

# General practice-based research network in Switzerland: Challenges and lessons learned from several clinical trials

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How to bridge the gap between  
research and practice?

# Overview

- Practice-based research
  - Why?
  - Definitions and context
  - History
- Example of a general practice–based research network in Switzerland
  - Research accomplishments
  - Future directions

# The Ecology of Medical Care (diagram of White)



CLASSIC PAPER

*The Ecology of Medical Care*<sup>\*</sup>

Reprinted from  
*The New England Journal of Medicine*  
265:885-892, 1961

KERR L. WHITE, MD,<sup>†</sup> T. FRANKLIN WILLIAMS, MD,<sup>‡</sup> AND  
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Current discussions about medical care appear largely concerned with two questions: Is the burgeoning harvest of new knowledge fostered by immense public investment in medical research being delivered effectively to the consumers? Is the available quantity, quality and distribution of contemporary medical care optimum in the opinion of the consumers? In addition, it may be asked: Whose responsibility is it to examine these questions and provide data upon which sound judgments and effective programs can be based?

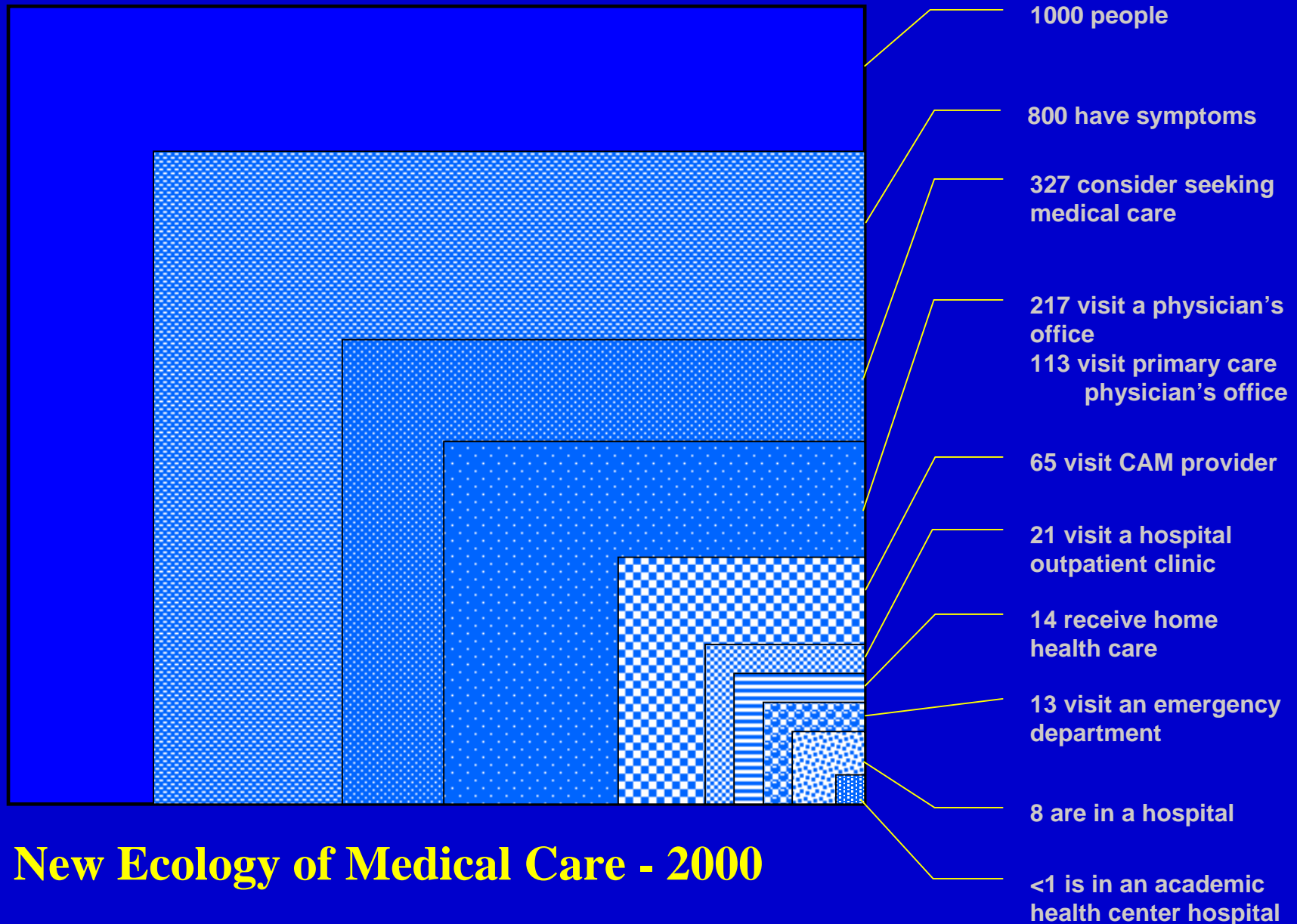
The traditional indexes of the public's health, such as mortality and morbidity rates, are useful for defining patterns of ill-health and demographic characteristics of populations who experience specific diseases. They are of limited value in describing actions taken by individual patients and physicians about disease and other unclassified manifestations of ill-

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SUMMER 1996 BULLETIN OF THE NEW YORK ACADEMY OF MEDICINE PAGE 187

- The foundation argument for practice-based research
- “...it would be difficult, for those at (tertiary care) medical centers, without special effort, to obtain valid impressions of the overall health problems of the community.”

# In an average month:



**New Ecology of Medical Care - 2000**

# Practice-Based Research

- The generation of new knowledge from the study of patient care in the practice setting
- “...based on the principle that the experience, wisdom, and insight of the practicing physician are powerful tools for identifying and framing research questions that are relevant to practice and will improve the practice of...medicine.”

» Nutting, PA et al. JAMA 1999;281(8):686-688

# Practice-Based Research Networks (PBRN)

- Are collaborations of clinicians
- Support practice-based research
- Use practices as research sites
- Develop an evidence-base for the medicine that is practiced by:
  - Generating relevant research questions
  - Providing internally and externally valid answers

# History of Practice-Based Research

- Late 1960s
  - Netherlands and Great Britain
- Well-known examples:
  - 1978 Dartmouth Primary Care Cooperative (COOP)
  - 1981 Ambulatory Sentinel Practice Network (ASPEN)

# Example of an PNBR in western switzerland : Areas Researched

- Utility of ultrasonography in a general practice:survey among practitioners
- CAGE (alcohol disorders detection)
- Sickness certification in primary care
- Development of a screening questionnaire for health problems related to work
- Fatigue and iron deficiency without anemia (RCT)
- Vitamin B12 deficiency (2 studies : 1 observational and 1 RCT)
- TOPIC study: chest pain in general practice (prevalence and evolution at one year)
- SODA study (ongoing): somatisation, depression, anxiety (prevalence and evolution at one year)

Primary care

BMJ

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**Iron supplementation for unexplained fatigue in  
non-anaemic women: double blind randomised placebo  
controlled trial**

F Verdon, B Burnand, C-L Fallab Stubi, C Bonard, M Graff, A Michaud, T Bischoff, M de Vevey,  
J-P Studer, L Herzig, C Chapuis, J Tissot, A Pécoud, B Favrat

« ...Iron supplements — A trial of iron supplementation therapy may be appropriate in menstruating women with fatigue, even in the absence of anemia... »

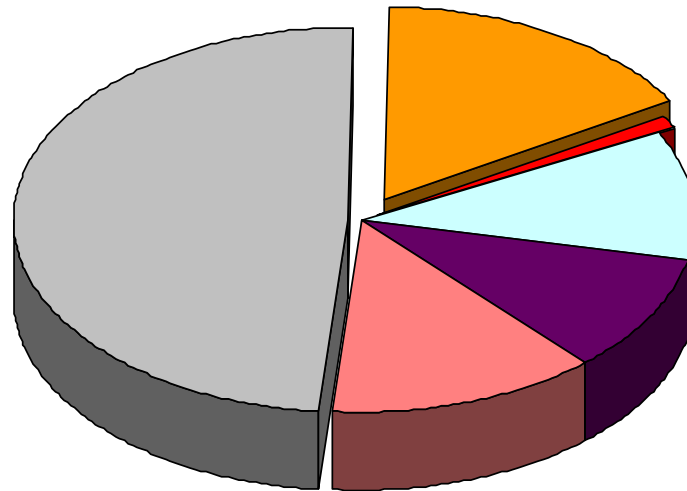
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# Vitamine B12 study

- Oral Vitamin B12 treatment normalized metabolic markers of vitamin B12 deficiency (methymalonnate) at one month but had no clear clinical effect in a primary care population where symptoms and signs were poor.
- Furthermore a one-month treatment with oral vitamin B12 (1000  $\mu\text{g}$  daily) was not enough to normalize the deficiency markers after 4 months.

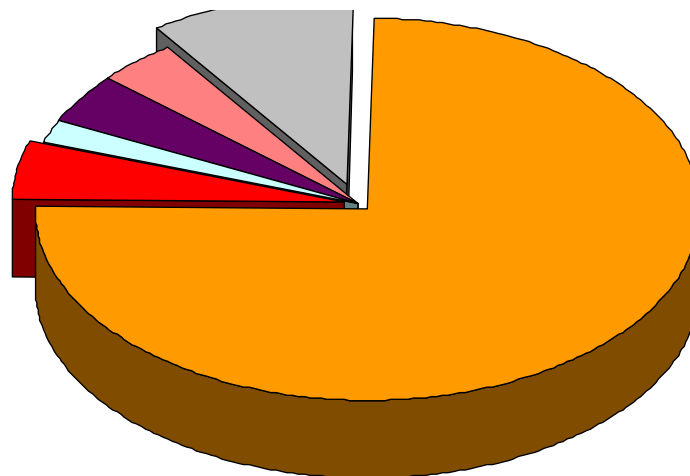
# Chest pain in community vs at the emergencies of an academic hospital in western Switzerland

Topic



- Chest wall syndrome
- Cardiovascular diseases
- Infarctus / pulm. Embolism
- Psychological diseases
- Respiratory diseases
- Others

Berger et al.



# Topic study

- 58 practices
- 24 620 consultations
- 672 patients complaining of chest pain
- 100% follow-up at 3 months and 96% at one year

# Lessons learnt from our experience in the western part of Switzerland

- Organisation:
  - The network was led by a peer group of GPs incorporating academic members
  - There was strong academic support (epidemiology and statistical help)
  - Research nurse for data management

# Other lessons learnt from our experience in the western part of Switzerland

1. Motivation and effort sustained:
  - The practitioners developed their own ideas, gave critical feed-back and discussed the feasibility
  - Participating GPs were ready to afford time.
  - The regular contacts made by the leader GP of the study was a condition to prevent problems.
2. Main difficulty: obtaining an adequate budget (importance of an institutional support)

# Challenge of Primary Care Research

- Patients present with multiple problems
- Presenting problems imbedded in context
  - Occupation or unemployment
  - Family and social connections
  - Life events and stages
- Primary care providers use multiple interventions
  - Drugs
  - Surgical procedures
  - Exercise
  - Referral
  - Watchful waiting
  - Education
  - Diet
  - Counseling
  - Reassurance

# Conclusion

- **General practice-based research is not only important but feasible for observational and randomized trials.**
- **However it is important to implement strict planning procedures before starting.**
- **Sharing experience with other european groups could be the future of the general practice-based research.**