



Project StAR-2

StAR National Antimicrobial Stewardship Programs: 3rd SwissASP Networking Zoom call, 26 May 2021, 9-10h30 *Meeting summary report*

1. Summary

This report presents key discussion points in the interactive 3rd SwissASP Networking Zoom call on 26 March 2021. The call focused on local quality improvement (QI) efforts and how they can be used for antibiotic stewardship programming (ASP; including local experience from two hospitals) before the planned face-to-face meeting in August.

2. Background and meeting purpose

The SwissASP working documents (framework conditions and portfolio) were developed during the first project phase of the FOPH-funded national Strategy against Antibiotic Resistance in the human sector (StAR-1) to provide evidence-based recommendations on the successful implementation of ASP in hospitals in Switzerland. The StAR-2 phase aims to create a functioning network for the development and implementation of bottom-up ASP activities and sharing stewardship tools and experiences.

The first SwissASP networking Zoom call in November 2020 focused on experiences in stewardship implementation in different local settings, the 2nd networking call on the use of quality improvement audits, potential challenges and barriers in adherence to prescription guidelines, and ideas on how to move forward with ASP implementation.

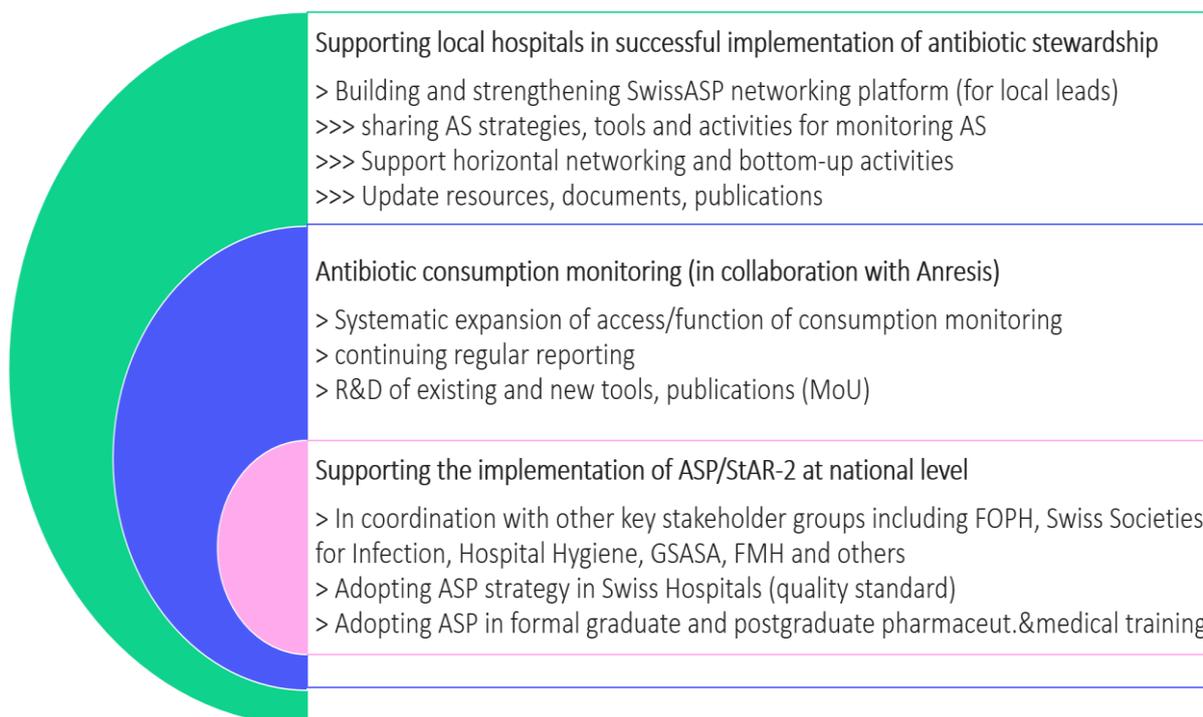
3. Audience

Invitees included all hospital contacts of Swissnoso and link hospital pharmacists of the Anresis network. The calls had about 50 participants from acute care hospitals (pharmacists and senior physicians, infectious diseases, IPC, and internal medicine) either involved or interested in getting involved in antibiotic stewardship.

4. Meeting format, content/speakers (Agenda→Annex) and critical discussion points

a) First part of the meeting

JB welcomed the participants to the call focusing on the use of data, data sharing/QI, and presented current priorities of the SwissASP project, as illustrated in the following chart.



JB further informed about the proposed SwissASP working/meeting in August with international guest speakers on stewardship (**SwissASP meeting on Wed, 25 August 2021. Either face-to-face in Bern or virtual via Zoom**). Educational and interactive workshop activities in smaller groups (escape room style) are planned.

b) Second part of the meeting

Presentations with Q&A (**second part**) on data sharing, QI, and experiences in initiating AS with existing local resources. **See presentation slides → see Annex and separate PDF file. In addition**, there will be more information on data analysis and data sharing for ASP in the following network interaction. Starting local ASP using the resources already available will be the subject of the upcoming SwissASP workshop event.

5. Next steps

Please save the date: SwissASP workshop, Wed, 25 Aug 2021, face-to-face in Bern or virtual

6. References

SwissASP Portfolio Version 2/31 Oct 2019

SwissASP framework conditions V2/27 Oct 2019



7. Annex

I. Agenda

Time	Subject	Speaker
#8:45	Call opening	
09:00	Welcome and introduction	Dr. Julia Bielicki UKBB/Swissnoso
09:05	recap and next priorities for SwissASP	Dr. Julia Bielicki UKBB/Swissnoso
09:20	Presentation: Presenting data: What, When, How? (Julia Bielicki, UKBB)	Dr. Julia Bielicki UKBB/Swissnoso
09:35	Presentation: Summary of REDcap feedback: Local leads' experiences in QI audit	Dr. Marcus Eder Swissnoso
09:45	Presentation: Work in progress Experience with digital antibiotic stewardship surveillance	- Dr. Benedikt Wiggli, SP Baden
10:30	Presentation: Starting off local stewardship	Dr. Yvonne Schmiedel, SP Delémont
10:55	Wrap up of Meeting	Dr. Julia Bielicki UKBB/Swissnoso
11:00	End of meeting	

II. Presentations (see separate PDF file)

- Presenting data: What, When, How? (Julia Bielicki, UKBB)
- Work in progress: Experience with digital antibiotic stewardship surveillance (Benedikt Wiggli, SP Baden)
- Work in progress: Starting local stewardship (Yvonne Schmiedel, SP Delémont)

SwissASP

Presenting data: What, When, How?

Dr. med. Julia Bielicki, PhD MPH

Why are (local) data important to AS?

- To know what your baseline is
- To measure change over time

- To identify opportunities for interventions
- To define determinants of practice

- To allocate resources
- To benchmark against others

Audit and Feedback

What is audit and feedback?

- Tracking of practices with direct reporting back (with or without comparison of performance to peers)

Goal

- Increase awareness of practices and highlight divergence from guidelines or peers

Impact

- Helps identify outliers and drive behaviour change

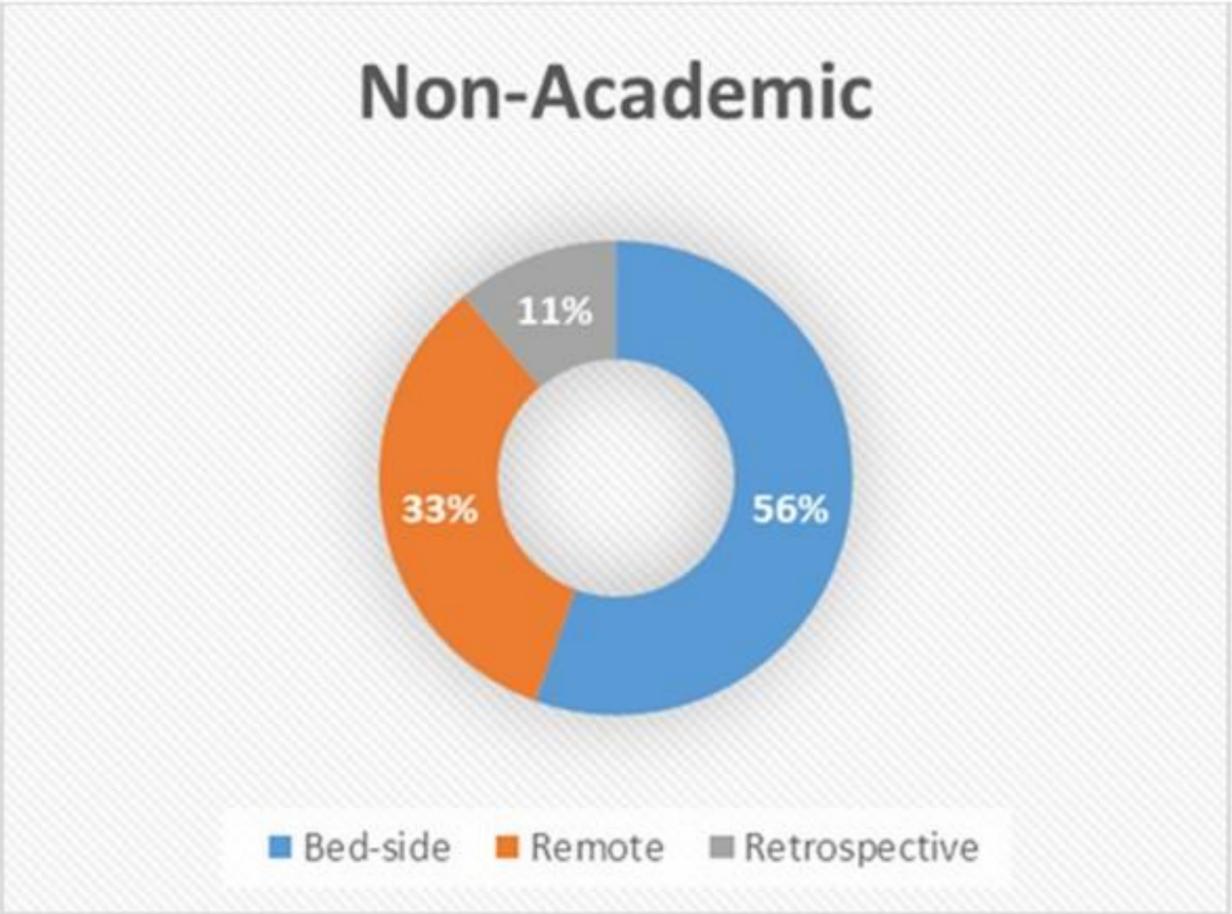
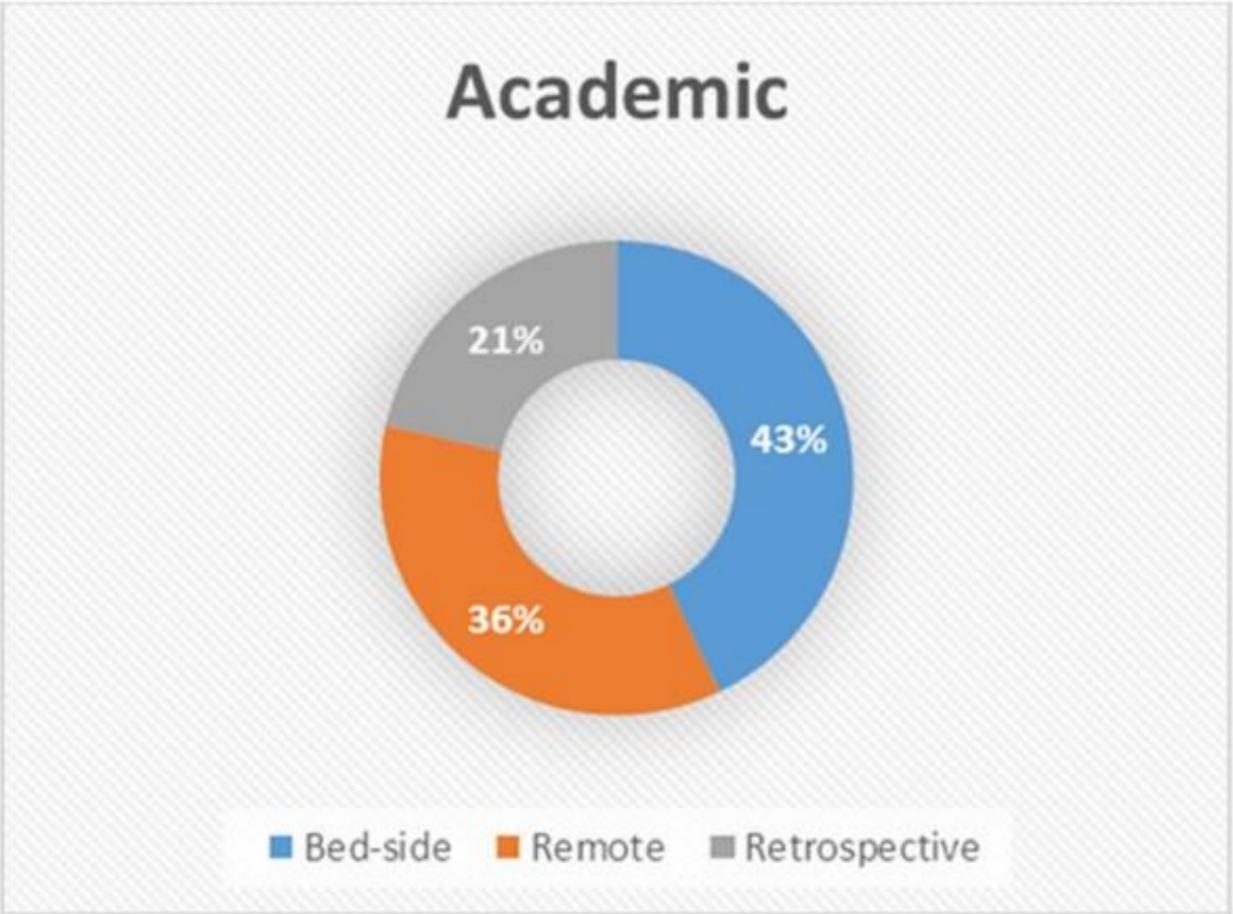
Supplemental action

- Can be personalised in writing or through educational detailing

Caveats

- Not durable – once stopped, return to pre-intervention levels expected

Audit and Feedback



Van Limburg et al. ARIC. 2014;

Audit and Feedback

Code	Sub-code	Variation	n	Quote
Needs audit	Content	Insights in diagnostics	6	"Do we use the right diagnostics for our patients? In other words, do we test too much or do we take the wrong tests?" P(17.36)
		Insights in empirical and targeted treatment	4	"I would like to know for a certain clinical presentation how we start our treatment, which antibiotics we start with." P(13.29)
		Insights in infection control measures	4	"For infection control I would like to know what percentage gets clean clothes every day. And what effect that would have on the prevention of new infections. I would also like to know if hand hygiene is adequately applied and if people comply to the dress code. Also, the use of non-sterile or sterile gloves." R(04.16)
		Insights in infection outcomes	3	"I would like to see how we perform in the hospital; how often do we have resistant micro-organisms and how often are these transmitted to other patients or personnel." R(05.21)
		Insights in resistance patterns	5	"Insights in diagnostic results, resistance patterns, not for individual patients, but overall. How the resistance patterns have developed over time." P(02.16)
	Norms	Benchmark	8	"If I would be compared to colleagues for example, that might be scary, but eventually you can learn a lot from it." R(04.31)
		Trends over time	4	"You could do a baseline measurement, so how are we performing now. And then look how it evolves over time when you change things." P(17.50)
Needs feedback	Content	Simple and concrete points of improvement and recommendations	7	"Some points we might be able to change ourselves, such as poor hygiene or so. But it may also be that policies need to be adapted, that certain antibiotics may or may not be given anymore. You really have to give something back that it is not just plain facts." N(09.56)
		Feedback tailored to target group	8	"I would indeed stick to one group [nurses or physicians] and focus on that specific target group. Adapt the feedback to that group." N(15.23)
		Substantiated recommendations	11	"I want to be convinced with good arguments. I understand that there are rules and you must adhere to them, so I adhere to them. But I find it very annoying when people can't explain why. It seems logical and it is tangible, but if it is not scientifically proven, then I think you should thoroughly study it before you set a rule." P(08.33)
	Form	Mail/ newsletter /poster	4	"I would like to receive some kind of newsletter online". P(05.31)
		Interactive	13	"Just data is an empty shell. You have to present it, you have to discuss it, you have to work with it." R(04.40)
	Frequency	Not too often, but recurrent	14	"Oh, not every week or month, then it is way too much. I think every six months, something like that. Because otherwise it will only overwhelm you and then it seems to be a goal and not a means for something." P(17.62)
AF implementation	Approach	Positive	4	"I think positive reinforcement is better than focusing on the negative." P(14.40)
		Transparent	1	"If there are consequences from AF, you have to explain in advance clearly why it happens with what purpose, that it is linked to a standard and that there is time to improve." P(17.62)
	Ownership	Bottom-up	9	"It is also easier to hear feedback from someone you see more often than from someone who just shows up and has something to say about your work." N(15.43)
		AMR/infection experts	8	"By someone who is knowledgeable about these topics." N(09.49)
		Interdisciplinary	6	"It would be very valuable to have regularly multidisciplinary meeting with the bacteriologists and possibly infectiologists or an infection committee." P(02.24)
		Supported by supervisors and management	3	"It must be supported by the organization, so people at the top, the management." R(10.44)

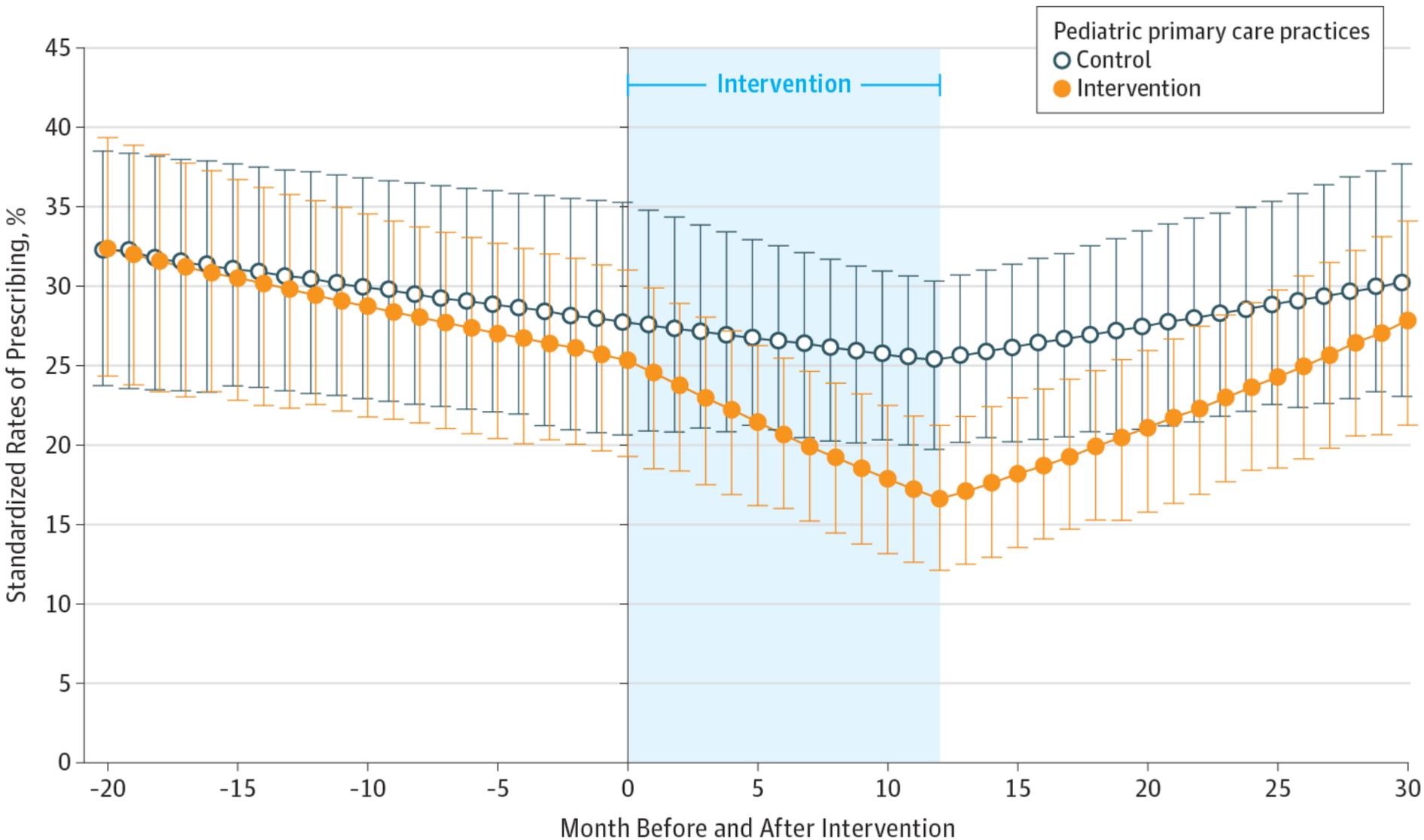
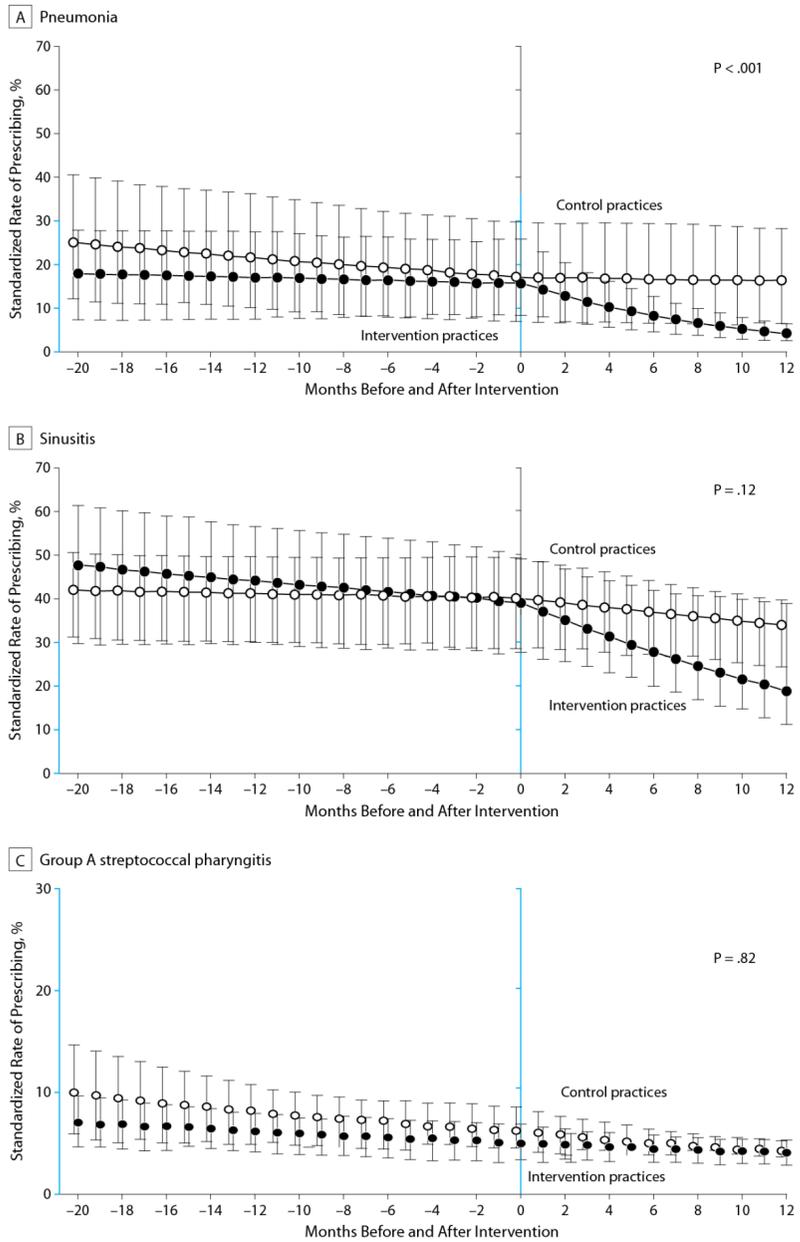
P physician, R resident, N nurse

Keizer et al. ARIC. 2020;

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Audit and Feedback



Gerber et al. JAMA. 2013; Gerber et al. JAMA. 2014;

Syndrome-specific tracking and interventions

What is syndrome-specific tracking?

- Tracking of practices for one or more syndromes

Goal

- Improve prescribing practices for conditions with known high levels of inappropriate prescribing

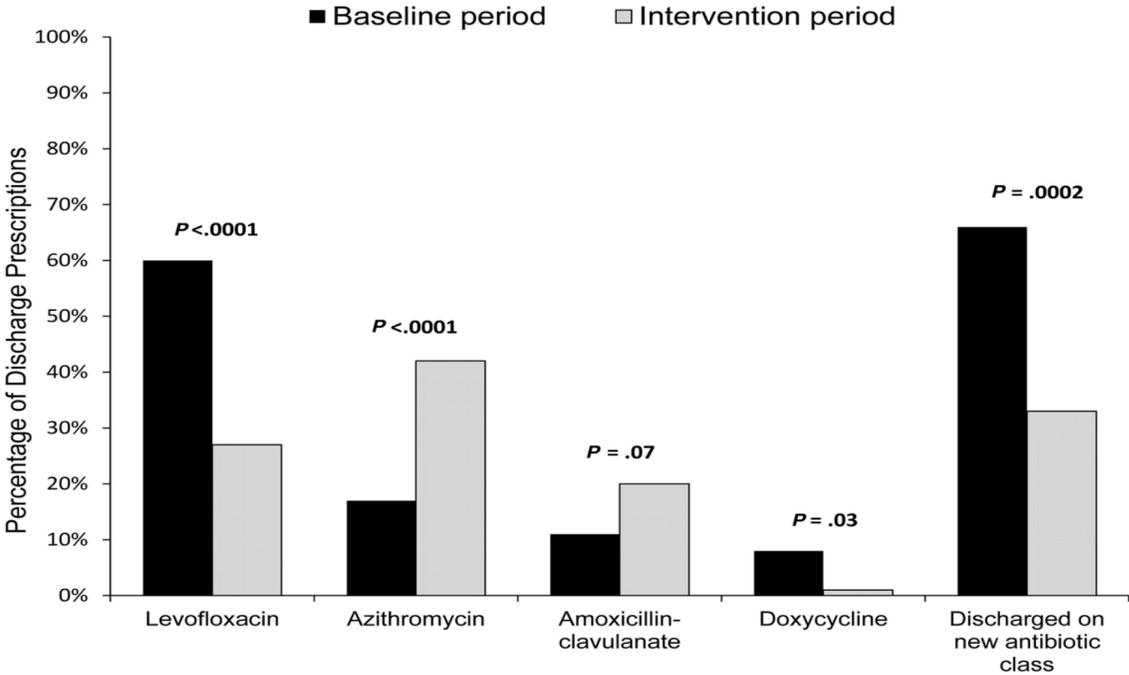
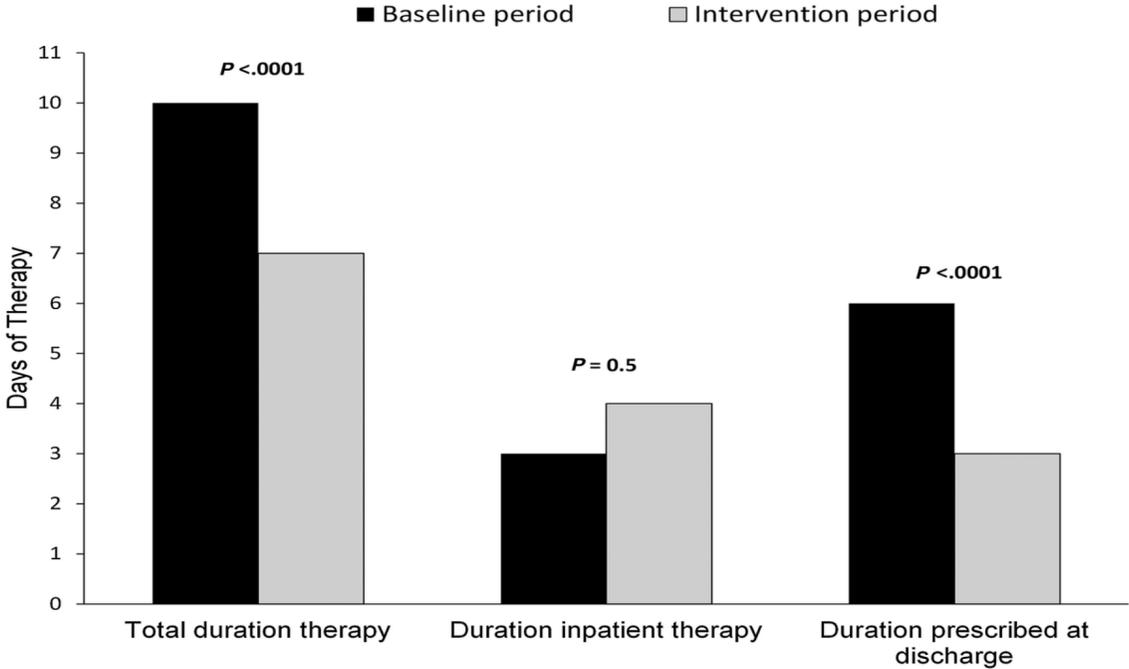
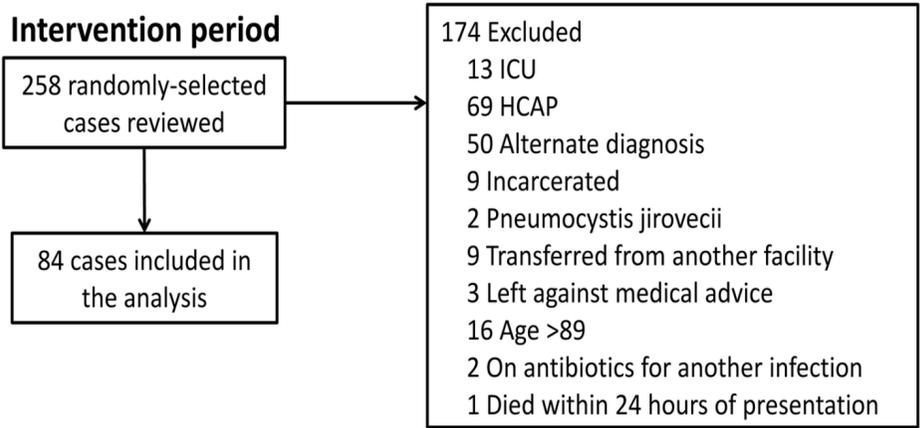
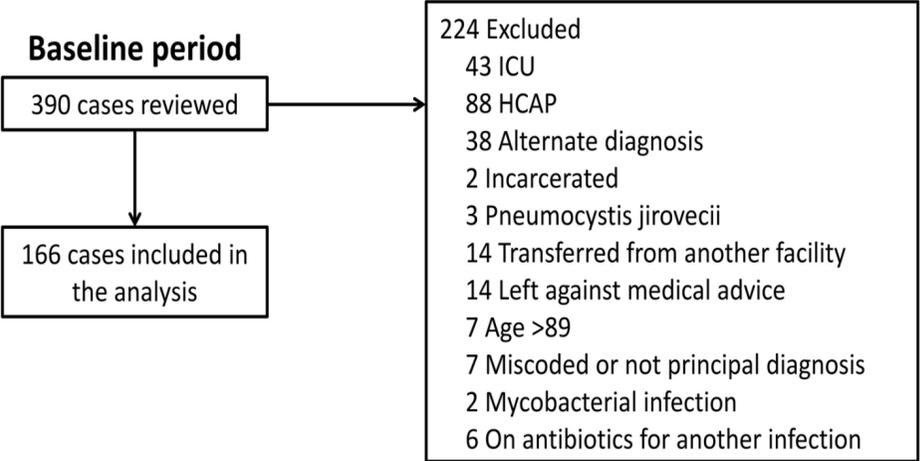
Impact

- Implementation and tracking of interventions for conditions with clear prescribing guidelines

Caveats

- Needs to be a high-burden syndrome
- When guidelines are unavailable this becomes less suitable

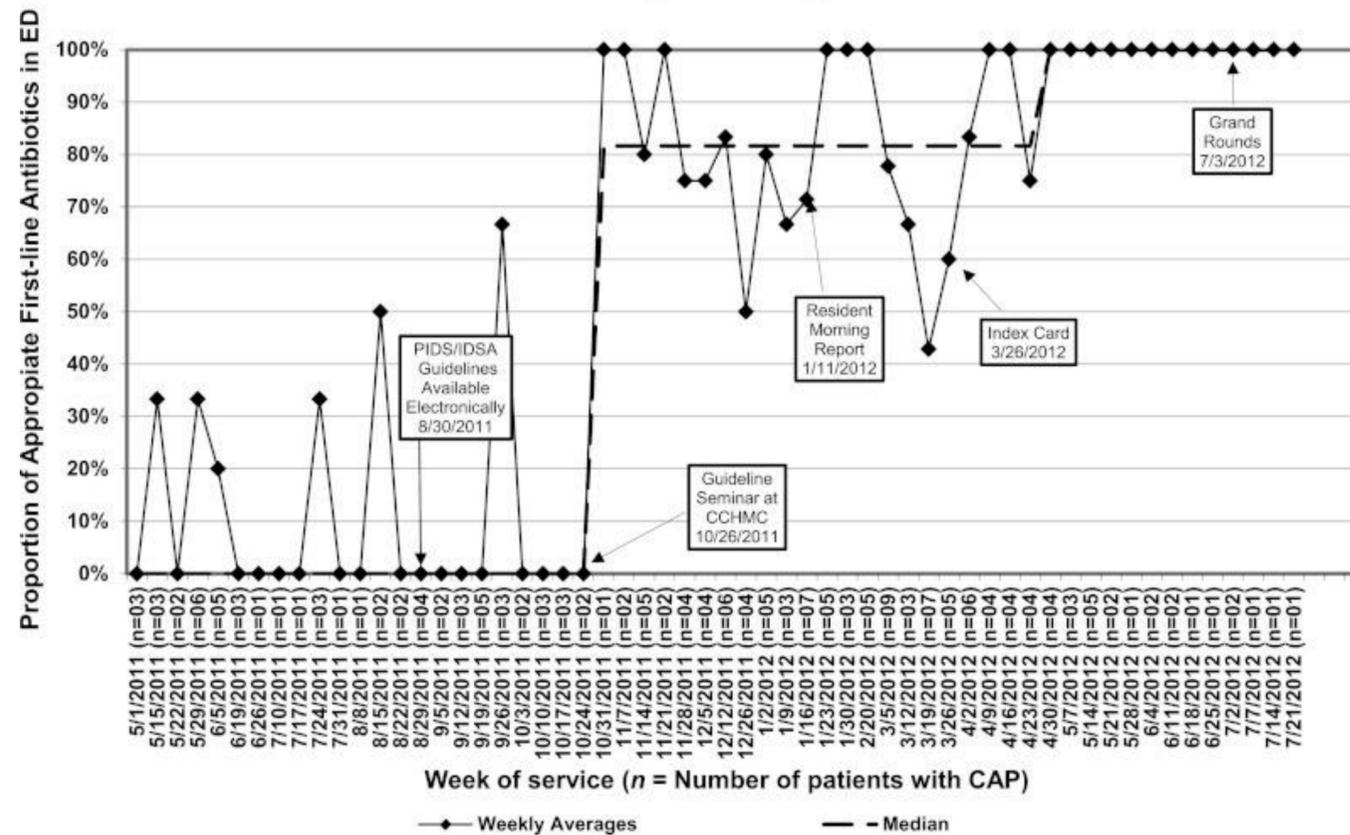
Syndrome-specific tracking and interventions



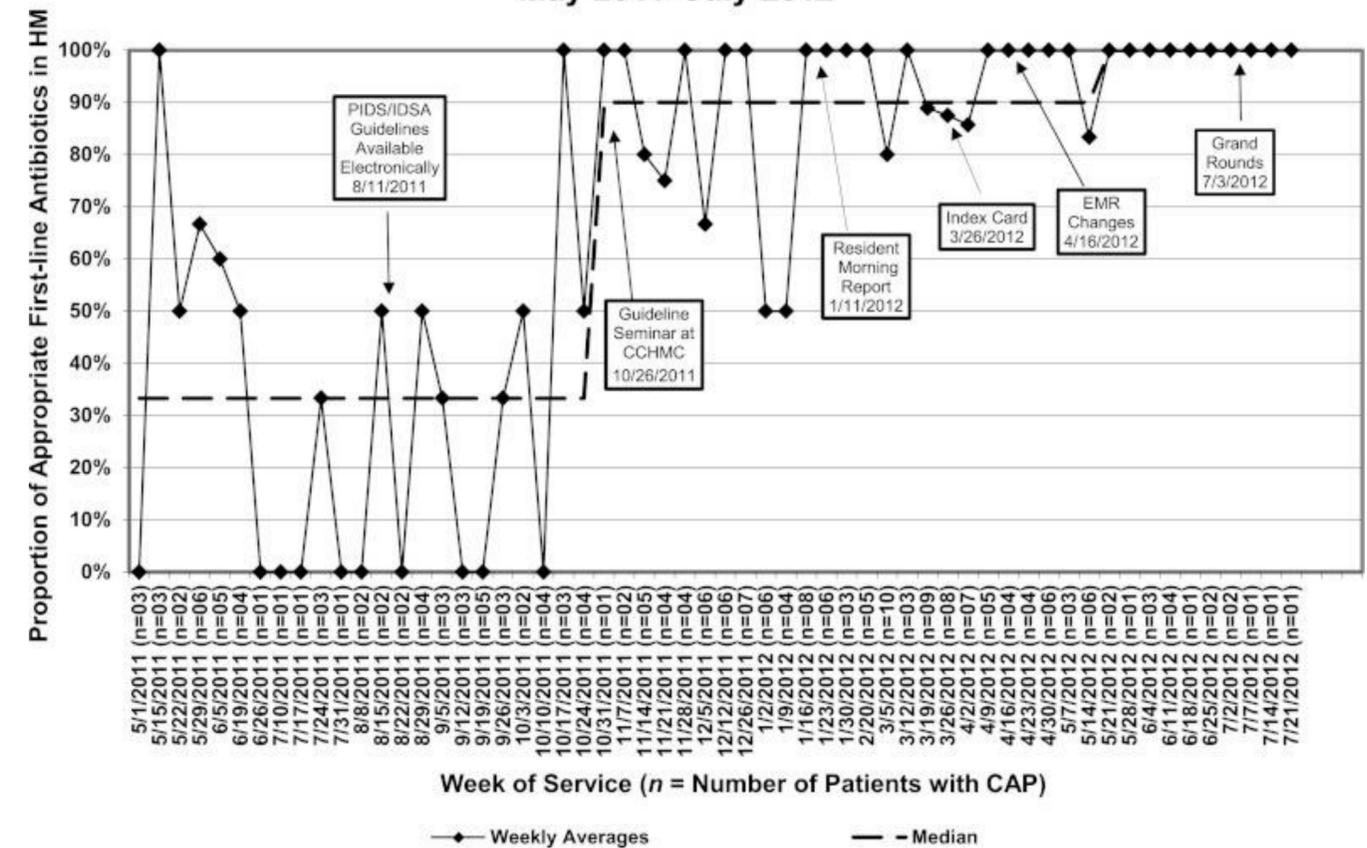
Haas et al. Open Forum Infect Dis. 2016;

Combining Syndrome-specific interventions with Audit and Feedback

First-line Antibiotic Prescribing in the ED
May 2011–July 2012



First-line Antibiotic Prescribing on HM Resident Teams
May 2011–July 2012



Ambroggio et al. Pediatrics. 2013;

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Benchmarking

What is benchmarking?

- Comparison to internal or external standards

Goal

- Identify deviations from the expected

Impact

- Helps identify outliers, target interventions, track over time

Risk adjustment

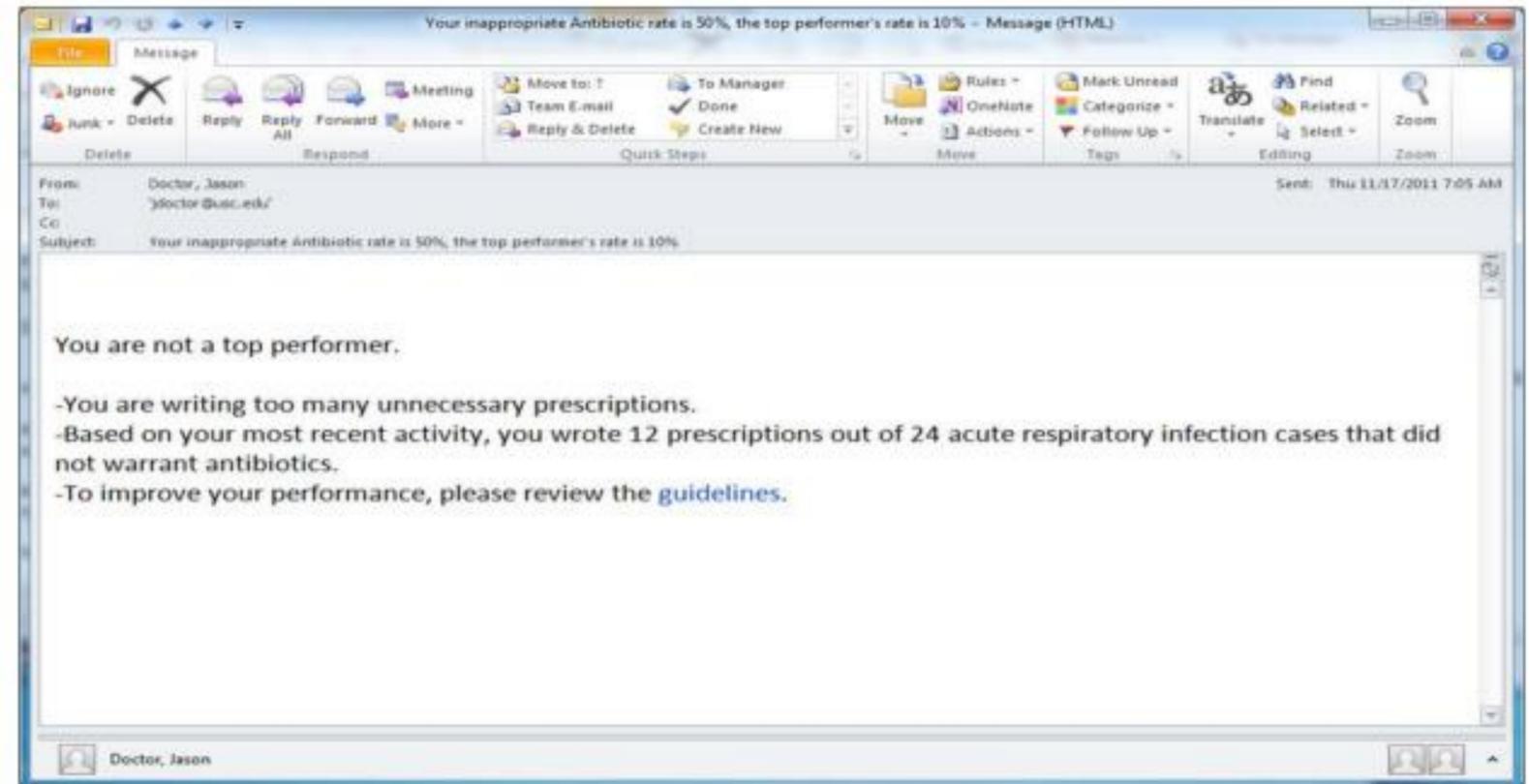
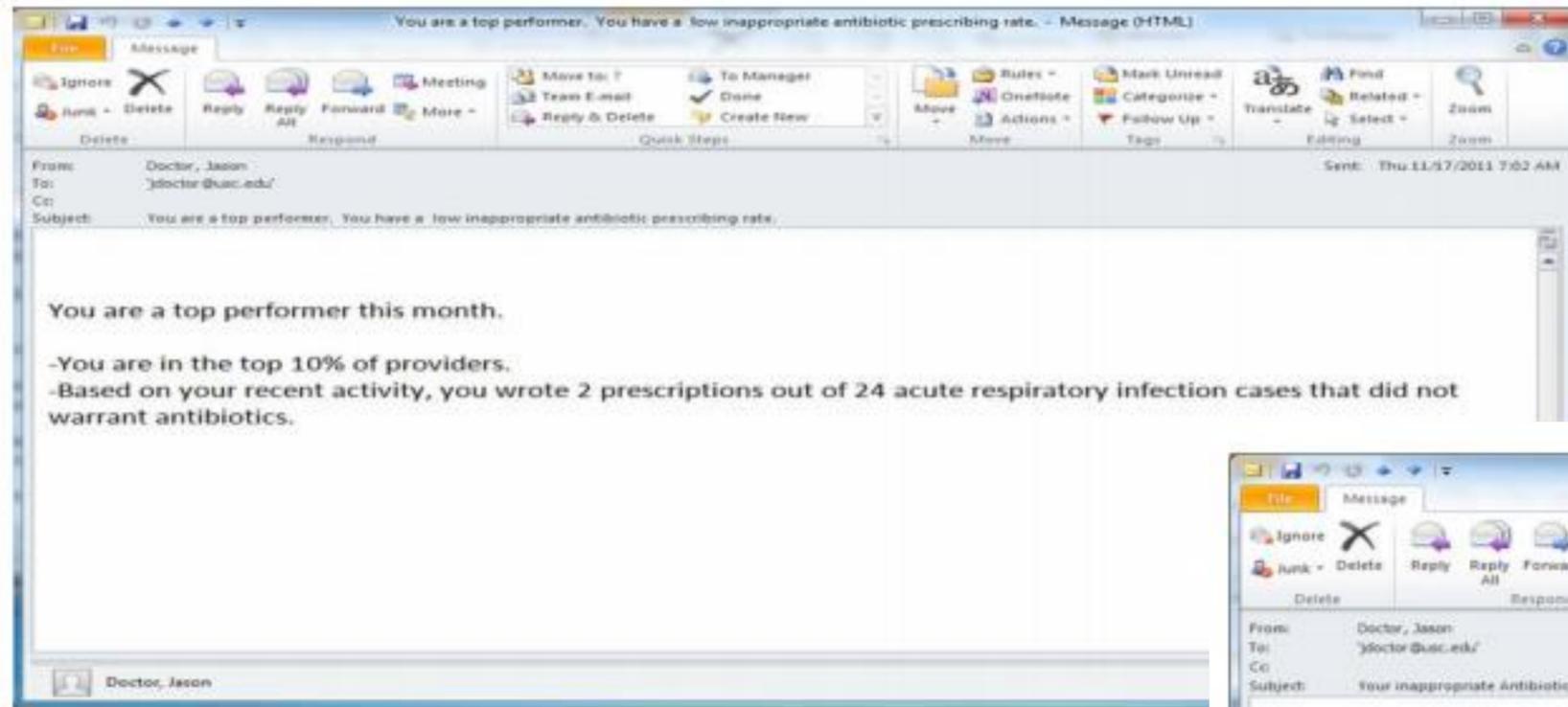
- Important for meaningful comparisons to control for differences

Caveats

- Cannot identify inappropriate prescribing (ecological fallacy)
- Does not reflect diagnostics (generally speaking)

Dellit et al. Clin Infect Dis. 2007; Polk et al. Clin Infect Dis. 2011; Fridkin et al. Clin Infect Dis. 2014;

Benchmarking



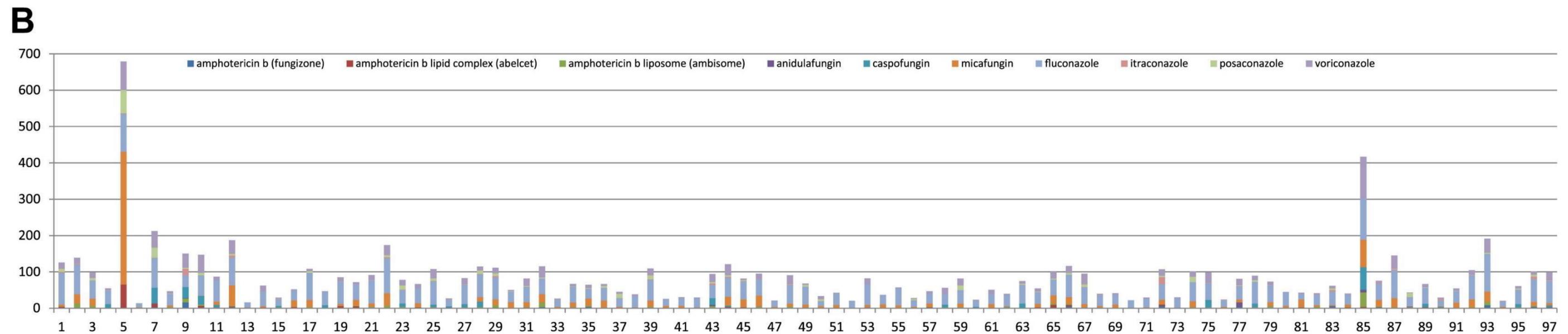
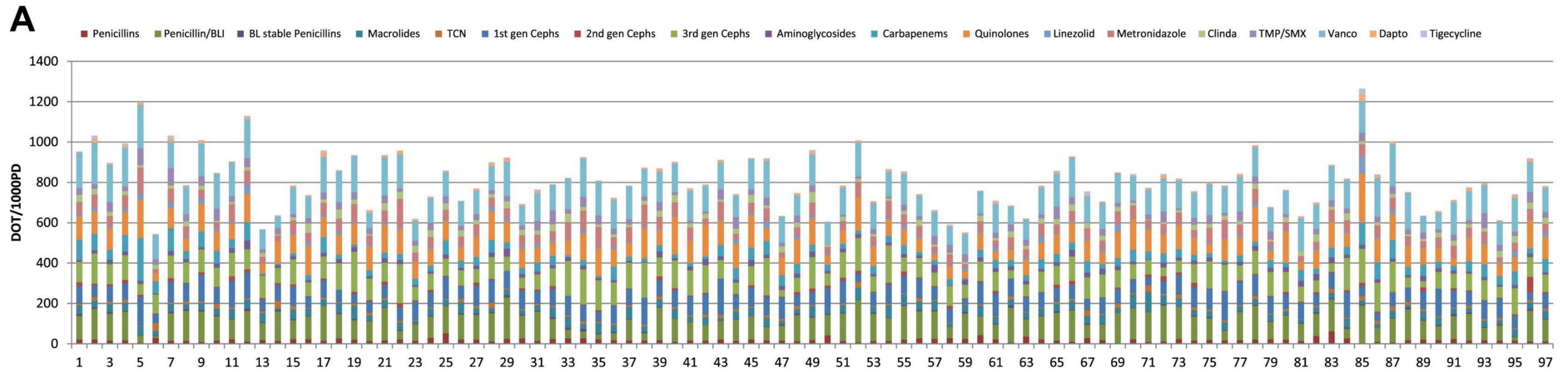
Meeker et al. JAMA, 2016;

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Point prevalence surveillance – looking at local data

Measure	PPS1		PPS2
	Your hospital	National	Your hospital
N patients surveyed	325	12931	294
N (%) on antimicrobials	104 (32%)	4267 (33%)	94 (32%) 😐
N (%) on single antimicrobial	79 (76%)	3516 (82%)	77 (82%) 😊📈
N (%) prescriptions	133	8636	113
- for parenteral antibiotics	69 (52%)	5268 (61%)	51 (45%) 😊📈
- with indication recorded	106 (80%)	6736 (78%)	88 (78%) 😞📈
- compliant with local policy	110 (83%)	7168 (83%)	94 (83%) 😐
N (%) surgical prophylaxis	28	1554	23
- single dose	14 (50%)	357 (23%)	15 (65%) 😊📈
- 24 hours	3 (12%)	497 (32%)	4 (17%) 😞📈
- >24 hours	11 (38%)	699 (45%)	4 (17%) 😊📈

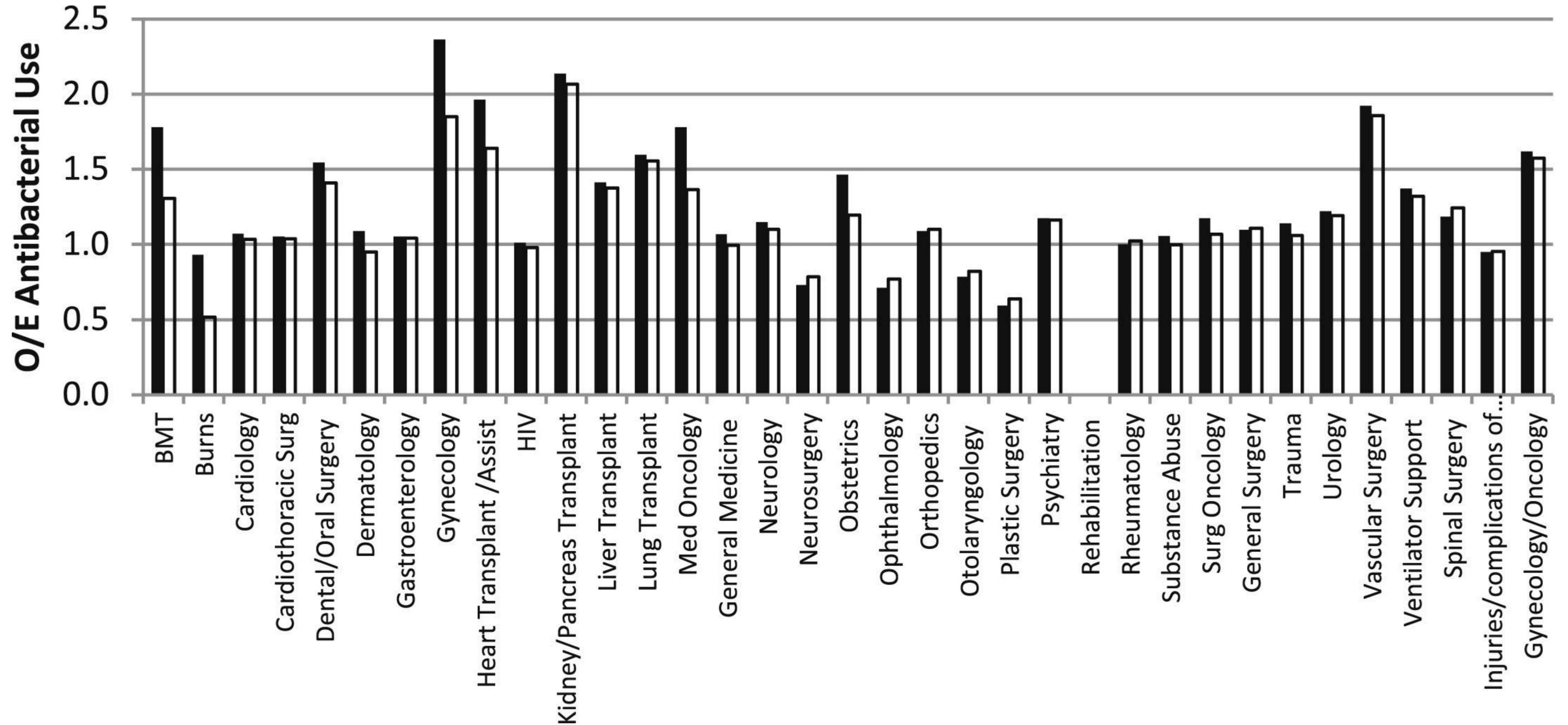
Benchmarking



Ibrahim and Polk. Infectious Disease Clinics. 2014;

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Benchmarking



Ibrahim and Polk. Infectious Disease Clinics. 2014;

Conclusions

- Know your audience
- Recognise that data may relate to an individual (prescriber or patient) or to a population (prescriber or patient)
- Experiment with different visualisations and tables
- Talk to your prescribers – what do they want and need?
- Think PDSA – data drives the S part
- Set a compliance threshold rather than more complex targets
- Small sample size → motivation: yes, comparison: no
- Beware of case-mix and use of non-comparable metrics in benchmarking