The EQUATOR Network:

Promoting responsible reporting of health research studies

Iveta Simera

June 2015, WCRI Rio

equator network

CSM

NDORMS
NUFFIELD DEPARTMENT OF
ORTHOPAEDICS, RHEUMATOLOGY
AND MUSCULOSKELETAL SCIENCES

UNIVERSITY OF OXFORD

Iveta Simera, EQUATOR
Shona Kirtley, EQUATOR
Luis Gabriel Cuervo, PAHO/WHO
Eleana Villanueva, PAHO/WHO
Caroline Struthers, EQUATOR
Angela MacCarthy, EQUATOR
Doug Altman, EQUATOR

UK EQUATOR Centre,
University of Oxford

Pan American Health Organi
Washington DC

equat network

EQUATOR Network

- International initiative
  - Aims to improve reliability and value of health research publications by supporting transparent and accurate reporting of research studies

- 'Umbrella' organisation; key stakeholders:
  - Authors, editors & peer reviewers, educators; funders

    .. Everyone interested in improving the quality of research publications and of research itself

- Key goals:
  - To improve people's health by making
    - Research publications more reliable
    - Easier to use research findings
  - To get the best returns and impact from investment in research for health

equator network

Why was EQUATOR set up?

- Wealth of evidence – widespread problems

What is missing from descriptions of treatment in trials and reviews?

Replicating non-pharmacological treatments in practice depends on how well they have been described in research studies, say **Paul Glasziou** and **colleagues**

Have you ever read a trial or review and wondered exactly how to carry out treatments such as a "behavioural intervention," "salt reduction," or "exercise programme"? Although CONSORT and related initi

receiving numerous requests for additional details from doctors and patients, the author of a randomised trial on graded exercise for chronic fatigue syndrome[6] subsequently pub-

Exercise prescription: a case for standardised reporting

a review of exercise reporting practices using the evidence of exercise effects for chronic conditions as the

as any kind of physical training to promote physical health.[12–14] Exercise can vary with respect to speed and titions and It is used to ty, function [15–18] These an umbrella terventions. as those of progression. ant burden h as cardio- , type 2 dia- porosis, by and physical e/e_wha57. s are promo-

Clin Chem Lab Med 2012;50(3):411–413 © 2012 by Walter de Gruyter • Berlin • Boston. DOI 10.1515/cclm-2011-0904

An appeal to medical journal editors: the need for a full description of laboratory methods and specimen handling in clinical study reports

ARTICLE

Adequacy of Published Oncology Randomized Controlled Trials to Provide Therapeutic Details Needed for Clinical Application

Jennifer M. Duff, Helen Leather, Edmund O. Walden, Kourtney D. LaPlant, Thomas J. George Jr

Manuscript received July 9, 2009; revised March 15, 2010; accepted March 16, 2010.

Correspondence to: Thomas J. George Jr, MD, FACP, Division of Hematology Oncology, Department of Medicine, Health Science Center, Unive Florida, PO Box 100278, Gainesville, FL 32610-0278 (e-mail: thom.george@medicine.ufl.edu).

OPEN ACCESS Freely available online

Publication Bias in Antipsychotic Trials: A Efficacy Comparing the Published Literat Food and Drug Administration Database

Erick H. Turner[1,2,3,4]*, Daniel Knoepflmacher[5], Lee Shapley[5]

1 Department of Psychiatry, Oregon Health & Science University, Portland, Oregon, United States of America, 2 Departme egon Health & Science Univers Portland, Oregon, United Sta

Reporting of adverse events in randomized controlled trials of highly active antiretroviral therapy: systematic review

Michal Y. Chowers[1,2]*, Bat Sheva Gottesman[1,2], Leonard Leibovici[1,3], Ulrike Pielmeier[4], Steen Andreassen[4] and Mical Paul[1,3]

[1]Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel; [2]Meir Medical Center, K [3]Rabin Medical Center, Beilinson Campus, Petah-Tiqva, Israel; [4]Center for Model-based M Support, Aalborg University, Aalborg, Denmark

Received 5 February 2009; returned 3 April 2009; revised 20 April 2009; accepted 24 April 20

***Objectives*: Our objectives were to systematically assess the quality of reporting of adv (AEs) in publications of randomized trials of highly active antiretroviral therapy (HAA examine whether reporting quality affects the effect estimates reported for AEs.**

***Methods*: We searched the PubMed, Cochrane library and EMBASE electronic datab December 2008. We included all published randomized controlled trials assessing HAA ment-naive adult HIV-infected individuals, with 48 weeks' follow-up. The quality of AE re extracted according to CONSORT guidelines. We pooled the relative risks for AEs an**

idelines ex on and rep ology journ ute, cycle l eters, and c

-based medicine, yet a y agencies, e.g., the US urnal articles can be ch ich it inflates apparent

RESEARCH ARTICLE Open Access

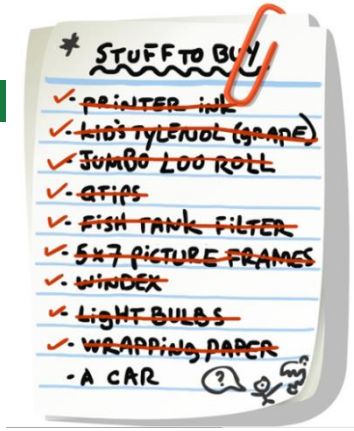
Electronic search strategies to identify reports of cluster randomized trials in MEDLINE: low precision will improve with adherence to reporting standards

Monica Taljaard[1,2*], Jessie McGowan[1,3,4,5], Jeremy M Grimshaw[1,6], Jamie C Brehaut[1,2], Andrew McRae[7], Martin P Eccles[8], Allan Donner[7,9]

Why was EQUATOR set up?

- ….. Research literature is not fit for purpose

Why was EQUATOR set up?



- Reporting guidelines exist but they are still not widely used
  - Adherence to reporting guidelines improves accuracy, completeness and transparency of research reports

Reporting guidelines for main study types

Randomised trials	CONSORT	Extensions
Observational studies	STROBE	Extensions
Systematic reviews	PRISMA	Extensions
Case reports	CARE	
Qualitative research	SRQR	COREQ
Diagnostic / prognostic studies	STARD	TRIPOD
Quality improvement studies	SQUIRE	
Economic evaluations	CHEERS	
Animal pre-clinical studies	ARRIVE	
Study protocols	SPIRIT	PRISMA-P

See all 271 reporting guidelines

CONSORT 2010 Checklist www.consort-statement

Section / topic	#	Checklist item
TITLE & ABSTRACT	1a	Identification as a randomised trial in the title
	1b	Structured summary of trial design, methods, results, and conclusions (for specific guidance see CONSORT for abstracts)
INTRODUCTION		
Background and objectives	2a	Scientific background and explanation of rationale
	2b	Specific objectives or hypotheses
METHODS		
Trial design	3a	Description of trial design (such as parallel, factorial) including allocation ratio
	3b	Important changes to methods after trial commencement (such as eligibility criteria), with reasons
Participants	4a	Eligibility criteria for participants
	4b	Settings and locations where the data were collected
Interventions	5	The interventions for each group with sufficient details to allow replication, including how and when they were actually administered
Outcomes	6a	Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed
	6b	Any changes to trial outcomes after the trial commenced, with reasons
Sample size	7a	How sample size was determined
	7b	When applicable, explanation of any interim analyses and stopping guidelines
Randomisation		
Sequence generation	8a	Method used to generate the random allocation sequence

Why was EQUATOR set up?

- **Immediate goal**

  To support better publication of research for health

- **Longer term goal:**

  Through improved reporting of current studies **increase the quality of future research**;

  Promote the generation of **relevant, ethical and high quality research**

equator network

EQUATOR focus

How we support improvement in research reporting and implementation of reporting guidelines? We foster best practices & standards

- Promotion of rigorous research reporting / highlighting problems resulting from inadequate reporting
- Provision of resources (e.g. organized validated standards)
- Education and training
- Research, evaluation, development
- Collaboration, global expansion

equator network

EQUATOR online resources

equator network

Enhancing the QUAlity and Transparency Of health Research

Visit the EQUATOR Spanish Website

Home | Library | Toolkits | Courses & events | News | Blog | About us | Contact

Essential resources for writing and publishing health research

Library for health research reporting

The Library contains a comprehensive searchable database of reporting guidelines and also links to other resources relevant to research reporting.

- Search for reporting guidelines
- Not sure which reporting guideline to use?
- Reporting guidelines under development
- Visit the library for more resources

Reporting guidelines for main study types

Randomised trials	CONSORT	Extensions	Other
Observational studies	STROBE	Extensions	Other
Systematic reviews	PRISMA	Extensions	Other
Case reports	CARE		Other
Qualitative research	SRQR	COREQ	Other
Diagnostic / prognostic studies	STARD	TRIPOD	Other
Quality improvement studies	SQUIRE		Other
Economic evaluations	CHEERS		Other
Animal pre-clinical studies	ARRIVE		Other
Study protocols	SPIRIT	PRISMA-P	Other

See all 271 reporting guidelines

REWARD / EQUATOR conference, 28 – 30 September 2015, Edinburgh

Toolkits

The EQUATOR Network works to improve the reliability and value of medical research literature by promoting transparent and accurate reporting of research studies.

EQUATOR highlights

3/03/2015 - Unique new EQUATOR course for health researchers

UK EQUATOR Centre Publication School, 6th-10th July 2015, St Anne's College, Oxford UK Fit for

News

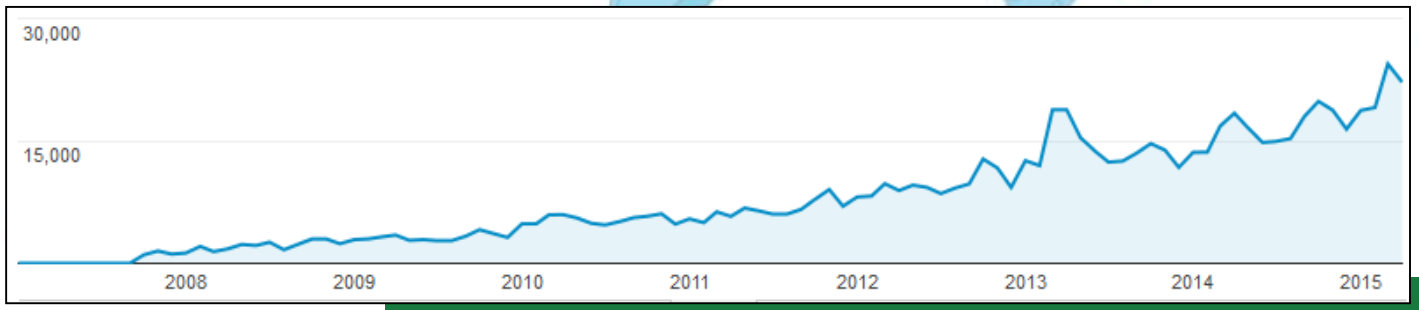
Professor Doug Altman awarded BMJ Lifetime Achievement Award
7/05/2015

BioMed Central to publish new journal: Research Integrity and Peer Review
2/04/2015

Websites visited from almost every country in the world

	777,046 % of Total: 100.00% (777,046)
1. United States	163,549 (21.05%)
2. United Kingdom	126,003 (16.22%)
3. Canada	45,664 (5.88%)
4. Australia	32,527 (4.19%)
5. Germany	30,668 (3.95%)
6. Brazil	24,735 (3.18%)
7. Spain	24,219 (3.12%)
8. India	21,464 (2.76%)
9. Netherlands	21,427 (2.76%)
10. China	21,015 (2.70%)

217.	Turks & Caicos Islands	2 (0.00%)
218.	Turkmenistan	2 (0.00%)
219.	American Samoa	1 (0.00%)
220.	St. Barthélemy	1 (0.00%)
221.	Cook Islands	1 (0.00%)
222.	Guinea	1 (0.00%)
223.	São Tomé & Príncipe	1 (0.00%)
224.	Chad	1 (0.00%)
225.	Tuvalu	1 (0.00%)
226.	Wallis & Futuna	1 (0.00%)



In 2015:
20-24,000 visits per month

Examples of courses and workshops

- Targeting
  - Editors, authors, reviewers
  - Early career researchers
  - Research students
  - Foundation doctors
  - Research sponsors
  - Research support staff

OUCAGS

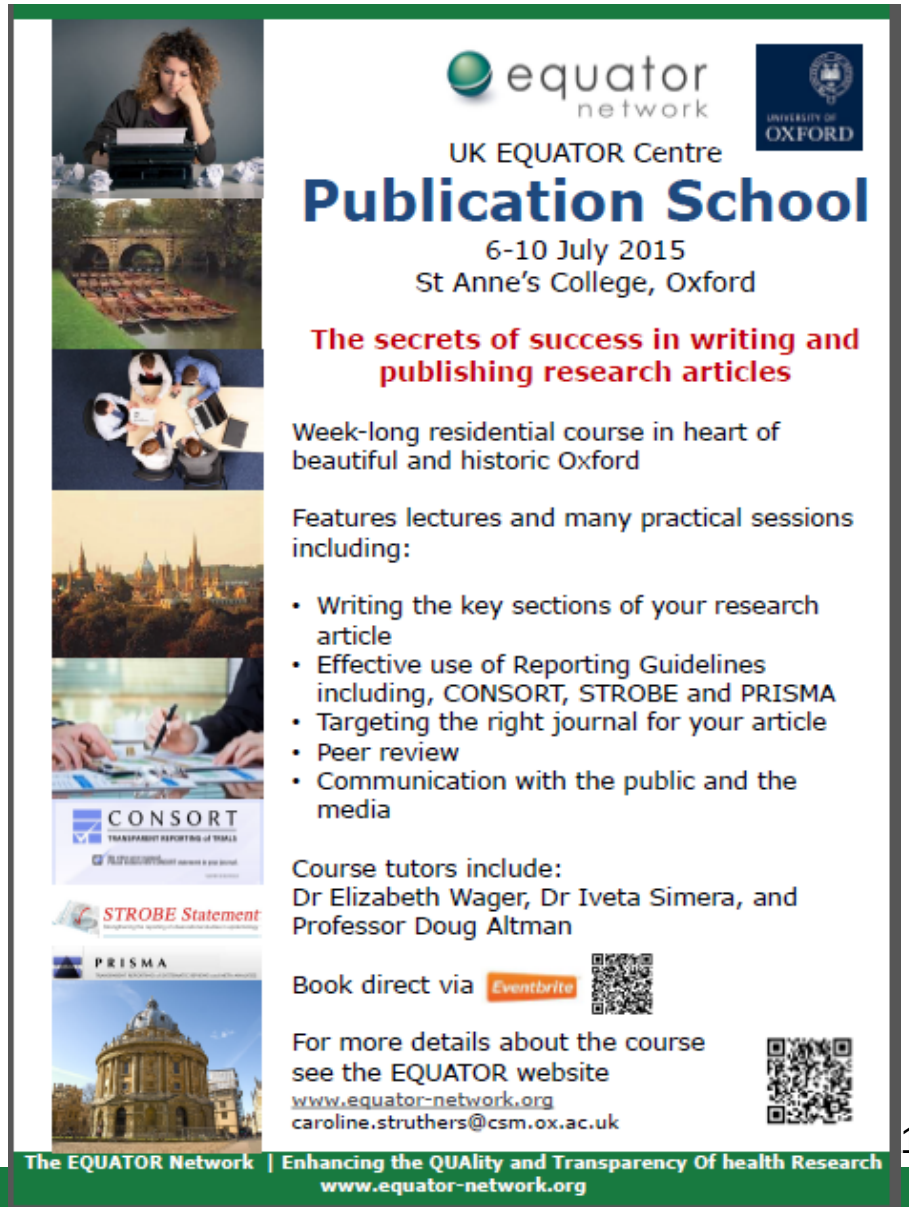
Oxford University Clinical Academic Graduate School

  - Online learning

THE GLOBAL HEALTH NETWORK

Enabling research by sharing knowledge

equator network



equator network

UNIVERSITY OF OXFORD

UK EQUATOR Centre

Publication School

6-10 July 2015

St Anne's College, Oxford

The secrets of success in writing and publishing research articles

Week-long residential course in heart of beautiful and historic Oxford

Features lectures and many practical sessions including:

- Writing the key sections of your research article
- Effective use of Reporting Guidelines including, CONSORT, STROBE and PRISMA
- Targeting the right journal for your article
- Peer review
- Communication with the public and the media

Course tutors include:
Dr Elizabeth Wager, Dr Iveta Simera, and Professor Doug Altman

Book direct via Eventbrite

For more details about the course see the EQUATOR website
www.equator-network.org
caroline.struthers@csm.ox.ac.uk

The EQUATOR Network | Enhancing the QUAlity and Transparency Of health Research
www.equator-network.org

COBWEB study

The Evaluation of a CONSORT Based Online Writing Tool (COBWEB)

This study has been completed.

Sponsor:
Assistance Publique - Hôpitaux de Paris

ClinicalTrials.gov Identifier:
NCT02127567

First received: April 29, 2014
Last updated: March 7, 2015

- 41 MSc and PhD students
- Evaluation of a simple tool in 4 h writing session
- Randomised 6 'domains' of trial report:
  - trial design, randomisation, blinding, participants, intervention, outcome descriptions
- Each student randomly allocated
  - 3 control domains (no tool, just section heading and empty box)
  - 3 intervention domains (tool – contained key elements from CONSORT E&E paper with examples of good reporting)
- Blinded assessment of outcomes
  - Completeness of reporting on a scale 0-10

equator network

COBWEB results: it works!

A	B	C	D	E	F
	Outcome [unit of analysis I.C]	**Tool** Intervention	Writing with **no support** control	p value	95%CI
	Primary outcome - overall completeness [123,123]	7.1 ± 1.2	5.0 ± 1.6	≤0.001	[1.5;2.7]
1	Randomization [20,21]	8.4 ± 2.4	4.6 ± 2.9	≤0.01	[1.1;4.4]
2	Blinding [21,20]	6.9 ± 2.4	6.2 ± 2.3	0.44	[-0.7;2.0]
3	Participants [21,20]	6.7 ± 2.0	4.5 ± 2.4	≤0.01	[0.8;3.6]
4	Intervention [20,21]	7.1 ± 1.5	5.3 ± 2.0	≤0.01	[0.7;2.9]
5	Outcomes [20,21]	6.1 ± 2.1	6.4 ± 3.0		
6	Trial design [21,20]	8.1 ± 2.3	2.7 ± 1.9		
		mean ± SD	mean ± SD		

equator network

Prestigious Annual Lectures

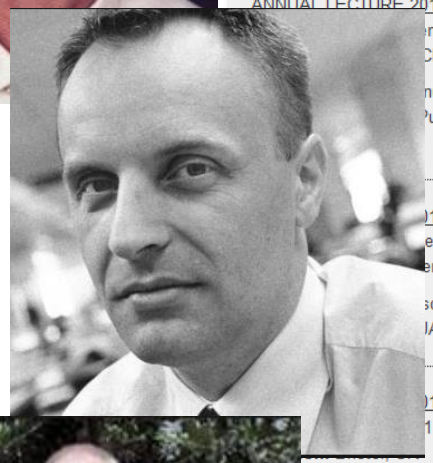
Annual lectures

ANNUAL LECTURE 2014: Presented by Dr Drummond Rennie
Date: 16 May 2014
Location: Hôpital Européen Georges Pompidou, Paris, France

The 6th EQUATOR Annual Lecture was presented by Dr Drummond Rennie, Adjunct Professor of Medicine, University of California San Francisco and until recently Deputy Editor (West), JAMA. Read More

ANNUAL LECTURE 2013: Presented by Prof Kay Dickersin
mber 2013, 17:30 – 18:30
Chicago, USA (Peer Review Congress venue)

nual Lecture was presented by Professor Kay Dickersin, Professor at the Johns Hopkins
Public Health, Director of the Center for Clin



12: Reporting and reproducible research: s
er 2012
ermany

sor of Medicine, Health Research and Polic
ATOR Annual Lecture Read More

11: Better reporting of better research = be
1

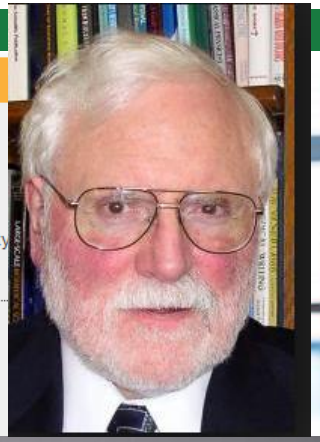
d EQUATOR Annual Lecture was presented by Hazel Thorn

AL LECTURE 2009: Redescribing medicine: reporting or re
9th September 2009
on: Vancouver, Canada

cond EQUATOR Annual Lecture was presented by Dr Rich

AL LECTURE 2008: Meeting the research information need
26th June 2008
ion: London, UK

st EQUATOR Annual Lecture was presented at the Network
lain Chalmers Read More



2015
Dr L.G. Cuervo
PAHO

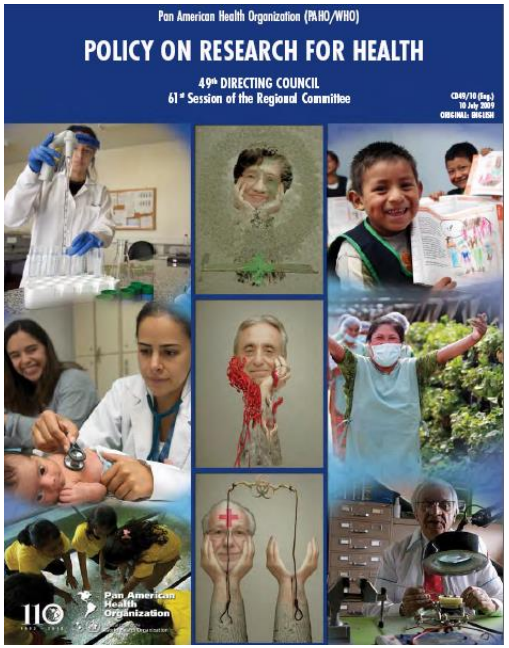
2015 REWARD | EQUATOR Conference
Increasing value and reducing waste in biomedical research
Edinburgh, 28th-30th September

Confirmed speakers include Doug Altman, Rustam Al-Shahi Salman, Iain Chalmers, An-Wen Chan, Paul Glasziou, Trish Groves, John Ioannidis, Frank Miedena, David Moher, Andrew Morris, Janet Wisely
http://researchwaste.net/researchwasteequator-conference/

equator network

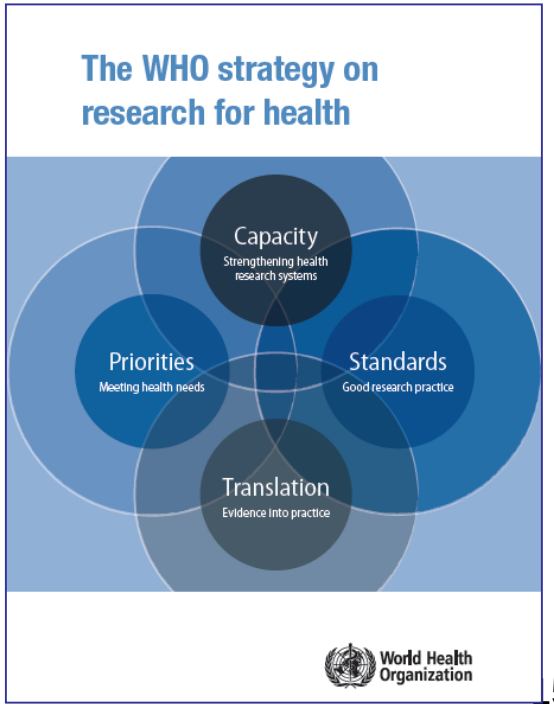
EQUATOR – PAHO collaboration: Relevance

- Adequate reporting of health research, the development of research reporting standards, improving competencies of and support for human resources involved in research, among other things, are central to leading policies on research for health



Policy on Research for Health (Americas) CD49/10 2009

63rd WHA. WHO Strategy on Research for Health 2010



equator network

EQUATOR – PAHO Collaboration

- **Memorandum of understanding, 2010**
  - Support the Policy on Research for Health of the Americas by raising the standards in the reporting
- **First projects** carried under the memorandum
  - EQUATOR website and main reporting guidelines translated to Spanish
  - Promotion of reporting guidelines in Latin America and the Caribbean; awareness raising
  - Dissemination and promotion of new guidelines (PAJPH)
- **Other projects**
  - Further development of Spanish / Portuguese resources
  - Series of webinars on research reporting and reporting guidelines, workshop for journal editors
  - Librarians' Network
  - Integration with scholarships (e.g. OAS, Grupo Coimbra de Universidades Brasileras) and other capacity development programs

EQUATOR Spanish website – launched July 2010

www.espanol.equator

Spanish resources

Organización Panamericana de la Salud

Organización Mundial de la Salud
Oficina Regional para las Américas

Bienvenido a las páginas en español de EQUATOR

Estas páginas han sido desarrolladas en colaboración con la Organización Panamericana de la Salud (OPS/OMS), con quienes estamos trabajando para promover el informe responsable de las investigaciones en salud de los estados miembros de la OPS en la región de las Américas y el Caribe.
Los recursos listados a continuación han sido traducidos al español (aparte de la base de datos de directrices para informar y publicar investigaciones).

Biblioteca

La biblioteca de informes de investigación en salud, provee una colección de directrices y política s relacionadas a los informes para la publicación de investigaciones en salud. Estos documentos están dirigidos principalmente a autores de artículos de investigación, editores de revistas científicas, revisores pares y a quienes desarrollan las directrices de publicación.

- Búsqueda de directrices para informar y publicar investigaciones
- Directrices en proceso de elaboración
- Traducción de directrices para informar y publicar investigaciones
- Pautas sobre redacción científica
- Pautas elaboradas por grupos editoriales
- Pautas para informar y publicar investigaciones elaboradas por entidades que financian investigaciones
- Investigaciones patrocinadas por la industria: pautas adicionales
- Ética en la investigación, ética en la publicación y directrices de buenas prácticas

equator network

www.equator-network.org

How to shift the 'reporting culture'

- Working towards …
  - Accurate, complete and transparent reporting of research studies is considered the norm
- How to achieve this?
  - Leadership and influence at every level
  - Clearly defined policies, requirements and expectations
  - Provision of tools, standards, and other resources
  - Education, training, advocacy and examples
  - Motivation and incentives
  - Application of safeguards and checks
- Collaboration of all key stakeholders
  - Researchers, research organisations, sponsors and regulators
  - Journals (editors, peer reviewers, publishers)
  - Other organisations (higher education, IRBs, REC, development and intergovernmental agencies, ...)

equator network

What can you do to help: promote and practice

- All research needs to be **well designed**, **well conducted** and **well reported** to be truly useful and to impact on health improvements

- Complete, accurate and transparent reporting is an **integral** part of responsible research conduct

- Adherence to reporting guidelines
  - Decreases honest reporting errors and omissions
  - Improves the reliability, usability and usefulness of publications

- Integrate these guidelines with
  - Research management and review processes (e.g. journals, IRBs / RECs, thesis review panels, etc)
  - High education activities

equator network

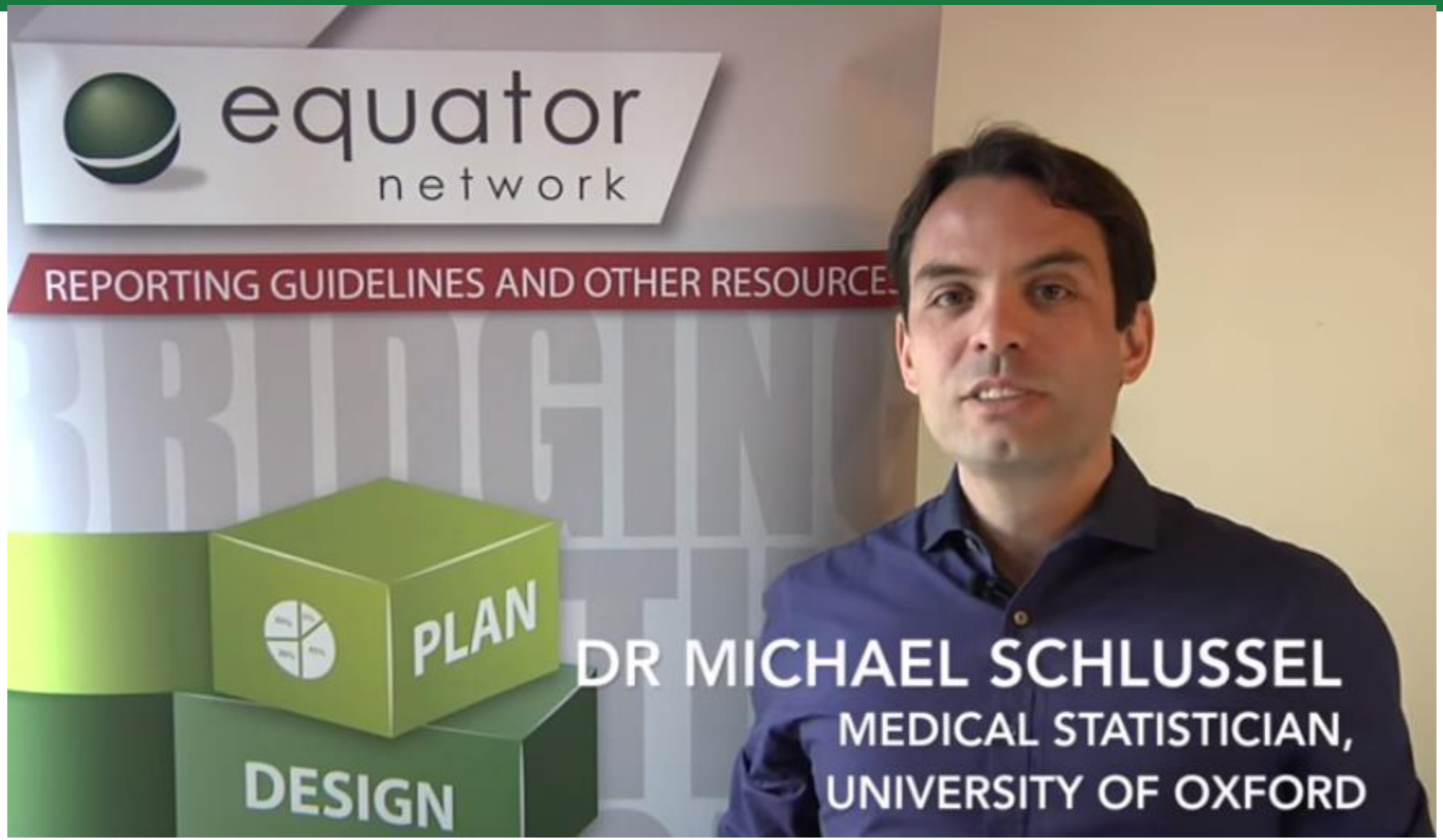
"Without accessible and usable reports, research cannot help patients and their clinicians."

Chalmers I. & Glasziou P. Avoidable waste in the production and reporting of research evidence. Lancet 2009

www.equator-network.org

iveta.simera@csm.ox.ac.uk

equator network



equator
network