

Quality indicators of antibiotic use in the inpatient setting: a global consensus procedure

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DRIVE-AB

- Driving Re-Investment in R&D and Responsible Antibiotic Use



- Funded by the Innovative Medicines Initiative

- New Drugs for Bad Bugs program

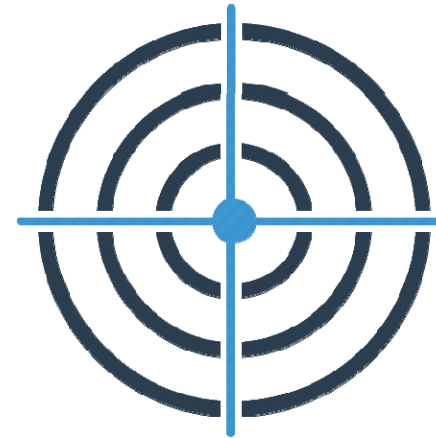


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Aim

To identify Quality Indicators (QIs) for antibiotic use in the inpatient setting



Quality Indicators

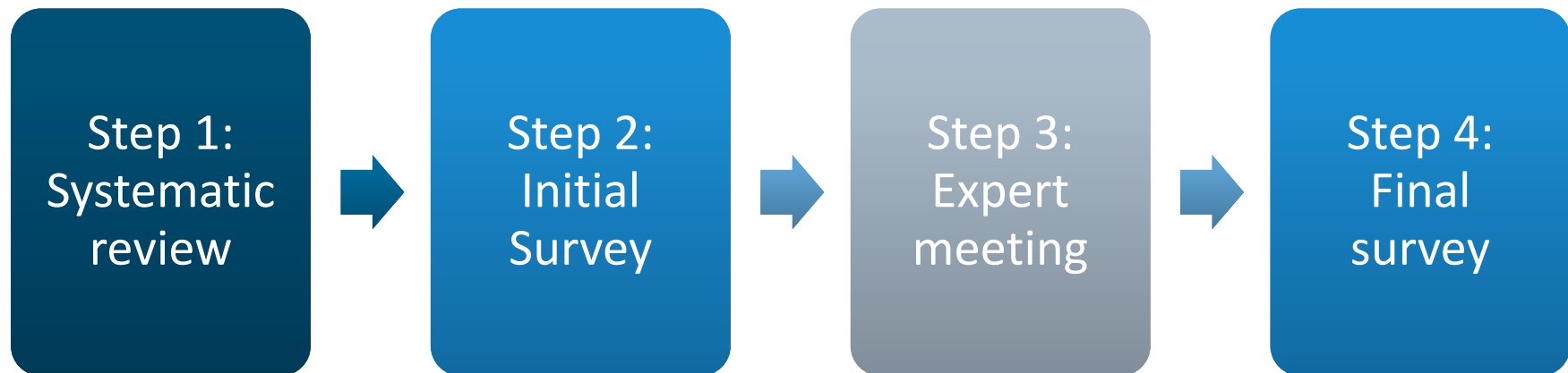
‘Measurable elements of practice performance for which there is evidence or consensus that they can be used to **assess quality, and hence change in the quality of care provided**’

Lawrence et al. 1997



Method

A four step RAND-modified Delphi procedure



Hermanides et al., 2008; Schouten et al., 2005; Van den Bosch et al. 2014

Search strategy

Concept 1: Antibiotics

anti-infective agents [MeSH] OR
antibiotic prophylaxis [MeSH] OR
antibiotic* [tiab] OR
antiinfective* [tiab] OR
anti infective* [tiab] OR
antimicrobial* [tiab] OR
anti microbial* [tiab] OR
antibacterial* [tiab] OR
anti bacterial* [tiab]

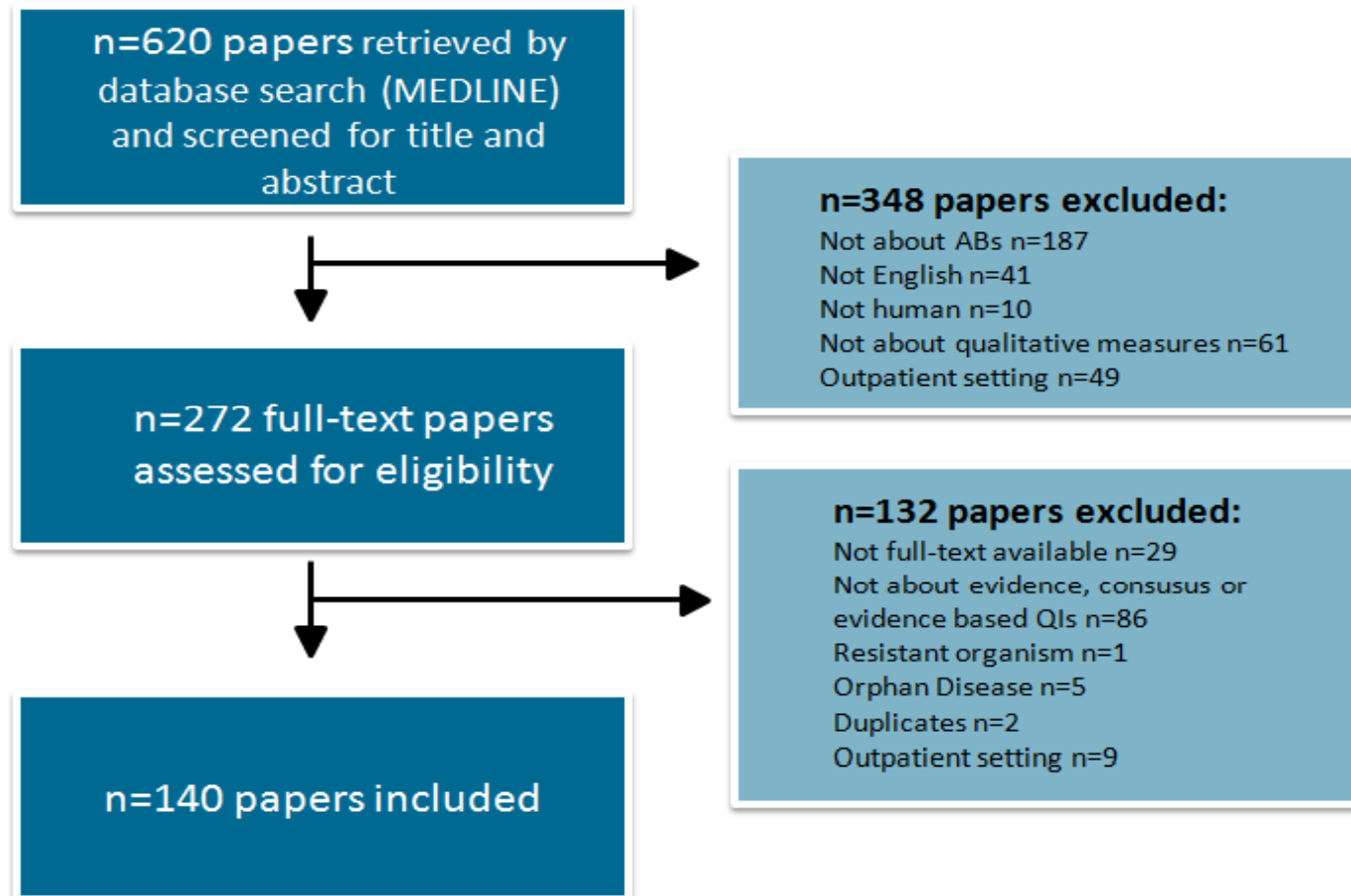
AND

Concept 2: Quality Indicators

quality indicators, health care [MeSH] OR
quality indicator [tiab] OR
quality indicators [tiab] OR
quality measure [tiab] OR
quality measures [tiab] OR
quality metric [tiab] OR
quality metrics [tiab] OR
quality criteria [tiab] OR
qualitative measure [tiab] OR
qualitative measures [tiab] OR
quality improvement [ti]

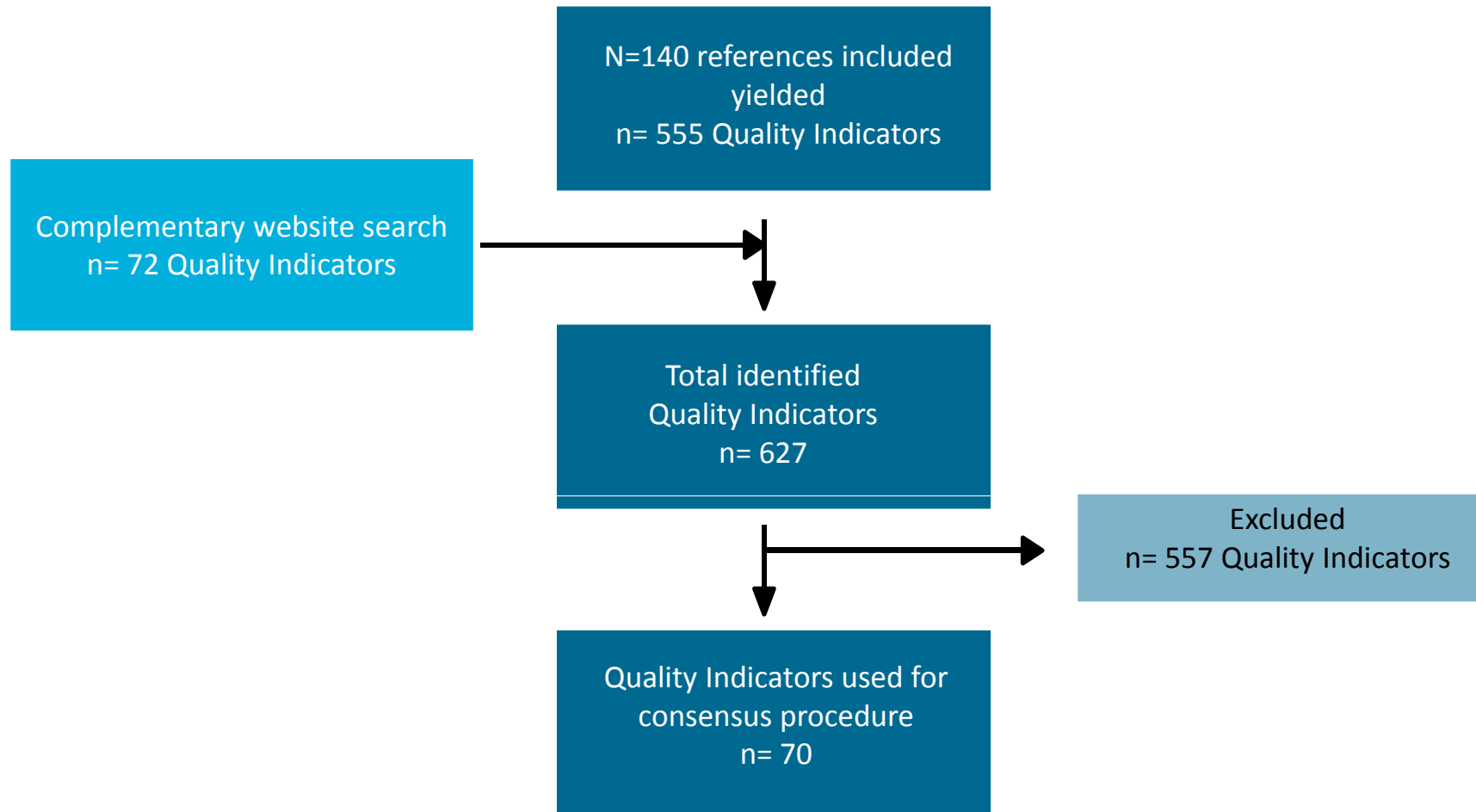
- MEDLINE database (no filters; performed 03-03-2015)
- Complementary website search

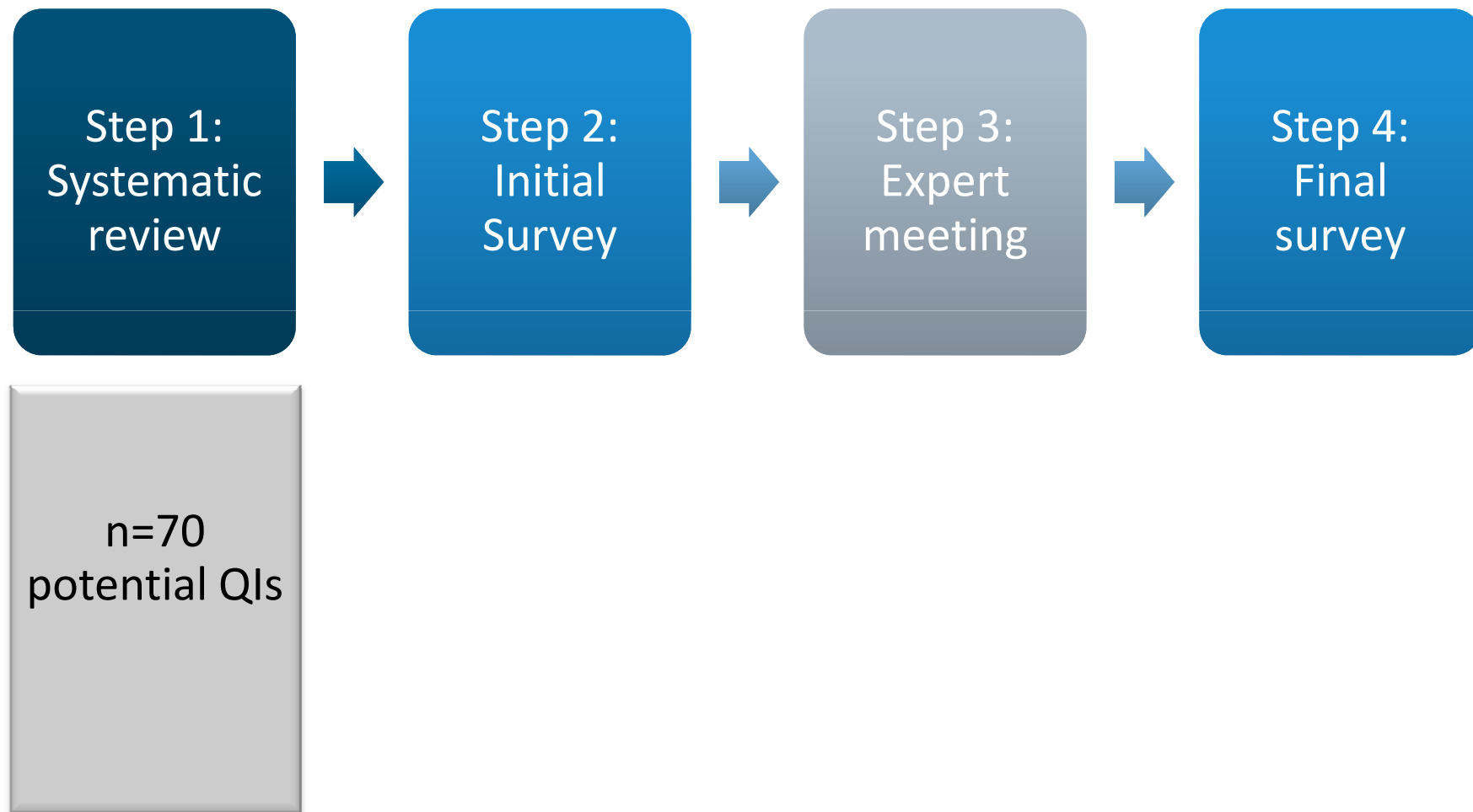
Systematic review



QI = Quality Indicators

Data extraction





Initial Survey

- Multidisciplinary expert panel (n=51 invited)
- SurveyMonkey®

Appraise the relevance of the following indicators for assessing the quality of antibiotic use in the inpatient setting.

1. Antibiotics should be prescribed according to local practice guidelines.

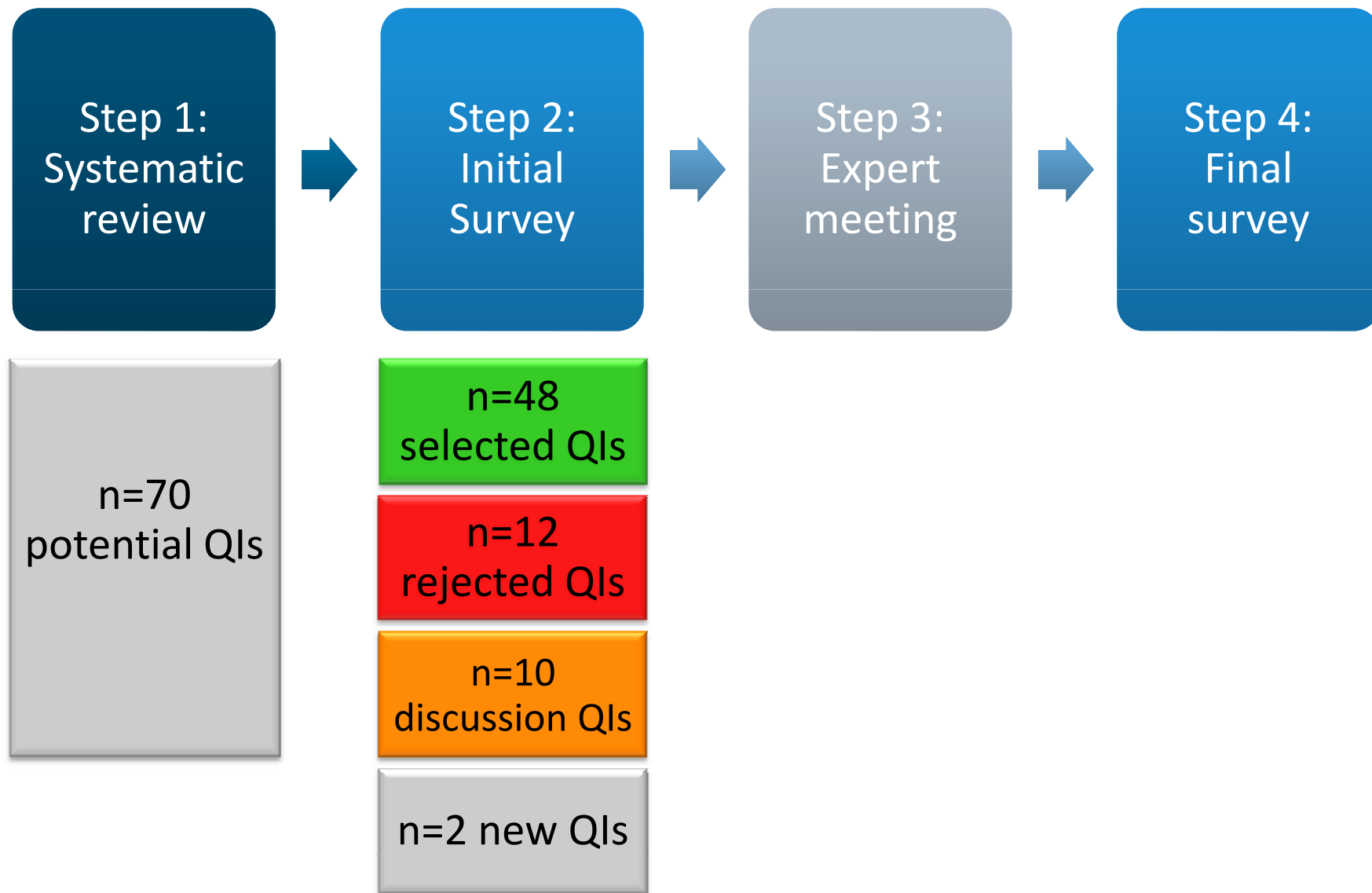
1. Clearly not relevant	2.	3.	4.	5.	6.	7.	8.	9. Clearly relevant	Cannot assess
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

- Attachment providing scientific references

Initial Survey

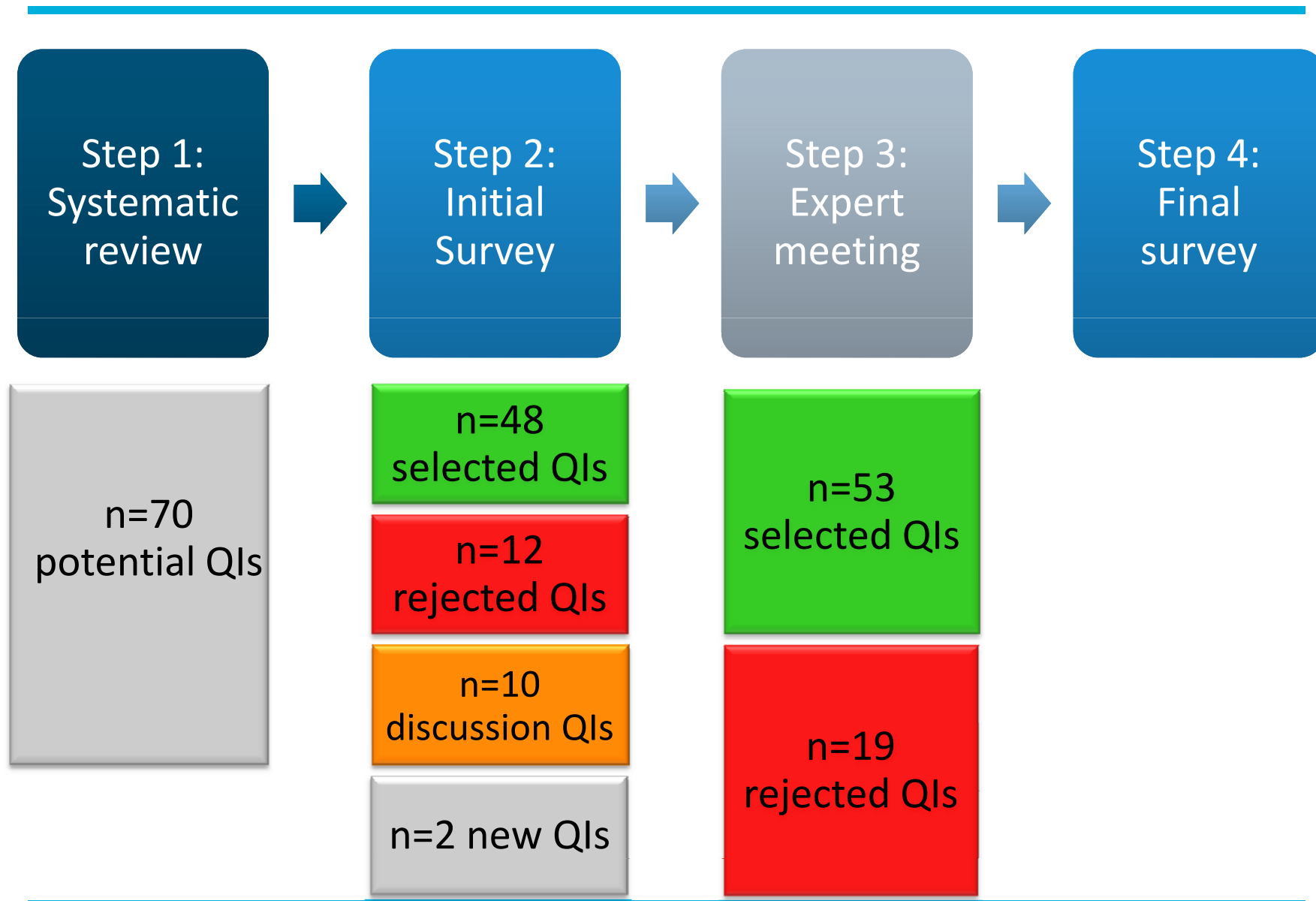
- Response rate (49 %)
- Multidisciplinary expert panel (n=25)
 - A. Medical Community including professional societies (n=9)
 - B. Patients/Global Public Health (n=3)
 - C. R&D Pharmaceutical Industry/SMEs/(Health) Economists (n=8)
 - D. Payers/Policy makers/Government/Regulators (n=5)
- 15 countries



Expert meeting

- Address the discussion QIs & new QIs
- Multidisciplinary expert panel (n=14)
 - Schiphol airport (NL)
 - WebEx





Final Survey

- SurveyMonkey®
- Response rate 88 %

Do you agree with these indicators?

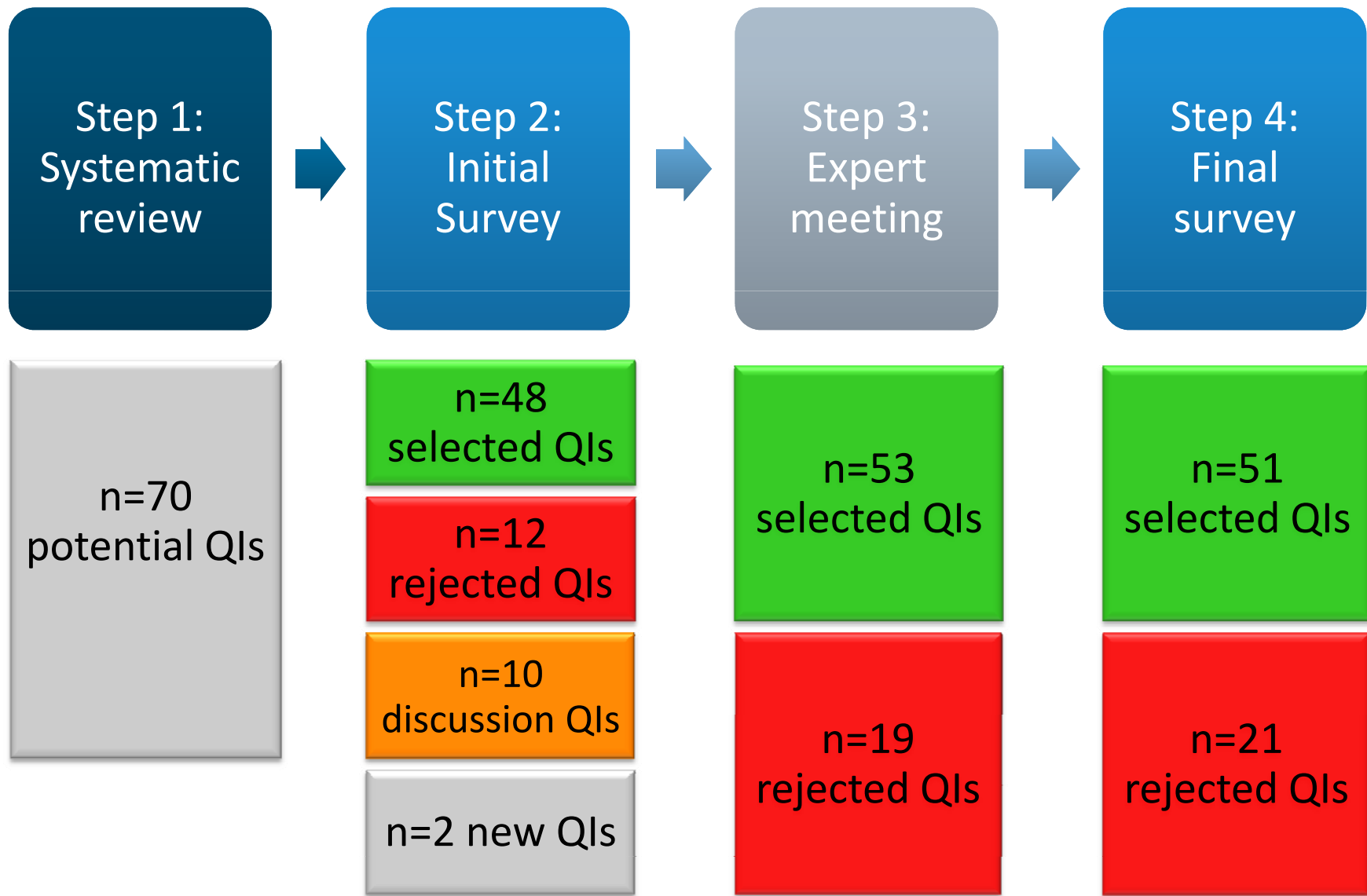
IQI-1 Antibiotics should be prescribed according to local practice guidelines.

Yes

No

Cannot assess

Reason(s) for disagreement



Highest appraised Inpatient QIs

QI-9 An antibiotic stewardship programme (antibiotic prescribing control programme and/or antibiotic prescribing policy) should be in place at the health care facility.

QI-17 An antibiotic plan* should be documented in the medical record at the start of the antibiotic treatment.

*Antibiotic plan includes: indication, name, doses, duration, route, and interval of administration.

QI-19 The results of bacteriological sensitivities should be documented in the medical records.

QI-34 The local guidelines should correspond to the national guideline but should be adapted based on local resistance patterns.

QI-49 Allergy status should be taken into account when antibiotics are prescribed.

Conclusion



- Evidence from literature & expert opinion
- 51 inpatient Quality Indicators
- ‘Proof of principle’ to ensure quality of antibiotic use
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