Use of reporting guidelines to design, report and referee antibiotic stewardship studies (e.g. CONSORT, ORION, PRISMA)

Using the "ORION/PRISMA" Guidelines for paper submission & review of antimicrobial stewardship studies

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On behalf of ORION group

www.ucl.ac.uk/amr/Reporting_Guidelines/ORION

Aims workshop/lecture

- Understand role of reporting guidelines to enhance quality and transparency of health research
- Current status of journal endorsement of these in Medicine & IPC
- Be aware of reporting guidelines most relevant to IPC and AMS

- Example-ORION (outbreak reports & IPC intervention studies) (10 mins)
  -PRISMA (systematic review) (5 mins)

- YOU learn how to use some reporting guideline tools-
  - ORION checklist to review an AMS study 2007 (30 mins)
  - PRISMA checklist for systematic review of AMS studies 2017 (35 mins)

- If time: possible ST Project (5 mins)

Who has heard of/used?

- CONSORT?

  RCTs

- STROBE?

  Observational Epidemiological:Cohort, Case control Cross sectional

- STROME-ID?

  Molecular epidemiology

- ORION?

  Outbreak Reports and IPC intervention studies

- PRISMA?

Systematic reviews and meta-analysis

- EQUATOR NETWORK?

EQUATOR NETWORK

www.equator-network.org;
PLoS Med Editors 2013

Too often, good research evidence is undermined by poor quality reporting.

The EQUATOR Network is an international initiative that seeks to improve reliability and value of medical research literature by promoting transparent and accurate reporting of research studies and facilitate replication effective interventions.

TIDiER Statement BMJ 2014

Pan American Health Organization

CIHR IRSC

MRC Medical Research Council

CHIEF SCIENTIST OFFICE

NHS National Institute for Health Research

MEDICINE IN GENERAL

- Equator has a comprehensive on-line database of consensus derived reporting guidelines, published after consultation with specialist societies & critical academic review
- Editors specialist journals- Rehabilitation Medicine (38 journals)
  -Dermatology
  -Surgical
  -Anaesthetic
  -Public Health journals

- Agreed that submitting authors adhere to relevant guidelines

ECCMID 2012 & 2013 & 2014

Guidelines for submission of abstracts

ESCMID and SHEA strongly support the improvements of reporting of study results and ask that those submitting abstracts to use the relevant reporting guidelines :

CONSORT (RCT)

www.consort-statement.org

STROBE (observational study in epidemiology)

www.strobe-statement.org

ORION (outbreak report or interventional study)

www.ucl.ac.uk/amr/Reporting_Guidelines/ORION

Interactive Workshops- SHEA, ECCMID (x2),FIS (x2) IFIC (x2)

AIMS ABSTRACT CHECKLISTS

ORION,CONSORT,STROBE

1. Help investigators write a high quality conference/journal abstract

2. Provide referees with framework to help review conference abstract

3. Help HCWs and researchers select best papers/conference presentations for continuing professional development..

   what article to read?

   what conference oral/poster session to go to?

Endorsement of CONSORT, STROBE, ORION, PRISMA and extensions by infection control journals

AJIC commentary, JIP commentary November 2016

In 2014 , letter to 12 infection control journals from 18 British, European, USA infection control and evidence based medicine specialists and academics asking for endorsement CONSORT, ORION, STROBE, PRISMA and STROME-id and enter evaluation

Main reason to help develop robust evidence base to drive policy and practice in the battle to overcome global threat AMR and HCAI

O'Neill Review Antimicrobial Resistance www.amr.org 16 May 2016

Nine agreed to endorse from mandatory upload of guideline checklists cross checked by editors through to simple request with link to online guidelines

Lancet ID; JAC; ARIC; CMI; EPID & INF; BMC INF DIS; AJIC; JIP; JCM

The ORION statement:

Guidelines for transparent reporting of

***O**utbreak **R**eports & **I**ntervention studies **O**f **N**osocomial **I**nfection*

A CONSORT equivalent for Infection Control Studies

Funded by Health Technology Assessement Board

Stone et al Lancet Infect Dis 2007; J Antimicrob Chemother 2007

www.ucl.ac.uk/amr/Reporting_Guidelines/ORION

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Evidence Base for Infection Control Interventions

Davey et al Cochrane 2005;Cooper et al BMJ 2004

- Cochrane review of interventions to change antibiotic prescription & evaluate HCAI outcomes (2005) & HTA (2003) review isolation practices in MRSA show limited evidence of some effect but inadequate reporting & major flaws in design & statistical analysis

- Lack of details eg on interventions & timings
- Failure to assess & adjust for confounders/biases
- Aggregation of outcomes (misses trends)
- Analysis fails to account for dependencies of infectious outcomes

- Quality of infection control research must improve to provide robust evidence for policy & practice

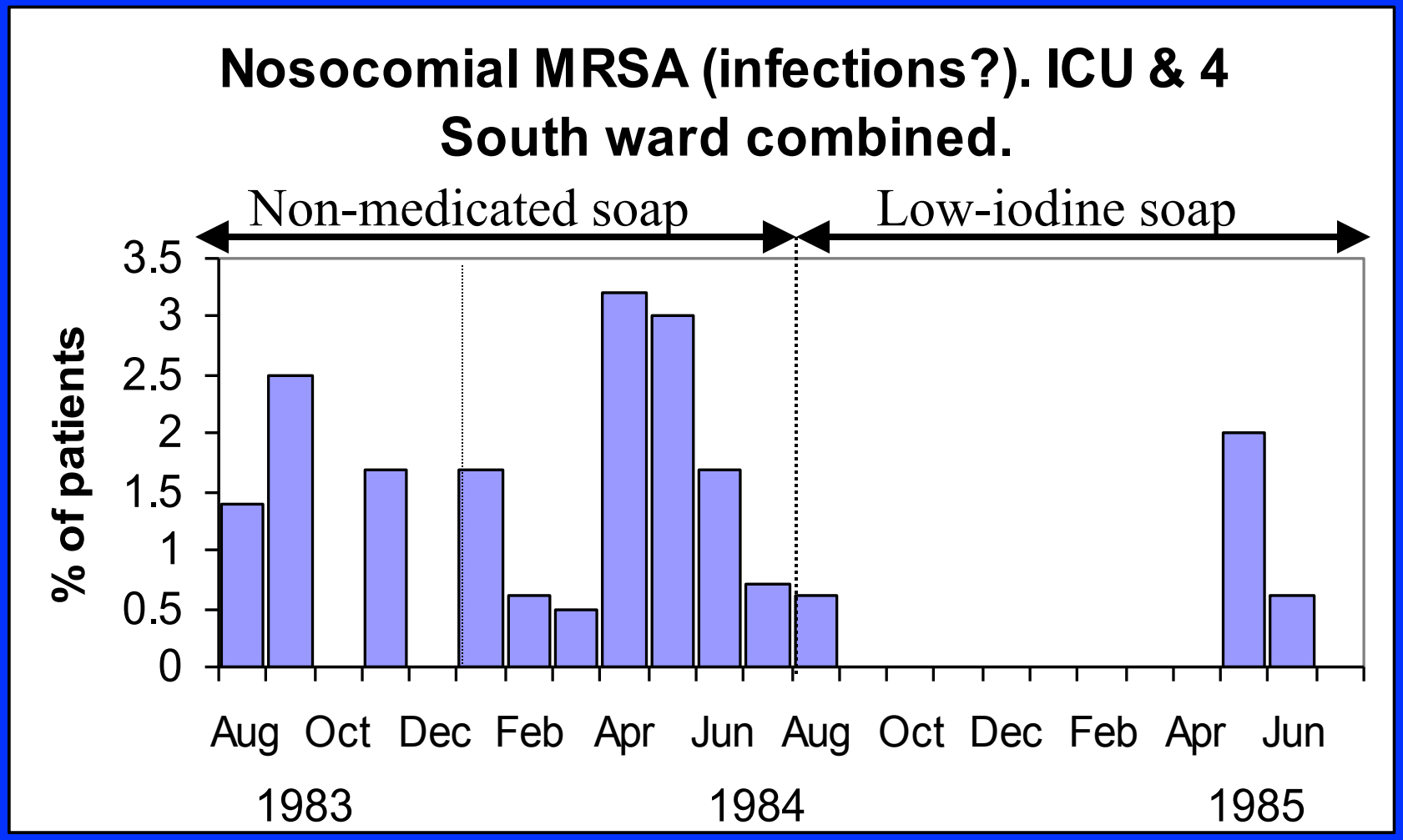
To summarise the problem…..

Cooper B et al BMJ 2004, HTA 20003, Davey et al Cochrane 2005;Ramsay et al JAC 2003

- Studies conclude interventions cause Δ MRSA or antibiotic use or *Clostridium difficile*

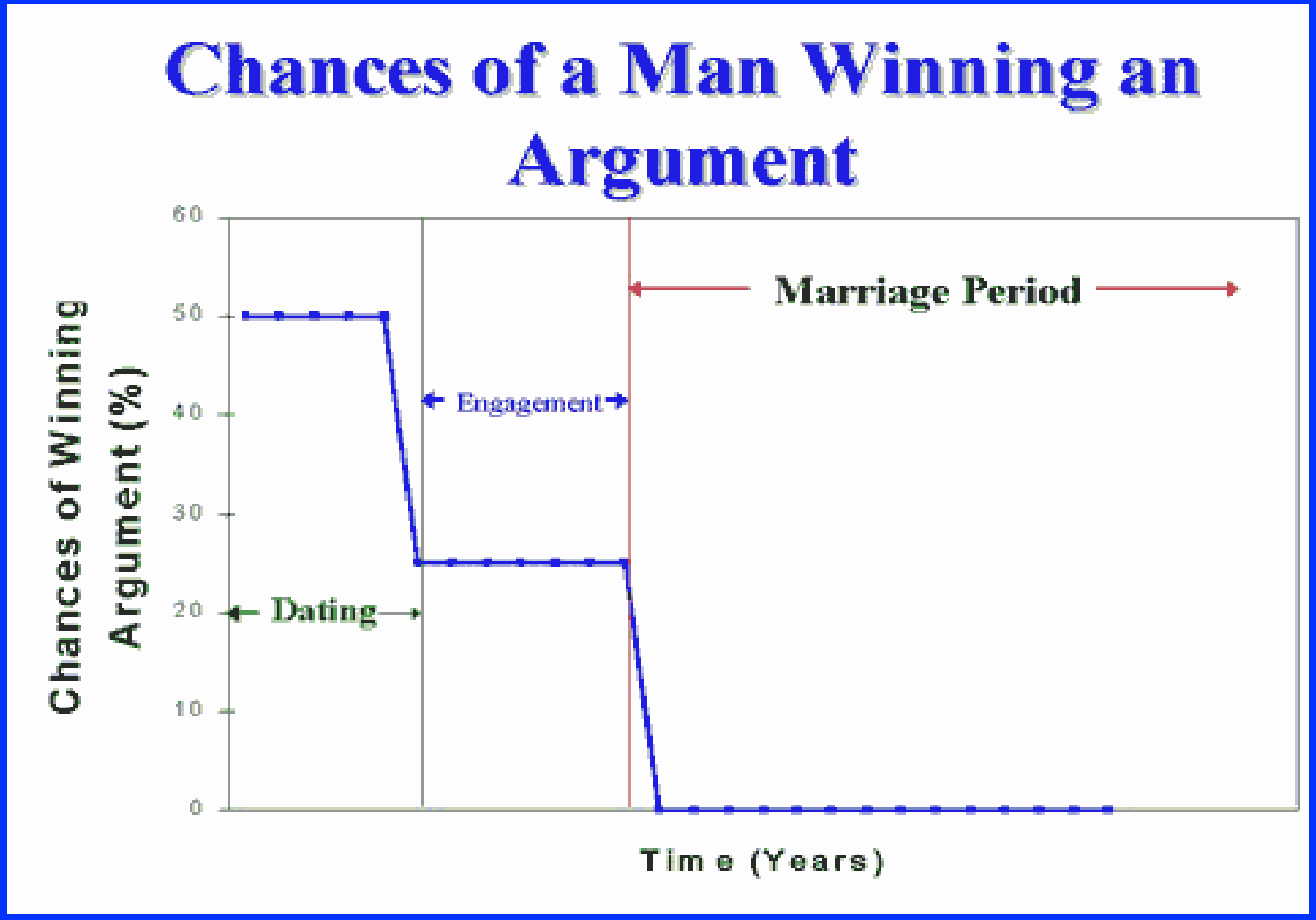
- Validity of conclusions threatened by **confounders & biases**, unaccounted for in studies, which provide plausible alternative explanations of outcome and by **inappropriate statistics** e.g. aggregation of data (misses time trends) & assumption that infection outcomes are independent (Chi-Sq; OR)

The sort of problems: regression to mean, statistical analysis



Onesko KM, Infection Control 1987

Interrupted time series



AIM OF ORION Statement

CONSORT equivalent for infection control studies

- Improve standards research & publication
- Transparency of reporting
- Assess or remove biases
- Readers relate studies to their situation.
- Facilitate synthesis of evidence
- Framework for reviewers & editors to assess papers
- Criteria research grant assessment panels

- Designed especially for Interrupted Time Series (with or without controls groups) and outbreak reports.

Key issues addressed by ORION

Transparency: Why was the study done? (hypothesis)
What sort of study? (design)
Exactly what was done, to whom, when?

Analysis: Disaggregated data
Account for dependencies
Confounders

Inference: How do findings relate to hypothesis?
What else influenced the findings?
Do findings generalise ?

Components of ORION

Stone et al Lancet ID 2007;JAC 2007;www.idrn.org/orion.php

- adapted CONSORT statement to the wide variety settings interventions, designs & statistical issues infection control studies & outbreak reports
- Consultation with professional societies
- Independent academic review in two journals

- 22 item checklist
  - Title
  - Abstract
  - Introduction
  - Methods
  - Results
  - Discussion
- Summary table
  - Population
  - Clinical setting
  - Precise nature & timing of all interventions
- Graphical summary results

ORION Checklist: Introduction

	Item No	Descriptor
Title & Abstract	1	**Description of paper as outbreak report or intervention study.** **Design of intervention study** (eg ITS +/- controls; cross over study etc). Brief description of intervention.
Introduction background	2	Scientific and/or local clinical background and **rationale**. Description of organism as epidemic, endemic or epidemic becoming endemic
Type of paper	3	Description of paper as Intervention study or outbreak report. If an outbreak report, report the number of outbreaks.
Dates	4	Start and finish dates of the study or report stated.
Objectives	5	**Objectives for outbreak reports.** **Hypotheses for intervention studies.**

ORION Checklist: Methods 1

Methods Design	6	**Study design**. **Use of EPOC classification recommended (CBA, ITS)** Whether study was retrospective, prospective or ambidirectional **Whether decision to report or intervene was prompted by any outcome data** Whether formally implemented study with pre-defined protocol and endpoints.
Participants	7	Numbers of patients admitted during the study or outbreak. Mean ages & LOS. Eligibility criteria for intervention study. Case definitions for outbreak report
Setting	8	Description of the unit, ward or hospital and.if a hospital, the units involved. Number of beds, the presence and staffing of an Infection Control Team.
Intervention	9	**Definition of phases by a major change in specific infection control practice. Start & stop dates. A summary table is strongly recommended with precise details of interventions, how & when administered in each phase.**
Typing	10	Details of culture media, use of selective antibiotics & local and /or reference typing. Where relevant details of environmental sampling

Setting: 1300-1600 bed teaching hospital. ICT with 5 full time infection control nurses from Oct 1992.MRSA initially epidemic, later endemic	**Dates:** 1989-1997	**Population characteristics**: Number of patients during study: 506012. Mean age of MRSA patients (SD): 68 (23) years.

Major infection control changes during the study: Carer hand-hygiene education and feedback; patient isolation; screening; MRSA eradication; antibiotic use**;** automatic readmission alerts, disinfection, sterilization, air control & building construction.

	Isolation	**Screening**	**Eradication**	**Other measures**
Phase 1 48 months (Jan 1989 - Dec 1992)	None	None	None	No MRSA control measures
Phase 2 24 months (Jan 1993 - Dec 1994)	1.Single room. 2. Cohorting on closed and open bays in special circumstance (e.g. unit specific outbreaks).	1.Admission screens for previous MRSA patients. 2.Contacts screened. 3.Treated MRSA patients: weekly for 4 weeks, then monthly.	Mupirocin and chlorhexidine. Mupirocin used for almost all patients, irrespective of MRSA carriage*.	1.CDC guidelines 1983 2.Computer alerts for readmitted MRSA patients (July 1994 on).
Phase 3 36 months (Jan 1995 - Dec 1997)	As phase 2	As phase 2	As phase 2 until September 1997.	As phase 2 + staff hand-hygiene education & feedback programme

Isolation details: From 1993 single rooms may not have been used when there was nasal carriage only and lack of available rooms.). Contact for overflow with nasal carriage only. 60 single rooms available for acute services patients (without negative pressure).

Screening details. Screening sites: nose, lesion, groin, infected sites. Patients in "septic" orthopaedic ward screened on admission from July 1994.

Eradication Details: From phase 2 most patients received ≥1 nasal mupirocin courses, irrespective of MRSA carriage*. After September 1997 mupirocin was limited to those with known nasal carriage and without chronic skin lesions and indwelling devices. Criteria for eradication: 2 negative sets of cultures ≥24 hrs apart.

ORION Checklist: Methods 2

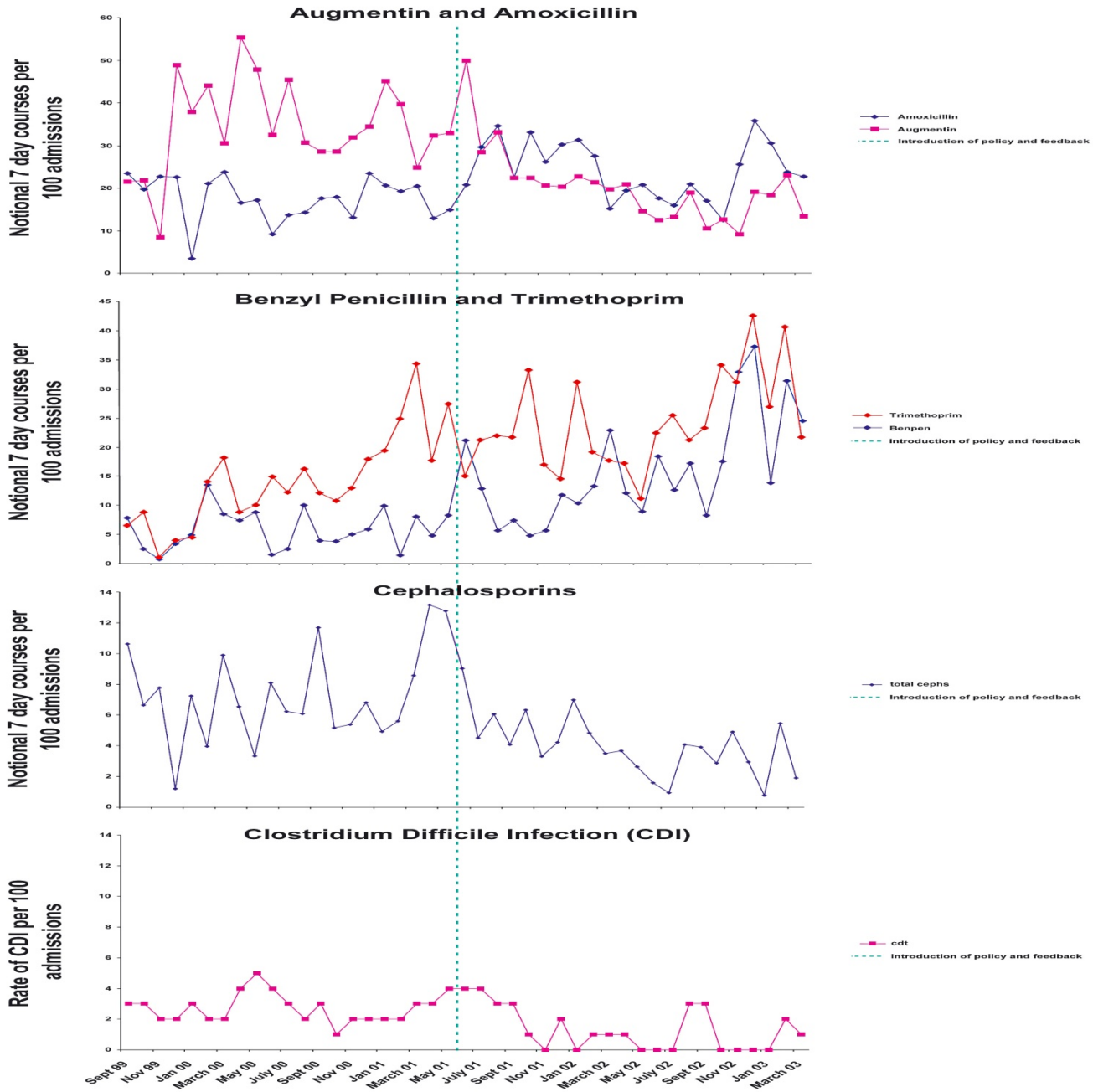
Infection related outcomes	11	**Clearly defined primary & secondary outcomes (eg incidence infection, colonisation, infection control behaviours) at regular time intervals (eg weekly, monthly,yearly) not as totals for each phase of a study, with at least 3 time points per phase and for many 2 phase studies, 12 or more monthly data points per phase.** **No place for the uncontrolled before and after study with only two time points.** Denominators (eg numbers admissions or discharges, patient bed days) Criteria for outcome measures. For short studies use of charts with duration patient stay & dates organism detected may be useful.
Economic outcomes	12	If a formal economic study done, definition of outcomes to be reported, description of resources used in intervention, costs broken down to basic units and important assumptions stated.
Potential Threats to Validity	13	**Which potential confounders were considered, recorded or adjusted for** (eg changes in length of stay, case mix, occupancy, staffing levels, hand-hygiene, antibiotic use, strain, processing isolates) Description of measures to avoid bias including blinding, standardisation outcome assessment & delivery care

ORION Checklist: Results

Results Recruitment	16	For relevant designs, the dates for each period recruitment & follow up. A flow diagram may help describe patient flows in each phase (eg cross over study)
Outcomes & estimation	17	For the main outcomes, the estimated effect size and its precision **A graphical summary is appropriate for dependent data (most ITS)**
Ancillary analyses	18	Report subgroup analyses and adjust for possible confounders.
Harms	19	Pre-specified categories of adverse events & occurences of these in each group or phase.

ORION exemplar paper

Fowler S et al JAC 2007



ORION Checklist :Discussion

Discussion Interpretation	20	**For intervention studies, an assessment of evidence for/against hypothesis** accounting for potential **threats to validity of inference** including regression to mean effects and reporting bias For outbreak reports consider clinical significance of observations & hypotheses generated to explain them
Generalisability	21	External validity of the findings of the outbreak report or intervention study
Overall evidence	22	General interpretation of results in context of current evidence.

The PRISMA Statement 2009

Preferred **R**eporting **I**tems for **S**ystematic Reviews and **M**eta-**A**nalyses

www.prisma-statement.org

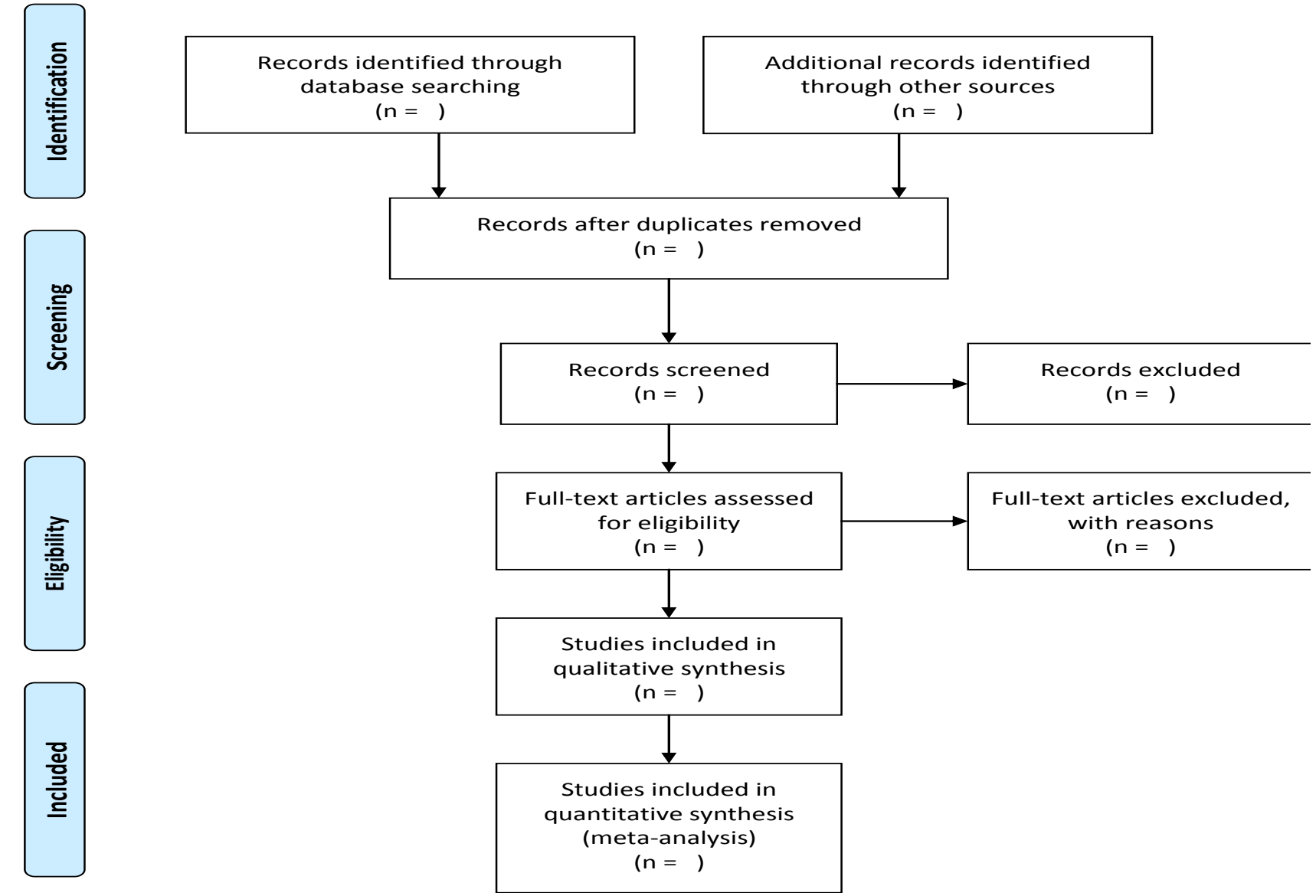
Moher D, Liberati A, Tetzlaf J, Altmann DG, The PRISMA Group

PLoS Medicine doi:10.1371/journal.pmed.1000097.t001

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	
ABSTRACT			
Structured summary	2	**Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number**.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	
Study selection	9	**State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).**	
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	
Risk of bias in individual studies	12	**Describe methods used for assessing risk of bias of individual studies** (including specification of whether this was done at the **study or outcome level**), and how this information is to be used in any data synthesis.	
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may **affect the cumulative evidence** (e.g., publication bias, selective reporting within studies).	
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, **ideally with a flow diagram.**	
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	
Risk of bias within studies	**19**	**Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).**	
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b**) effect estimates and confidence intervals**, ideally with a forest plot.	
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and **measures of consistency.**	
Risk of bias across studies	**22**	**Present results of any assessment of risk of bias across studies (see Item 15).**	
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	
Limitations	25	**Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).**	
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	

PRISMA 2009 Flow Diagram



Workshop materials

- Antibiotic Stewardship paper (*Fowler et al*)
- Full two page ORION checklist

- Systematic Review of AMS papers (*Baur et al Lancet ID 2017*)
- PRISMA checklist and Flow Diagram

Successful use of feedback to improve antibiotic prescribing and reduce Clostridium difficile infection: a controlled interrupted time series

Fowler et al JAC 2007

Workshop: Antimicrobial Stewardship
Report with full ORION checklist

1). Fowler et al 2007 JAC paper

2) Full 2 page ORION checklist

3) Groups of 5 (2 mins)

4) Appoint rapporteur to allocate items as follows

Group 1 and 2- items 1-5: intro

Group 3 and 4- items 6-10: methods-interventions

Group 5 and 6- items 11-14: methods-chosen outcomes

Group 7 and 8- items 15-19: results

Group 9 and 10- items 20-22: discussion

5). Each group reviews allocated items with checklist (20 mins)

6). If time: Groups 1 &2 covers group 3 & 4's items: 3 & 4 covers 5 & 6's who covers 7 & 8's who covers 9 & 10's who covers 1&2's etc

7). Each rapporteur has 2 mins to present their findings

"Correct" answers fed back immediately (1 minute)

ORION in Practice 1

Fowler et al JAC 2007

Groups 1 & 2

1.Title
stated "controlled ITS" so iv study α;
i/v & outcomes- described α

2. Background
: rationale and local background α ;
endemic/epidemic α

3. Type paper:
Controlled ITS therefore IS α

4. Dates:
in methods (table) α

5. Hypothesis:
to "investigate effects" investigation β

Groups 3 & 4

6. Design:
Prospective Controlled ITS. α
Outcome data prompted iv α
Predefined end points. α
Protocol- unclear

7. Participants:
Number, age, LOS, eligibility, inter-hospital t/f α
No info care homes or risk factors **

8. Setting:
Wards, Hospital, ICT team α

9. Interventions:
Phases, summary table, dates, details, timing
Delivery α

10. Culture & Typing:
Toxin only for CDT; no details for MRSA β

ORION in Practice 2

Fowler et al JAC 2007

Groups 5 & 6

11. Infection related outcomes:
    1ry & 2ry outcomes, monthly, enough time points α

12. Economic: N/R

13. Potential Threats to Validity:
    LOS, case-mix, hand-hygiene, seasonality processing isolates α
    Lists those not recorded eg CoA
    Bias- design protects against many same diagnostics, lab unaware, no major changes in care α-

14. Sample size: N/R

Groups 7 & 8

15. Statistical methods:

Segmented regression analysis accounts for dependencies α ;
Confounders- numbers admissions α

16. Recruitment: N/R

17. Outcomes & estimation:
    Effect size and CI α
    Graphical display α

18. Ancillary analyses: none

19. Harms:
    Crude mortality α
    Specific mortality (discussion) α-

ORION in Practice 2

Fowler et al JAC 2007

Groups 9 and 10

20. Interpretation –
No hypothesis to evaluate against β
Plausible alternatives conisdered α

21. Generalisability:
well covered including feasibility α

22. Overall evidence:
in context α

Effect of antibiotic stewardship on the incidence of infection and colonisation with antibiotic-resistant bacteria and *Clostridium difficile* infection: a systematic review and meta-analysis

Baur D et al Lancet ID 2017

Workshop: Antimicrobial Stewardship
Report with full PRISMA checklist

1). Bauer et al 2017 paper

2) Full 2 page PRISMA checklist

3) Groups of 5 (2 mins)

4) Appoint rapporteur to allocate items as follows

Group 1 and 2- items 1-5: intro

Group 3 and 4- items 6-11: methods

Group 5 and 6- items 12-16: methods

Group 7 and 8- items 17-23: results

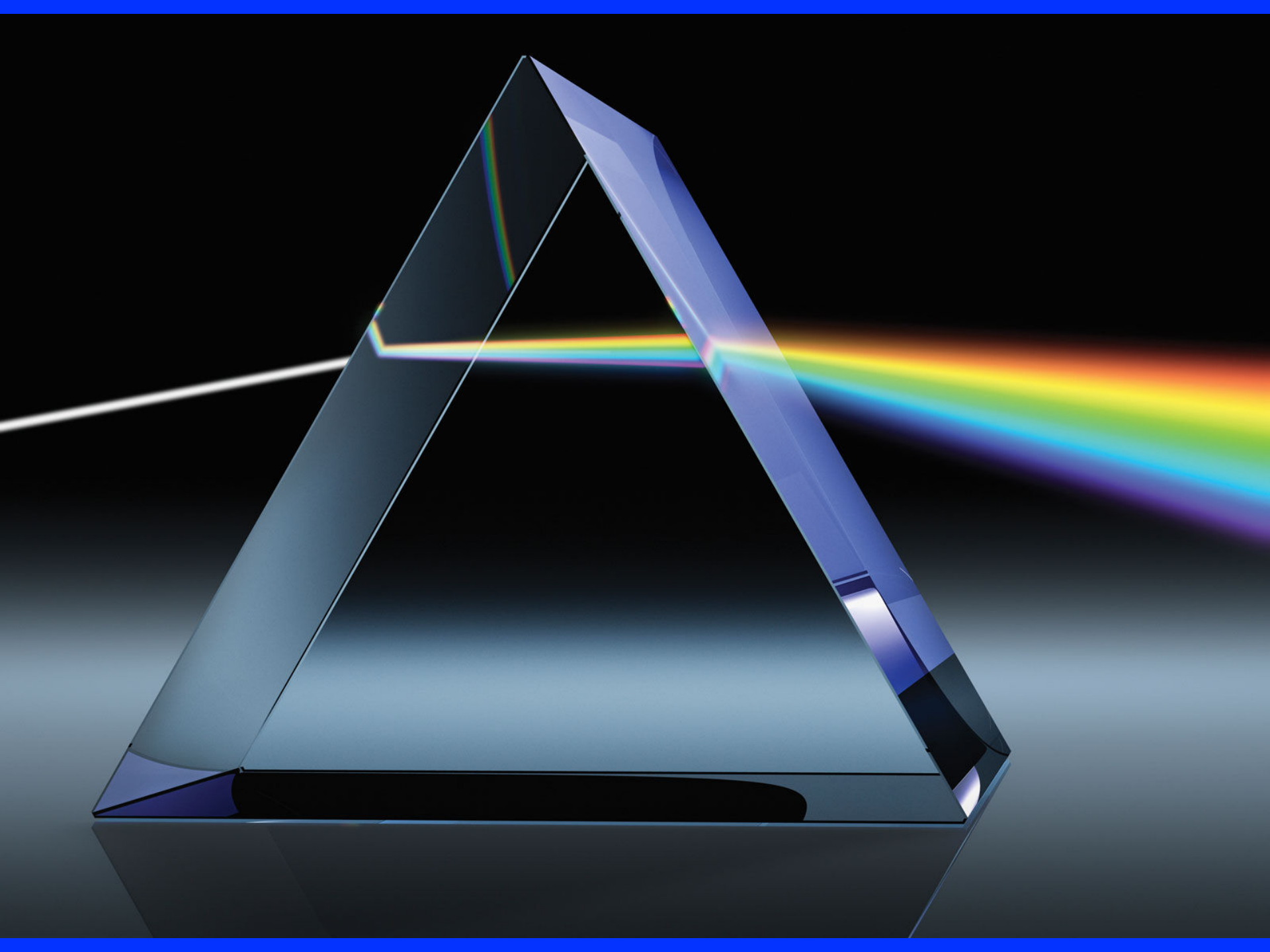
Group 9 and 10- items 24-27: discussion

5). Each group reviews allocated items with checklist (20 mins)

6). If time: Groups 1 &2 covers group 3 & 4's items: 3 & 4 covers 5 & 6's who covers 7 & 8's who covers 9 & 10's who covers 1&2's etc

7). Each rapporteur has 2 mins to present their findings

"Correct" answers fed back immediately (1 minute)



PRISMA in Practice 1

Baur D et al Lancet ID 2017

GROUPS 1 & 2

1.TITLE
systematic review and a meta-analysis α;
2. ABSTRACT
Background, objectives, data sources
Study eligibility criteria β+
Participants, Interventions α
Appraisal methods β
Synthesis methods – models and I^2 α
Results- effect size & CI, consistency α
Limitations- β
Conclusions α
Implications α
Registration No β

INTRODUCTION
3. **Rationale**- in context α
4. **Objectives-** explicit but nothing on study designs chosen or comparisons β
5. **Protocol and Registration-**
website reference p993 margin α
registration number-no β

PRISMA in Practice 2

Baur D et al Lancet ID 2017

GROUPS 3 & 4

6. Eligibility criteria-
   Not specific re length time and no rationale given for accepting all study designs or just in-patients β+

7. **Information sources-**
   Full α
8. **Search-**
   In appendix α
9. **Study selection**
   Described α

10. **Data collection-**
    Described but how "verified for consistency and accuracy" α-
11. **Data Items**
    Listed and defined- no, nor in appendix β

PRISMA in Practice 3

Baur D et al Lancet ID 2017

GROUPS 5 & 6

12. Risk of bias individual studies-
    NIHQ tool, individual study level α

13. Summary measures-
    Incidence ratio & CI α
    note: not antibiotics
14. Synthesis results-
    full details m/a- random effects model
    heterogeniety- I^2 α

15. Risk of bias across studies-
    Publication bias- funnel plot α
    Large no. uncontrolled CBA β

16. Additional analyses-
    Settings, type intervention, other IPC α
    Sensitivity analysis pre-specified: for study quality and design α ;

PRISMA in Practice 4

Baur D et al Lancet ID 2017

RESULTS--GROUPS 7 & 8

17. Study selection-
    Flow diagram with reasons α
18. Study characteristics
    Table 1 for m/a papers α
    Table 6 Appx for qualitative papers but not reasons for exclusion α-
19. Risk Bias within studies-
    Figure 1 in Appx NIHQ tool α
20. Results individual studies-
    Figures 2-4 for each study with Forrest Plots α
21. Synthesis results-
    Figs 2-4 with CIs α
    Heterogeneity I^2 α
22. Risk bias across studies-
    Publication bias funnel plot Appx Fig 2 α
    Small studies Eggers test α
23. Additional analysis-
    Figure 5 gives full analyses for each subset

PRISMA in practice 5

Baur D et al Lancet ID 2017

DISCUSSION (Groups 9 & 10)

24. Summary of evidence-

Main findings and strength evidence α

Relevance α

25. Limitations-

Addressed – p999 α

26. Conclusions-

context other evidence α

implications research α

27. Funding-

Source- acknowledgements α

Role- paragraph on p 993 α

Methodological overlap- no one size fits all

- May need to use one guideline in particular eg ORION for a AMS study but take from STROBE-AMS some of the items to better describe the organisms, resistance and subgroups
- CRCT of a hand hygiene intervention may want to use CONSORT extension for CRCTs but take some items from ORION to better describe the confounders and setting
- Outbreak Report: ORION plus some elements of STROBE (?vv)

Open Access Research

BMJ Open

STROBE-AMS: recommendations to optimise reporting of epidemiological studies on antimicrobial resistance and informing improvement in antimicrobial stewardship

Evelina Tacconelli,[1,2] Maria A Cataldo,[3] M Paul,[4] L Leibovici,[5] Jan Kluytmans,[6] Wiebke Schröder,[1,2] Federico Foschi,[1,2] Giulia De Angelis,[3] Chiara De Waure,[7] Chiara Cadeddu,[7] Nico T Mutters,[8] Petra Gastmeier,[9] Barry Cookson[10]

BMJ Open 2016;6:e010134.

doi:10.1136/bmjopen-2015-010134

Additional Items in STROBE-AMS

1. Provide **definition of resistance,** multidrug resistance, including pattern of **co-resistance**; whether studies performed to identify location or resistance e.g. plasmid, chromosome, integron, transposon
2. Describe how **antibiotic consumption data were obtained** (pharmacy, patients' charts, etc.) and if it was it actual use or purchase / dispensing
3. **Definition of infection** and/or **colonization.** If not a **validated reference, evidence of robustness** of definition
4. Provide **subgroup analyses** for immunocompromised, surgical/medical patients and patients in intensive care units, if applicable.

JHI

Wanted to study whether their accepted papers were guideline compliant or not before making a decision

Thought maybe get an SpR to undertake this

Any takers?

Randomised sample of 10 papers needing ORION, STROBE, STROME-ID, PRISMA or CONSORT (50 papers in all).

summary

- Understand the role of reporting guidelines to enhance the quality and transparency of health research
- Be aware of reporting guidelines most relevant to IPC and AMS
- Most IPC journals would now like you to use them

- Gained some experience of using some of the tools to review papers and abstracts

- Use to construct your study as well as your report

- Remember our offer of a study to appraise the JHI literature