

# MEASURING THE IMPACT OF FM-RESEARCH: SCIENTIFIC CITATIONS OR SOCIETAL IMPACT?

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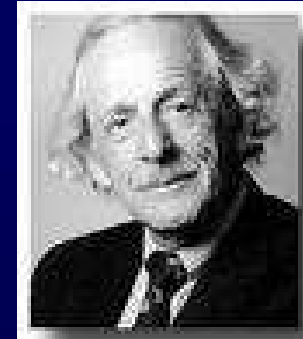


# BACKGROUND

- Number of scientific publications increases  
MEDLINE 1996: 423994  
MEDLINE 2006: 641604
- Number of Journals is high  
- MEDLINE 2008: 5318
- How to select publications critically?
- How to evaluate research quality?

# ASSESSMENT OF BIOMEDICAL RESEARCH

- ISI established in 1955
- Development of SCI
- Evaluation of scientific literature
- Instrument: (scientific) impact factor



# IMPACT FACTOR OF A JOURNAL

- Calculation

$$IF_A = \frac{\text{All citations in A during last 2 years}}{\text{All citable articles in A during last 2 years}}$$

- Example:

$$\text{NEJM: } IF_{2004} = \frac{14.147 + 14.549}{366 + 378} = 38.6$$

# PROBLEMS

- SCI covers only a fraction of all journals
- English language preferred
- Publication in electronic media favourable
- Does not evaluate individual articles
- Does not/cannot assess the quality of research
- Basic research cited more frequently than clinical articles
- Basic scientists are researchers, they publish and cite frequently
- Clinicians/GPs are less likely to be researchers – they cite less
- Several other biases

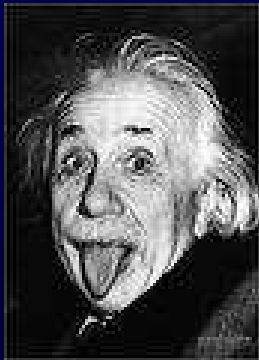
# DEVELOPMENTS

- Detailed review of achievements are uncommon
- IF adopted to assess quality
- Used to describe both journal and author impact
- Ranking of applicants by IF
- Allocation of research funds by IF
- FM- papers submitted to non- family medicine journals

# QUICK AND EASY: COUNTING?

Not everything which can be counted, counts  
and not everything, which counts, can be counted.

*Albert Einstein*



# EXAMPLE

- Austrian Diabetes-Report 2004  
- published as a booklet, no IF
- Austrian Diabetes Plan 2005
- DMP – Diabetes
- Implementation nationwide  
- affects 300000 patients,  
impact?





# NEED FOR ALTERNATIVES

- IF is misused
- „since institutions are unable to measure what they want to maximize (quality), they will maximize what they can measure“ (*Nature 2006*)
- Alternatives have been put forward

# ALTERNATIVE OR COMPLEMENTARY INSTRUMENTS

- H- Index
  - citations of the same paper
  - influential vs. many publications
  - example: h-index 15
  - favours older scientists / longer careers
- Societal impact

# SOCIETAL IMPACT

- Proposed in 2000 by „Royal Dutch Academy of Science“
- Should assess impact of research on society
- How to measure?
- Attempts in UK, Australia and Austria

DRAFT

## 1.) Publication

Knowledge gain?

Application of knowledge?

Interprofessional target group?

# DRAFT

## 2.) Translation into reality/practice

a) translation potential?

b) translation efforts?

intensity/methodology

appropriate journal

c) translation accomplished?

level

sustainability

Target groups

# FAMILY MEDICINE RESEARCH

FM- research covers the entire spectrum of clinical problems as well as the organization and delivery of primary care.

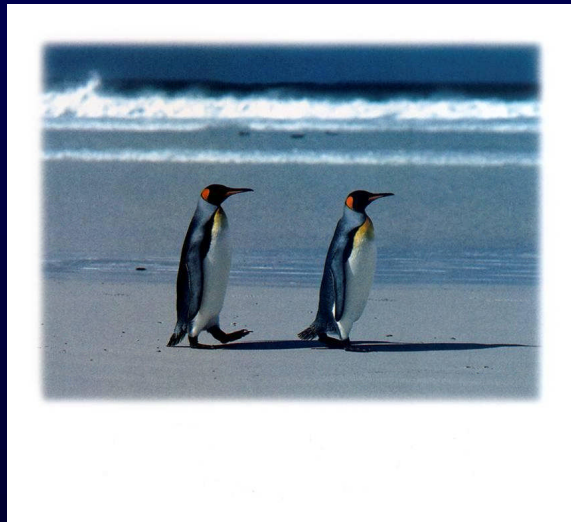
*NAPCRG*

# FAMILY MEDICINE RESEARCH

- Is primarily clinical research
- has a high potential to improve health of individuals or the population
- This impact on society should be measured by the „societal impact factor“

# RECOMMENDATIONS

- FM- research should be visible and appreciated by the scientific community
- Do not fight against the  $IF_{sci}$ !
- Fight for the  $IF_{soc}$  as a complementary instrument!





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# CLINICAL RESEARCH

## **Patient-oriented research:**

This type of research involves a particular person or group of people or uses materials from humans. This research can include:

- Studies of mechanisms of human disease
- Studies of therapies or interventions for disease
- *Clinical trials*
- Studies to develop new technology related to disease

# CLINICAL RESEARCH

## **Epidemiological and behavioral studies:**

These types of studies examine the distribution of disease, the factors that affect health, and how people make health-related decisions.

## **Outcomes and health services research:**

These studies seek to identify the most effective and most efficient interventions, treatments, and services.

*NIH*