regime profilattico per qualsiasi tipo di intervento chirurgico?

Ruolo dei nuovi farmaci?