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# CHEERS II: Bold directions for new reporting standards?

Presented by the CHEERS II – ISPOR Health Economic Evaluations Publication Guidelines Good Reporting Practices Task Force



#### **Moderator:**

**Michael Drummond PhD,** Professor of Health Economics, University of York York, England, UK

#### **Speakers:**

- Sophie Staniszewska, DPhil (Oxon), Professor, Health Research (Patient and Public Involvement (PPI) and Patient Experiences), Warwick Medical School, University of Warwick, Coventry, England, UK
- Don Husereau, MSc, BSc, Adjunct Professor, University of Ottawa Ottawa, ON, Canada
- Chris Carswell MSc, Editor, PharmacoEconomics, The Patient, PharmacoEconomics Open, Auckland, New Zealand

#### **Chat Moderators:**

- Nathorn Chaiyakunapruk, PharmD, PhD, Professor, Department of Pharmacotherapy, University of Utah College of Pharmacy, Salt Lake City, UT, USA
- Stavros Petrou, PhD, MPhil, Professor of Health Economics, Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford, England, UK

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Michael Drummond PhD
Professor of Health Economics
University of York
York, England, UK



# **CHEERS Task Force Report & Checklist**

# Consolidated Health Economic Evaluation Reporting Standards (CHEERS) - Explanation and Elaboration

Husereau D, Drummond M, Petrou S, et al. Consolidated health economic evaluation reporting standards (CHEERS)—explanation and elaboration: a report of the ISPOR Health Economic Evaluations Publication Guidelines Good Reporting Practices Task Force. *Value Health*. 2013;16(2):231-250.



# The CHEERS story so far.....

- The CHEERS checklist was endorsed by 10 major journals.
- It was recognized as a primary reporting guideline by the EQUATOR Network, alongside CONSORT, STROBE and PRISMA.
- It has been used by funding agencies (NIHR,UK), HTA agencies (CADTH, HAS) and international organizations (PAHO, EUNetHTA).
- It has been widely cited (Checklist: 673 times, Elaboration & Explanation Task Force Report: 563 times)
- Ranked # 3 most cited paper in Value in Health since its inception (1999)



# **Motivations for the update**

- CHEERS perceived as being overly focused on CEA, especially cost-utility analysis
- Emergence of other checklists or methods guides (eg Second Washington Panel, other ISPOR Good Practices Task Force Reports, EUNetHTA guide on appraising economic evaluations)
- Important methodological developments in economic evaluation (including in preference measurement, concepts of value in healthcare, optimization modeling, exploring distributional effects of interventions)
- Some confusion concerning how CHEERS should be used (eg, Caulley et al. J. Clin. Epid 2020)
- Growth of patient and public involvement and engagement in health services research



#### This task force builds on....

# the original CHEERS Task Force Report & Checklist by:

- broadening representation on the task force
- conducting a new Delphi exercise
- adding a patient & public involvement and engagement (PPIE) component



#### **Task Force Members - 1**

- Don Husereau, MSc, BSc, (Co-Chair), Adjunct Professor, University of Ottawa Ottawa, ON, Canada
- Michael Drummond, PhD, (Co-Chair) Co-Editor-in-Chief, Value in Health; Professor of Health Economics, Centre for Health Economics, University of York Heslington, England UK
- Federico Augustovski MD, MSc, PhD, Director, Health Economic Evaluation and Technology Assessment, Institute for Clinical Effectiveness and Health Policy (IECS) Professor of Public Health, Universidad de Buenos Aires, Buenos Aires, Argentina
- Andrew H. Briggs, DPhil, MSc, Professor of Health Economics, London School of Hygiene & Tropical Medicine, London, England, UK
- Chris Carswell MSc, Editor, *PharmacoEconomics*, *The Patient, PharmacoEconomics Qpen*, Auckland, New Zealand



#### **Task Force Members - 2**

- Lisa Caulley, MD, MPH, FRCSC, Assistant Professor, Otolaryngology-Head and Neck Surgery, The Ottawa Hospital, Ottawa, ON, Canada
- Nathorn Chaiyakunapruk, PharmD, PhD, Professor, Department of Pharmacotherapy, College of Pharmacy, University of Utah, Salt Lake City, UT, USA and Deputy Editor, Value in Health Regional Issues
- Esther de Bekker-Grob, MSc, PhD, Associate Professor, Erasmus University, Rotterdam, Netherlands
- Dan Greenberg, PhD, Senior Lecturer, Department of Health Systems Management, Faculty of Health Sciences, University of the Negev Beer-Sheva, Israel
- Elizabeth Loder, MD, MPH, Head of Research, The BMJ, London, England, UK
- C. Daniel Mullins PhD, Co-Editor-in-Chief, Value in Health; Chair, Pharmaceutical Health Services Research, University of Maryland, Baltimore, MD, USA



#### **Task Force Members - 3**

- Josephine Mauskopf, PhD, Vice President of Health Economics, RTI Health Solutions, Research Triangle Park, NC, USA
- David Moher, PhD, Senior Scientist, Clinical Epidemiology Program, Ottawa Hospital Research Institute, Ottawa, ON, Canada
- Stavros Petrou, PhD, MPhil, Professor of Health Economics, Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford, England, UK
- Raoh-Fang (Jasmine) Pwu, PhD, Director, National Hepatitis C Program Office, Ministry of Health and Welfare, Taipei, Taiwan
- Sophie Staniszewska, DPhil (Oxon), Professor, Health Research (Patient and Public Involvement (PPI) and Patient Experiences), Warwick Research in Nursing, Division of Health Sciences, Warwick Medical School, University of Warwick, Coventry, England, UK and Co-Editor-in-Chief of Research Involvement and Engagement (Springer)



#### New members on the task force

- Lisa Caulley, MD, MPH, FRCSC, The Ottawa Hospital, Ottawa, ON, Canada
- Nathorn Chaiyakunapruk, PharmD, PhD, University of Utah Salt Lake City, UT, USA and Deputy Editor, Value in Health Regional Issues
- Esther de Bekker-Grob, MSc, PhD, Erasmus University, Rotterdam, Netherlands
- Raoh-Fang (Jasmine) Pwu, PhD, Ministry of Health and Welfare, Taipei, Taiwan
- Sophie Staniszewska, DPhil (Oxon), University of Warwick Medical School, Coventry, England, UK and Co-Editor-in-Chief of Research Involvement and Engagement (Springer)
- C. Daniel Mullins PhD, University of Maryland, Baltimore, MD, USA, Co-Editor-in-Chief, Value in Health

#### **Expertise in:**

- 'Journalology' / reporting
- Health technology assessment
- Lower-middle income countries
- Benefit-cost analysis, patient preference methods
- Patient and public involvement and patient experiences
- Editing

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Sophie Staniszewska, DPhil (Oxon)
Professor of Patient and Public
Involvement and Engagement,
University of Warwick Medical School
Coventry, England, UK



# Patient and Public Involvement and Engagement (PPIE)

- Patient and public involvement and engagement (PPIE) in research has increased over the last decade.
- Patients and the public are involved in research, helping to ensure it is acceptable, relevant and appropriate and enhancing its quality.
- Wide range of impacts and outcome: for example, more relevant research questions, more appropriate study designs, patient-relevant outcomes selected, results that enhance patient benefit



# Reporting Patient & Public Involvement & Engagement (PPIE)

- PPIE has a developing evidence base to support practice.
- Past studies that included PPIE often reported it inconsistently and poorly.
- GRIPP2 (Guidance for Reporting Involvement of Patients and the Public) was developed to enhance the quality of PPI reporting.
- In developing GRIPP2, our view was that when PPIE has been included in a study, it should be reported in a way that enhances our evidence base for practice.
- In addition to GRIPP2, we are also interested in enhancing PPIE reporting in other existing guidance to strengthen PPIE reporting in specific fields, such as health economic evaluation

Staniszewska S, Brett J, Simera I, Seers, K, Mockford, C, Goodlad S Altman DG Moher D Barber R Denegri S Entwistle A Littlejohns P Morris C Suleman R Thomas V Tysall C (2017) GRIPP2 reporting checklist: tools to improve reporting of patient and public involvement in research. BMJ 358:j3453. Doi: <a href="https://doi.org/10.1136/bmj.j3453">https://doi.org/10.1136/bmj.j3453</a>. Simultaneously published in Research Involvement and Engagement. 3:13 <a href="https://doi.org/10.1186/s40900-017-0062-2">https://doi.org/10.1186/s40900-017-0062-2</a>



# **Changing the conversation**

- Increasing interest in PPIE in health economics
- Patients are interested in shaping the content of economic thinking, including key concepts, methods, interpretations, applications.
- Where PPIE is included in a heath economic evaluation, our position is that we would like people to report it well.
- Reporting PPIE in health economic evaluation will help to develop a strong evidence base to guide best practice.



#### **PPIE in CHEERS II**

#### Goal: Review the CHEERS Checklist with patient & public contributors

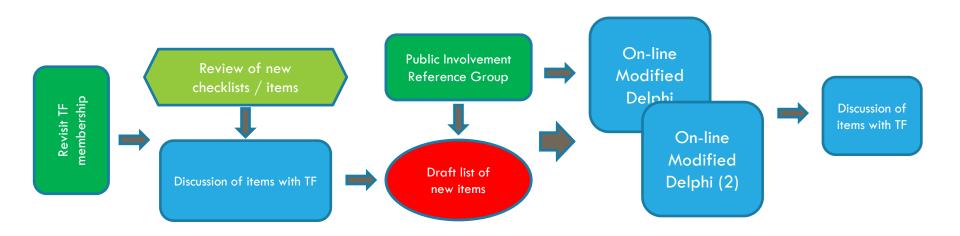
- Established CHEERS II Patient & Public Involvement Reference Group (PPIRG)
  - Ivett Jakab, President, European Patients' Forum Youth Group, Member of Board of Trustees, EUPATI (European Patients' Academy on Therapeutic Innovation), Health Economist, Syreon Research Institute Patient Policy Research Unit
  - Eric Low, Independent Healthcare Consultant, Eric Low Consulting
  - Jean Mossman, Healthcare Consultant and Senior Associate Director of The London School of Economics and Political Science
  - Phil Posner, PCORI and NIH Ageing Initiative: AGING Initiative's Patient/Caregiver Advisory Council (APCAC)
- Reviewed the original CHEERS items
- Suggested edits, questioned item rationale, refined wording and meaning, added their perspectives
- Created new PPI items
- Provided feedback on the Delphi outcomes and refinements were made.
- \*16 Will report our PPIE in the development of CHEERS II

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Don Husereau, MSc Adjunct Professor University of Ottawa Ottawa, ON, Canada



# **Approach to the CHEERS update**





## **Delphi process**

The RAND/UCLA Appropriateness Method User's Manual

Kathryn Fitch Steven J. Bernstein María Dolores Aguilar Bernard Burnand Juan Ramón LaCalle Pablo Lázaro Mirjam van het Loo Joseph McDonnell John Paul Vader James P. Kahan

> Prepared for Directorate General XII European Commission

RAND Europe RAND Health





Journal of Clinical Epidemiology

Journal of Clinical Egipheriplose 104 (2020) 60s 6

REVIEW

#### The majority of reporting guidelines are not developed with the Delphi method: a systematic review of reporting guidelines

Masahim Banno<sup>sh.g.\*</sup> Yasushi Tsuiimoto<sup>sd.e.</sup> Yuki Katanka<sup>s.df.g.</sup> "Department of Parchistry, Stricking Hospital, Tamorni 4-16-27, Strang-Inc. Nation 405-0094, James ant of Psychiatry, Magoya University Graduale School of Medicine, Terrumai-cho 85, Showe-ke, Magoya 485-5550

Systematic Northern Worldhop Plant Support Group (SMSS-PSG), Japan "Department of Healthcare Epithenicings, Graduate States of Health as and Public Health, Kyoto University, Wolfside Ko \*Department of Nephrology and Distyrie, Kypriko-Hospital, Chro-cho 18-5, Kananishi 899-0018, Japan \*Hospital Care Pennerch Unit. Hospi Profestural Americal General Matricel Couler, Hospitalisas-cho 2-17-77, Americali 880-8850, June

Department of Receivables Medicine, Horse Protectural Arrangeoid General Medical Contr. Higastic Accorded 9 April 2000; Published online 14 April 2020

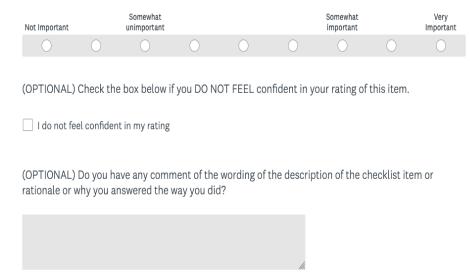
Objectives. Revious guidance of reporting guidelines recommends incorporating the Delichi method to integrate the opinions of expets for coverse when developing recording publishes. The purpose of this study was to clearly whether recording publishes tracially use the Deletri multiply what factors may be associated with the use of Deletri, and the recording quality of Deletri. Study Design and Sating: We included all reporting guidelines (n.5. 244) in the Enhancing the CLIABly and Transparency of health Research (ECLIATOR) Network published after Jenuary 1, 2011. We assessed the trends and factors associated with conducting Delphi and the reporting quality of Delphi against current reporting guidelines.

- Protocol developed
- Pre-specified rules for rejection
- Assessment of disagreement
- Confidence assessed
- Two-three rounds
- Items randomized
- Representation from content experts, journal editors, payers/HTA, patients/public, and industry



# **Delphi process**

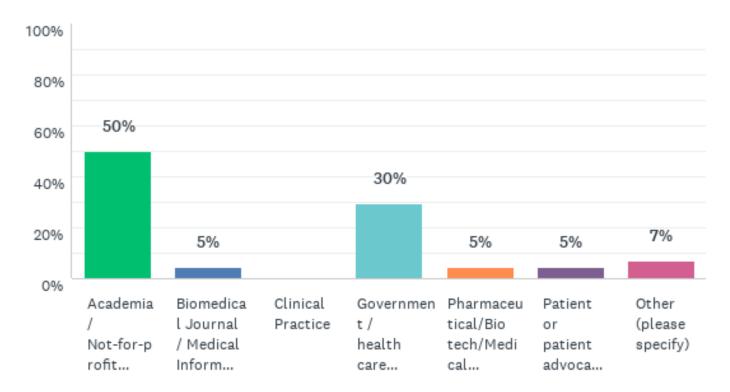
\* What is the relative importance of this item when reporting an economic evaluation?



- Rule for Rejection (1): An item will be removed if more than 70% of the members score it as < 7 on the scale.
- Rule for Rejection (2): Mean score less than 4
- A summary of the rating and feedback on each remaining item will be created and presented to panelists in the next round.
- Rule for Disagreement: If 30<sup>th</sup> 70<sup>th</sup> inter-percentile range is greater than the inter-percentile range adjusted for symmetry (IPRAS).

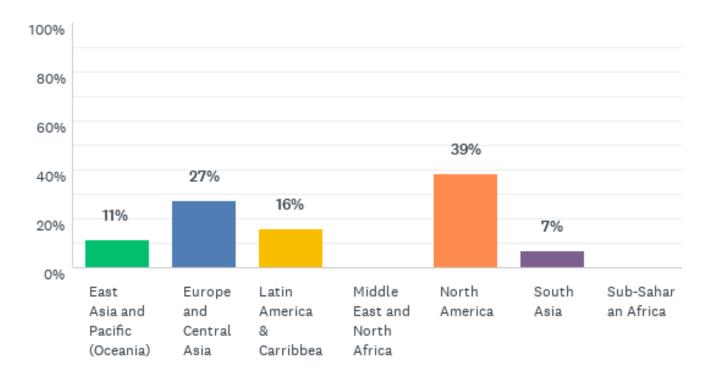


# Delphi participants (n=44) principal work setting



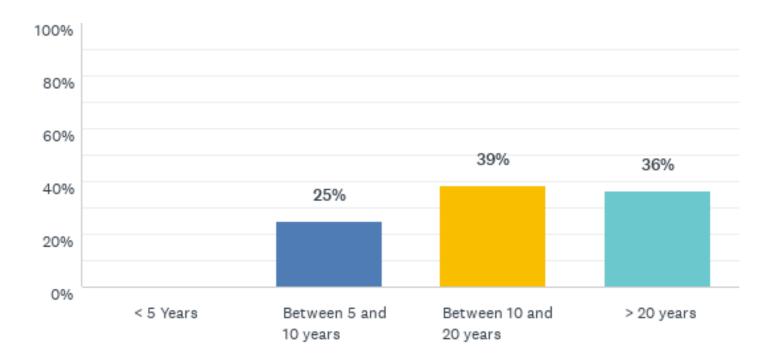


# Delphi participants (n=44) region of work





# Delphi participants (n=44) years of experience in health research





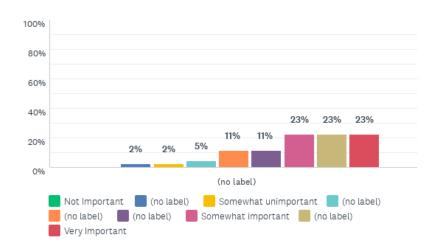
# **Delphi Results**

- No items (0/26) were rejected in the first round based on rejection rules.
  - Interpretation: All Items important or potentially important
- Two 'possibles' (mean score < 7)</li>
  - Approach to, and effect of, patient and public involvement
  - However, they did score 6.5 and 6.2, respectively
- Three items with disagreement (1 on characterizing heterogeneity and 2 on patient and public involvement – approach to and effect of)
  - Most criticism from missing information or conflated concepts



# **Disagreement – Characterizing Population Heterogeneity**

	Characterizing Population Heterogene
MEAN	7.00
RANK	24
MEDIAN	7
QRT1	6
QRT3	8
Disagreement	Yes
REJECT (C1)	No
REJECT (C2)	no



	NOT IMPORTANT	(NO LABEL)	SOMEWHAT UNIMPORTANT	(NO LABEL)	(NO LABEL)	(NO LABEL)	SOMEWHAT IMPORTANT	(NO LABEL)	VERY IMPORTANT	TOTAL	WEIGHTED AVERAGE
(no label)	0% 0	2% 1	2% 1	5% 2	11% 5	11% 5	23% 10	23% 10	23% 10	44	7.00

5, 5

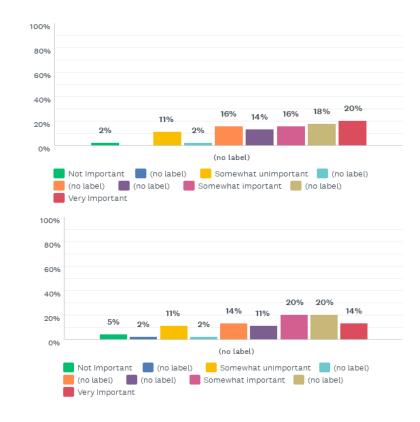
ANSWER CHOICES	RESPONSES	
I do not feel confident in my rating	100%	2
Total Respondents: 2		



## Disagreement – Approach to / Effect of Patient and Public Involvement

	Approach to Patient and Public Involvement
MEAN	6.48
RANK	25
MEDIAN	7
QRT1	5
QRT3	8
Disagreement	Yes
REJECT (C1)	No
REJECT (C2)	no

	<b>Effect of Patient and Public Involve</b>		
MEAN	6.18		
RANK	26		
MEDIAN	7		
QRT1	5		
QRT3	8		
Disagree ment	Yes		
REJECT (C1)	No		
REJECT (C2)	no		
Number less than 7	20		
Percentage	45.45		
Percentage 26	45.4		





# **Checklist items – Other findings**

- Wide range of opinions
  - Some felt CHEERS should stick to model-based CUA/QALYs.
  - Others felt the opposite more attention to RCT-based and benefit-cost.
  - Some disliked / favored use of economic language.
- Title, abstract, and background scored low
  - Participants were asked how important each item was to help interpret the findings of an economic evaluation report.
- Some items were difficult to interpret
  - "If appropriate" and "if applicable", "justify" were ambiguously interpreted.
  - Delphi participants advised decoupling heterogeneity / distributional effects.



#### **Checklist items – Results and final considerations**

- Many items required editing to facilitate agreement between reviewers using CHEERS as a checklist (ie, reported or not).
- Language of some items edited as were specific to modelling (parameters and distributions, modelling assumptions).
- Is a single checklist sufficient?
  - Speaks to the need for extensions (BCA, real-world etc.)

Title	Outcomes - Selection	Characterizing Uncertainty	
Abstract	Outcomes - Measurement	Approach to patient, public, and stakeholder involvement	
Background	Outcomes - Valuation	Study parameters	
Study Population	Measurement and valuation of resources and costs	Summary of main results	
Setting/Location	Currency, price date and conversion	Effect of uncertainty	
Study Perspective(s)	Rationale and Description of Model	Effect of patient, public and stakeholder involvement	
Comparators	Model analytics and assumptions	Study findings, limitations, generalizability, and current knowledge	
Time Horizon	Characterizing Heterogeneity	Source of Funding	
Discount rate	Characterizing Distributional Effects	Conflicts of Interest	

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# Chris Carswell MSc Editor in Chief, PharmacoEconomics, The Patient, PharmacoEconomics Open, Auckland, New Zealand



# **Communication / Outreach of the original CHEERS**

- ISPOR conference presentations and website
- Simultaneous publication in 10 journals
- Translated into local languages
- Equator Network
- Social Media





# Enhancing the QUAlity and Transparency Of health Research



### Consolidated Health Economic Evaluation Reporting Standards (CHEERS) Statement

Reporting guideline provided for? (i.e. exactly what the authors state in the paper)

Economic evaluations of health interventions

#### Full bibliographic reference

Husereau D, Drummond M, Petrou S, Carswell C, Moher D, Greenberg D, Augustovski F, Briggs AH, Mauskopf J, Loder E. Consolidated Health Economic Evaluation Reporting Standards (CHEERS) statement.

This guideline was published simultaneously in 10 journals. You can read the guideline in any of these journals using the links below.

Eur J Health Econ. 2013;14(3):367-372. PMID: <u>23526140</u>
Value Health. 2013;16(2):e1-e5. PMID: <u>23538200</u>
Clin Ther. 2013;35(4):356-363. PMID: <u>23537754</u>
Cost Eff Resour Alloc. 2013;11(1):6. PMID: <u>23531194</u>
BMC Med. 2013;11:80. PMID: <u>23531108</u>
BMJ. 2013;346:f1049. PMID: <u>23521088</u>
BMJ. 2013;346:f1049. PMID: <u>23529882</u>
Pharmacoeconomics. 2013;31(5):361-367. PMID: <u>23529207</u>
J Med Econ. 2013;16(6):713-719. PMID: <u>23521434</u>
Int J Technol Assess Health Care. 2013;29(2):117-122. PMID: <u>23587340</u>
BJOG. 2013;120(6):765-770. PMID: <u>23565948</u>











Following

#### **CHEERS STATEMENT**

@CHEERSSTATEMENT Follows you

The Consolidated Health Economic Evaluation Reporting Standards (CHEERS) are currently endorsed by leading international biomedical journals

- Ottawa Sispor.org/TaskForces/Eco... Joined May 2012
- **51** Following **244** Followers



Followed by Sara Pickett, Joshua Soboil, and 98 others you follow





# **Journals Library**

Consolidated Health Economics

Evaluation Reporting Standards (CHEERS)

Checklist

ΑII

- Must be completed by authors of reports which contain a substantial economic evaluation or cost effectiveness component
- Provide relevant page numbers next to each item on the checklist, however it is not necessary
  to indicate every single instance of an item being included in your report.
- For more information about the checklist please visit the CHEERS Task Force webpage.



# Imitation is the sincerest form of flattery

- Creating a healthy eating and active environment survey (CHEERS)
- The Craig Hospital Eye Evaluation Rating Scale (CHEERS)
- Chewing versus Swallowing Ticagrelor to Accelerate Platelet Inhibition in Acute Coronary Syndrome - the CHEERS study.





# Journal of Clinical Epidemiology

Volume 122, June 2020, Pages 87-94



Original Article

# Reporting guidelines of health research studies are frequently used inappropriately

Lisa Caulley a, b, Ferrán Catalá-López c, d, e, Jonathan Whelan f, Michel Khoury f, Jennifer Ferraro f, Wei Cheng f, Don Husereau f, Douglas G. Altman f, David Moher f

Show more 🗸



# **Key Points of Caulley et al. regarding CHEERS**

- Identified a high proportion of publications that inappropriately cited the PRISMA, CHEERS, and ARRIVE as methodologic guidelines.
- "Appropriate use of the reporting guidelines is a consequence of clarity of instruction in the original guideline, measures taken to further promote appropriate use including outreach, editorial training, policy and consistency of editorial application.."
- "Further education is needed to ensure the effective dissemination and proper understanding of the CHEERS reporting guidelines, particularly as time elapses."



# Using CHEERs as a mark of quality?

> Medicine (Baltimore). 2017 Jul;96(29):e7445. doi: 10.1097/MD.0000000000007445.

An economic analysis of high-dose imatinib, dasatinib, and nilotinib for imatinib-resistant chronic phase chronic myeloid leukemia in China: A CHEERS-compliant article

Comparative Study > Medicine (Baltimore). 2016 Jan;95(2):e2481. doi: 10.1097/MD.0000000000002481.

#### Short-Term Medical Costs of a VHA Health Information Exchange: A CHEERS-Compliant Article

Dustin D French <sup>1</sup>, Brian E Dixon, Susan M Perkins, Laura J Myers, Michael Weiner, Allan J Zillich, David A Haggstrom

Affiliations + expand
PMID: 26765453 PMCID: PMC4718279 DOI: 10.1097/MD.0000000000002481
Free PMC article



# **Author Instruction Examples - Medical Journals**

**British Medical Journal** (BMJ) recommends <u>CHEERS</u> for economic evaluation studies in its Guide for Authors. https://www.bmj.com/sites/default/files/attachments/resources/2018/05/BMJ-

InstructionsForAuthors-2018.pdf

**Clinical Therapeutics:** To optimize the quality, consistency, and transparency of health economic and outcomes research reporting and dissemination, *Clinical Therapeutics* endorses the Consolidated Health Economic Evaluation Reporting Standards (CHEERS) statement.

Authors submitting economic evaluations of pharmacotherapies and other treatment interventions for publication should consult with the CHEERS statement and follow its 24-item checklist of recommendations.

https://www.elsevier.com/journals/clinical-therapeutics/0149-2918/guide-for-authors



#### **Author Instruction Examples – HEOR Journals**

#### Cost Effectiveness Resource Allocation and BMC Medicine

Checklists are available for a number of study designs, including:

- •Randomized controlled trials (CONSORT) and protocols (SPIRIT)
- •Systematic reviews and meta-analyses\* (PRISMA) and protocols (PRISMA-P)
- Observational studies (<u>STROBE</u>)
- Case reports (<u>CARE</u>)
- Qualitative research (<u>COREQ</u>)
- Diagnostic/prognostic studies (<u>STARD</u> and <u>TRIPOD</u>)
- Economic evaluations (CHEERS)
- Pre-clinical animal studies (<u>ARRIVE</u>)

#### International Journal of Technology Assessment in Health Care

We encourage authors to follow best practices in reporting their methodology. Reporting guidelines for many study designs, including quantitative and qualitative scholarship across many disciplines, can be found in the <u>EQUATOR Network</u>.



# Wording we might use / adopt to encourage use of CHEERS II

#### How to Endorse PRISMA

Step 1 Include mention of the PRISMA Statement and reference the PRISMA website in your journal's instructions to authors for reporting of systematic reviews, or in the organization's resource section

Our suggested text to include in journal's instructions for authors is as follows:

"[journal name] requires a completed PRISMA checklist and flow diagram as a condition of submission when reporting findings from a systematic review or meta-analysis. Templates for these can be found here or on the PRISMA website which also describes several PRISMA checklist extensions for different designs and types of data beyond conventional systematic reviews evaluating randomized trials. At minimum, your article should report the content addressed by each item of the checklist. Meeting these basic reporting requirements will greatly improve the value of your review and may enhance its chances for eventual publication."



#### CHEERS II: Additional communication / outreach?

- Editorials
- Digital communication / other social media
- CHEERS II Task Force Report make it clear that it is a reporting checklist / discourage ad hoc scoring schemes
- User Guides
- Formal outreach to HTA bodies to encourage use of CHEERS II?
- Website eg, PRISMA?



# **Polling Question**

In order to encourage the widest possible dissemination and *appropriate* use of the *updated* CHEERS II Checklist, which of the following would be the most important? **Please vote for your Top 2!** 

- 1. A users guide for researchers, peer-reviewers, and biomedical journal editors
- 2. A users guide for stakeholders (patients, the public, clinicians, decision makers)
- More active engagement with journal editors and editorial societies, e.g., ICMJE (International Committee of Medical Journal Editors) and WAME (World Association of Medical Editors)
- 4. A CHEERS II website



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- Consolidated Health Economic Evaluation Reporting Standards (CHEERS) II
- Joint HTAi ISPOR Deliberative Processes for HTA NEW
- Machine Learning Methods in HEOR
- Measurement Comparability Between Modes of Administration of PROMs
- Measuring Patient Preferences for Decision Making
- Performance Outcome (PerfO) Assessments
- Systematic Reviews with Cost and Cost-Effectiveness Outcomes

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# **Discussion**

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# Thank you

Please feel free to email any follow-up questions or comments

content - related to: taskforce@ispor.org

webinar – related to: webinars@ispor.org