The contributions of case reports to medical practice and translational research

Professor Michael Kidd AM
Who is this guy?

General practitioner, primary care researcher, medical educator, author

Executive Dean, Faculty of Medicine, Nursing and Health Sciences, Flinders University

President, World Organization of Family Doctors

Past president, Royal Australian College of General Practitioners

Council member, National Health and Medical Research Council (NHMRC)

Director, beyondblue, Therapeutic Guidelines, Channel 7

Childrens’ Research Foundation

Consultant, World Health Organization and UNAIDS

Editor in chief, Journal of Medical Case Reports
Clinicians as researchers
Landmarks in your career

Your first research idea
Your first research project
Your first ethics approval
Your first research presentation
Your first research publication
Your first research grant
Your first nationally-competitive grant
Your first appointment as a professor
Your first Nobel Prize
My first research idea

1987
HIV/AIDS was an emerging disease

Study of knowledge of young people about HIV transmission and risk behaviours

3 high schools
Pre-intervention questionnaire
Control vs seminars vs posters
Post-intervention questionnaire
The result?

All groups, including the control showed a substantial increase in their knowledge of HIV transmission and risk behaviours

How could this happen?
The Grim Reaper

The most effective public health campaign ever seen in Australia
Golden Rule

If something can possibly go wrong with your research, it probably will

So expect it and learn from it
Where do research questions come from?

Often from our daily practice

Must ask important questions

Must create new knowledge
Have you ever …

Come across something in a journal and thought “That isn’t true!” or “That doesn’t apply to my patients”?

Had one of your patients experience an “unexpected outcome”, a new reaction to a medication, or an unusual presentation of an illness?

Wondered how your one of your patients feels about some event in their lives or what their experience of a certain disease is really like?
So where does the inspiration come from?

Through observation

As clinicians we work in the best laboratories

Research inspiration comes through the door each day
“If we want evidence-based practice, we need practice-based evidence”

Rich Roberts
A 13-year-old Caucasian girl presented to our clinic with hamstring tendinitis. She was commenced on ibuprofen.

After the third ibuprofen dose, she experienced palpitations. These were associated with lower chest and/or upper abdominal discomfort, and a feeling of being hot and sweaty.

Her symptoms ceased upon the cessation of ibuprofen therapy.
This case is the first case report ever in the medical literature of cardiac arrhythmia following standard oral ibuprofen administration.

Palpitations following regular ibuprofen dosing in a 13-year-old girl: a case report.

Robert J Douglas

Journal of Medical Case Reports 2010, 4: 76 (2 March 2010)
“As clinicians we learn something new about human existence, health and disease every single day.”
The Journal

- The world’s first PubMed-listed journal devoted to publishing case reports from all medical disciplines.
- Editor-in-Chief
- Five Deputy Editors
- 200 Associate Editors
- Laureate Editor Deborah Saltman
- Unofficial Impact Factor 0.40
Aims and Scope of the Journal of Medical Case Reports

• *Journal of Medical Case Reports* is an open access, peer-reviewed online journal that will consider any original case report that expands the field of general medical knowledge, and original research relating to case reports.

• Case reports should show one of the following:
  • Unreported or unusual side effects or adverse interactions involving medications
  • Unexpected or unusual presentations of a disease
  • New associations or variations in disease processes
  • Presentations, diagnoses and/or management of new and emerging diseases
  • An unexpected association between diseases or symptoms
  • An unexpected event in the course of observing or treating a patient
  • Findings that shed new light on the possible pathogenesis of a disease or an adverse effect

• Original research articles include but are not limited to: N of 1 trials, meta-analyses of published case reports, research addressing the use of case reports and the prevalence or importance of case reporting in the medical literature.
Journal visibility

• Over 4 million article accesses in 2014
• Therefore, more than 10,000 article accesses per day
• Coverage in news outlets
Promoting articles
Indexing Services

• All articles published in *Journal of Medical Case Reports* are included in PubMed, the most widely use biomedical bibliographic database service, which is run by the US National Library of Medicine. Other bibliographic databases that index JMCR article include:

  • Cinahl, Citebase, DOAJ, Google Scholar, Index Copernicus, MEDLINE, OAIster, PubMed Central, SCImago, Scopus, SOCOLAR, Zetoc
Global audience

Submissions 2014
- Japan: 38%
- Italy: 14%
- United States of America: 9%
- China: 8%
- Turkey: 7%
- Morocco: 6%
- United Kingdom: 5%
- Germany: 5%
- South Korea: 5%
- Sri Lanka: 4%
- Other: 3%

Publications 2014
- Japan: 34%
- Italy: 10%
- United States of America: 9%
- China: 9%
- Turkey: 8%
- Morocco: 7%
- United Kingdom: 5%
- Germany: 5%
- South Korea: 5%
- Sri Lanka: 5%
- Other: 3%

2% of submissions and 2% of publications are from Australia
40% submissions and publications from non-English speaking countries
25% submissions and publications from low and middle income countries
300,000 users access *Journal of Medical Case Reports’* website every month
Newer international journals dedicated exclusively to Case Reports

BMJ Case Reports (BMJ, UK)
Case Reports in Medicine (Hindawi, Egypt)
Case Reports in Dermatology + 6 other disciplines (S. Karger, Switzerland)
Grand Rounds (eMed, UK)
International Journal of Surgery Case Report (Elsevier, Netherlands)
Journal of Surgical Case Reports (JSCR, UK)
Radiology Case Reports (University of Washington, USA)
International Medical Case Reports Journal (Dove Press)
Gynecologic Oncology Case Reports (Elsevier)
Respiratory Medicine Case Reports (Elsevier)
Epilepsy and Behavior Case Reports (Elsevier)
Medical Mycology Case Reports (Elsevier)
Journal of Cardiology Cases (Elsevier)
And more ...
Reporting standards

- JMCR advocates for the complete and transparent reporting of case reports.
- Open peer review.
- Published the CAse REport (CARE) guidelines in 2013.
- Over 16,000 accesses.
- Authors must submit a populated CARE checklist on submission.
- Now rolled out across many of the BioMed Central journals.
CAse REport (CARE) guidelines

Title
The words “case report” and the area of focus should appear in the title (such as diabetes, a therapeutic approach, an outcome)

Key Words
2 to 5 key words that identify areas covered in this case report

Abstract
a Introduction—What is unique about this case? What does it add to the medical literature? Why is this important?

b The patient's main concerns and important clinical findings

c The main diagnoses, therapeutics interventions, and outcomes

d Conclusion—What are the “take-away” lessons from this case?
CAse REport (CARE) guidelines

Introduction
One or two paragraphs summarizing why this case is unique with reference to the relevant medical literature

Patient Information
a  De-identified demographic and other patient specific information
b  Main concerns and symptoms of the patient
c  Medical, family, and psychosocial history including relevant genetic information (this should also appear in the timeline)
d  Relevant past interventions and their outcomes

Clinical Findings
Describe the relevant physical examination (PE) and other significant clinical findings

Timeline
Relevant data from the patient's history organized as a timeline
CAse REport (CARE) guidelines

Diagnostic Assessment
a  Diagnostic methods (PE, laboratory testing, imaging, surveys)
b  Diagnostic challenges (access, financial, cultural)
c  Diagnostic reasoning including other diagnoses considered
d  Prognostic characteristics when applicable (staging)

Therapeutic Intervention
a  Types of intervention (pharmacologic, surgical, preventive)
b  Administration of intervention (dosage, strength, duration)
c  Any changes in the interventions (with rationale)
CAse REport (CARE) guidelines

Follow-up and Outcomes
a  Clinician and patient-assessed outcomes (when appropriate)
b  Important follow-up diagnostic and other test results
c  Intervention adherence and tolerability (how was this assessed)
d  Adverse and unanticipated events

Discussion
a  Strengths and limitations in your approach to this case
b  Discussion of the relevant medical literature
c  The rationale for your conclusions (a causality assessment)
d  The primary “take-away” lessons from this case report

Patient Perspective
When appropriate the patient should share their perspective on the treatments they received

Informed Consent  Did the patient give informed consent? Please provide if requested
BioMed Central's Case Report of the Year 2014: lessons for modern life

Extensive deep vein thrombosis following prolonged gaming (‘gamer’s thrombosis’): a case report

Hsien-Cheng Leon Chang*, Hayley Burbridge and Conroy Wong

Department of Medicine, Middlemore Hospital, 100 Hospital Road, Otahuhu, Auckland 2025, New Zealand

Journal of Medical Case Reports 2013, 7:235
My first publication

1992

Research for Bureau of Immigration of Research

“Problems encountered by overseas trained doctors migrating to Australia”

Initial print run – 200 copies
Golden Rule

It is harder to be a researcher and also be a busy clinician but your research is likely to be more relevant and have more of an impact on improving people’s lives

Measuring the social impact of research

“In the real world scientific quality and social impact do not always go together. Scientists would think of the original work on apoptosis (programmed cell death) as high quality, but 30 years after it was discovered there has been no measurable impact on health. In contrast, research that is unlikely to be judged as high quality by scientists—say, on the cost effectiveness of different incontinence pads—may have immediate and important social benefits.”

Richard Smith
Golden Rule

If you are going to be a great researcher, and a great clinician, look after yourself and look after those who love you
Clinical medicine is a wonderful adventure

Working with our patients we can make new discoveries every day

Each of us has an ethical responsibility to report our new discoveries and share our new knowledge with our peers

What you see and report today may save lives in the future