


Lessons from the health sector

The Norwegian Knowledge Centre for the Health Services

- Established 2004, by merging three separate institutions
 - Independent and autonomous organization
 - No normative authority
 - Staff: 200 people, interprofessional
 - Librarians
 - Health care personnel
 - Social scientists
 -
- 



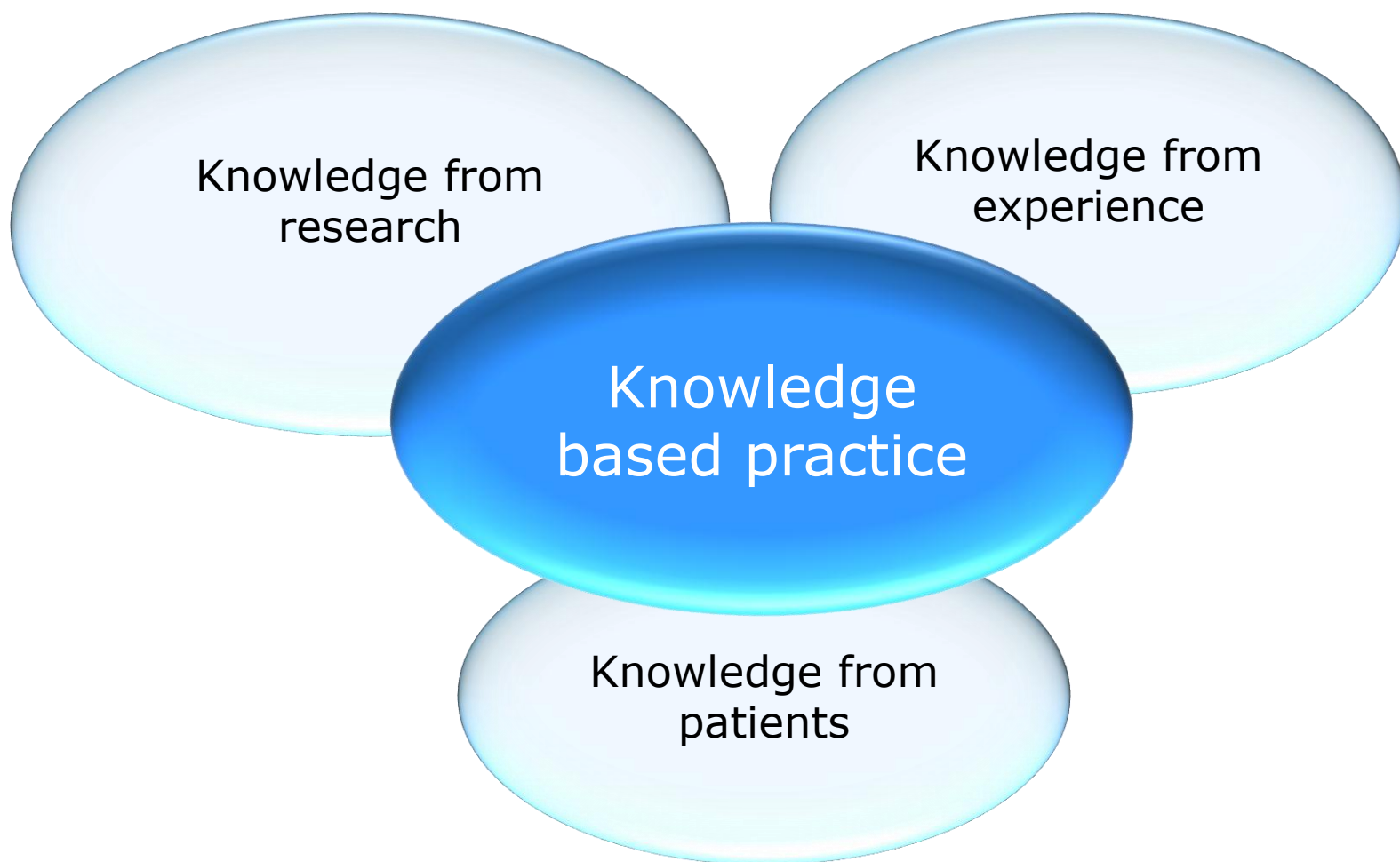
We:

- *Collect, analyse and disseminate knowledge*
- *Promote and measure quality*



 kunnskapssenteret
Nasjonalt kunnskapssenter for helsetjenesten

**Good
knowledge
contributes to
good health
services**



What is special about health care

- Several interventions with great impact on people – possible benefit and harm
- A long tradition and high production of research – indexed in good data bases
- Structured continuous medical education (CME)
- Internationalization



Information overload

- > 25 000 scientific journals
- 1,5 mill papers/year
- 11 systematic reports/day
- PubMed includes > 20 millioner articles

On the impossibility of being expert

More scientific papers are being published than ever before. **Alan G Fraser** and **Frank D Dunstan** call for that new strategies to deal with this avalanche of information

Every doctor has an ethical duty to keep up to date. Is this just getting more difficult or has it already become impossible? Since Alvin Toffler coined the phrase "information overload" in 1970,¹ the growth of scientific and medical information has been inexorable. There are now 25 400 journals in science, technology, and medicine, and their number is increasing by 3.5% a year²; in 2009, they published 1.5 million articles.² PubMed now cites more than 20 million papers.

One response of the medical profession to the increasing scientific basis and clinical capacity of medicine has been to increase subspecialisation. This may restrict the breadth of knowledge of the ultraspecialist, but can such subspecialists maintain their depth of expertise? Taking one medical subspecialty as an example, we have examined the gap between information and human capacity, and we explore the implications for any doctor

tomography (CT), and coronary arteriography, as well as cardiovascular ultrasound (strategies 5-6, table).

All searches were performed for each year from 1966 (the year before ultrasonics was introduced as a search term in PubMed; echocardiography was added in 1973) to 2009. Trends in papers on echocardiography were modelled; a good fit—from a cubic model containing time, the square of time, and the cube of time—was used to predict the numbers of publications to the end of 2010 and annually to 2015.

which time at least 82 142 more papers would have been added, accounting for another eight years and 78 days. Before our recruit could catch up and start to read new manuscripts published the same day, he or she would—if still alive and even

remotely interested—have read 408 049 papers and devoted (or served a sentence of) 40 years and 295 days. On the positive side, our recruit would finish just in time to retire.

Reading only the major studies would need more than four years for strategy 3 and more than five years for strategy 6. Alternatively, if only one year was allocated for study,

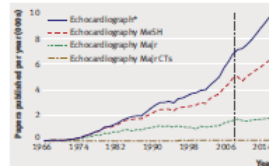


Fig 1 | Trends in numbers of papers listed each year in PubMed, according to search strategies 1-4 in table. The numbers to the right of the vertical line, after 2009, are projected totals. MeSH=medical subject heading, Major—as a main topic; CTs=controlled clinical trials

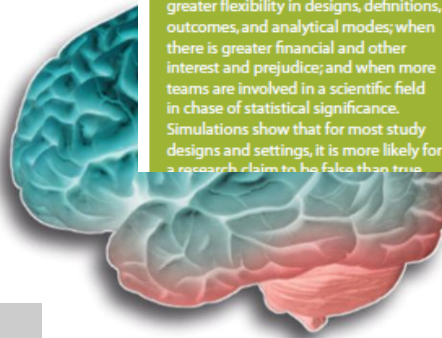


An increasing number of studies are not replicable



«A rule of thumb among biotechnology venture-capitalists is that half of published research cannot be replicated»

Problems with scientific research
How science goes wrong
Scientific research has changed
Oct 19th 2013 | From the print edition



Herbert A. Simon's science: "trust, but verify". Results should always be subject to experiment. That simple but powerful idea has generated a vast body of knowledge. Since its birth in the 17th century, modern science has changed the world, and overwhelmingly for the better. But in the process, it has also created a dangerous complacency. Modern scientists are doing too much trusting and too little verifying—to the detriment of the whole of science, and of humanity.

Essay

Why Most Published Research Findings Are False

John P. A. Ioannidis

Summary

There is increasing concern that most current published research findings are false. The probability that a research claim is true may depend on study power and bias, the number of other studies on the same question, and, importantly, the ratio of true to no relationships among the relationships probed in each scientific field. In this framework, a research finding is less likely to be true when the studies conducted in a field are smaller; when effect sizes are smaller; when there is a greater number and lesser preselection of tested relationships; where there is greater flexibility in designs, definitions, outcomes, and analytical modes; when there is greater financial and other interest and prejudice; and when more teams are involved in a scientific field in chase of statistical significance. Simulations show that for most study designs and settings, it is more likely for a research claim to be false than true.

factors that influence this problem and some corollaries thereof.

Modeling the Framework for False Positive Findings

Several methodologists have pointed out [9–11] that the high rate of nonreplication (lack of confirmation) of research discoveries is a consequence of the convenient, yet ill-founded strategy of claiming conclusive research findings solely on the basis of a single study assessed by formal statistical significance, typically for a p -value less than 0.05. Research is not most appropriately represented and summarized by p -values, but, unfortunately, there is a widespread notion that medical research articles

It can be proven that most claimed research findings are false.

is characteristic of the field and can vary a lot depending on whether the field targets highly likely relationships or searches for only one or a few true relationships among thousands and millions of hypotheses that may be postulated. Let us also consider, for computational simplicity, circumscribed fields where either there is only one true relationship (among many that can be hypothesized) or the power is similar to find any of the several existing true relationships. The pre-study probability of a relationship being true is $R/(R+1)$. The probability of a study finding a true relationship reflects the power $1 - \beta$ (one minus the Type II error rate). The probability of claiming a relationship when none truly exists reflects the Type I error rate, α . Assuming that c relationships are being probed in the field, the expected values of the 2×2 table are given in Table 1. After a research finding has been claimed based on

Cherry picking, i.e. choosing the single study that coincides with own preferences or interests



VG Nett ► Nyheter ► Innholds ► Arkiv

Svensk professor: Tre glass vin er sunt

Publisert 08.10.03 - 06:28, endret 08.10.03 - 06:36 (VG)

Tweet 0 +1 0 Anbefal 30 E-post

STOCKHOLM/OSLO (VG) Drikk mellom ett og tre glass (15 cl) vin daglig og få bedre helse.

Det er budskapet fra flere svenske medisinske eksperter.

- Jeg synes det er greit at voksne folk over 40 år drikker ett til tre glass vin om dagen. Det er bra for dem, sier den pensjonerte



VG Nett ► Helse ► Arkiv

Lev lenger - med rødvin

Publisert 05.06.06 - 15:06, endret 05.06.06 - 15:06 (VG NETT)

Av Bodil Fagerheim

Tweet 0 +1 0 Anbefal 369 E-post

(VG Nett) Nyt rødvinen din - i moderate mengder. Det kan styrke hjertet, redusere risikoen for leddgikt og ganske enkelt gjøre at du lever lenger.



VG Nett ► Helse ► Arkiv

Unngå kreft med rødvin

Kreft i prostata rammer mange menn litt opp i årene. Men risikoen blir ti glass rødvin nå og da.

Av Joachim Henriksen
Mandag 10.01.05 kl 08:24
Kontakt: redaksjonen

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og nå er jeg 10 kg tynnere! Trygg, raske og naturlig pille.
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Ti sunne grunner til å ta deg et glass vin i kveld

Ny forskning viser at vin kan for

Et par glass er bra ved høyt blodtrykk

Menn med høyt blodtrykk får redusert risiko for hjerteinfarkt hvis de drikker ett til to glass øl eller vin hver dag, viser ny amerikansk studie. Det er selve alkoholen som gir den gode virkningen.



Arntfinn Christensen
Journalist

Tirsdag 02. januar 2007
kl. 05:00

I tidligere undersøkelser er det vist at moderat alkoholforbruk kan redusere risikoen for hjerte- og karsykdommer og total dødelighet, også blant mennesker med høyt blodtrykk.

Den nye undersøkelsen tar spesielt for seg menn med høyt blodtrykk og tiffelle av hjerteinfarkt som ikke ender med døden. Også her gir et par glass om dagen en helsegevinst.

Undersøkelsen er også mer langsiktig og grundigere enn tidligere studier.



Bakgrunn

Ikke så edle dråper

Rødvin motvirker både kreft, hjertesykdom, hjernesvikt, overvekt, blodtrykk og aldring. Eller? Hva er egentlig sannheten om den blodrøde drinken?



Hanne Østli Jakobsen
Journalist

Lørdag 28. januar 2012
kl. 05:00

forskning.no har skrevet sak på sak om rødvin opp gjennom årene. Som regel med positivt fortegn. For visste du at rødvin kan senke risikoen for å få astma? Eller at du blir eldre saktere med et glass om dagen? Eller at vinen senker blodtrykket?

Samtidig kan både staten og erfaringen fortelle oss noe ganske annet: rødvinssimping kan være troblete å takle. Det gjelder både på kort sikt - på fylla - og i lengden, dersom du blir alkoholiker.

Så hva er egentlig status for rødvinen: Bør du drikke den?

- Ett glass vin om dagen øker kreftfaren

Publisert 27.02.09 - 11:45, endret 27.02.09 - 11:52 (VG NETT)

Av Bodil Fagerheim

Tweet 0 +1 0 Anbefal 50 E-post

(VG Nett) Er du i trygg forvisning om at ditt daglige glass vin er sunt? Kanskje må du revurdere den oppfatningen.



FARLIG GODT: Selv små mengder alkohol, som et glass rødvin om dagen, kan øke faren for kreft. Foto: STOCKUPERT

Seh små eller moderate mengder alkohol hver dag øker risikoen for å utvikle kreft, spesielt hos kvinner. Og jo mer du drikker, enten det er brennevin, øl eller vin, jo mer øker risikoen, viser en ny studie ved University of Oxford. Studien er publisert i fagtidsskriftet Journal of the National Cancer Institute.

VG Nett følger
Helse og medisin

kunnskapssenteret

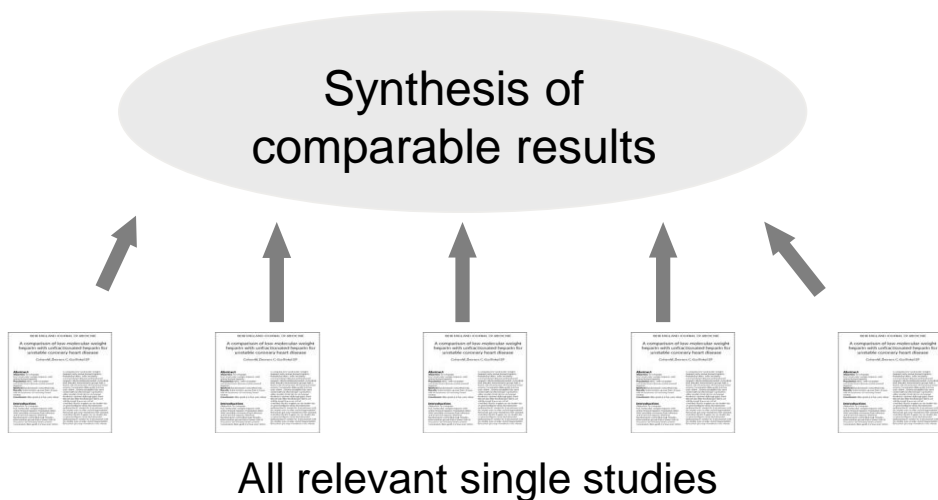
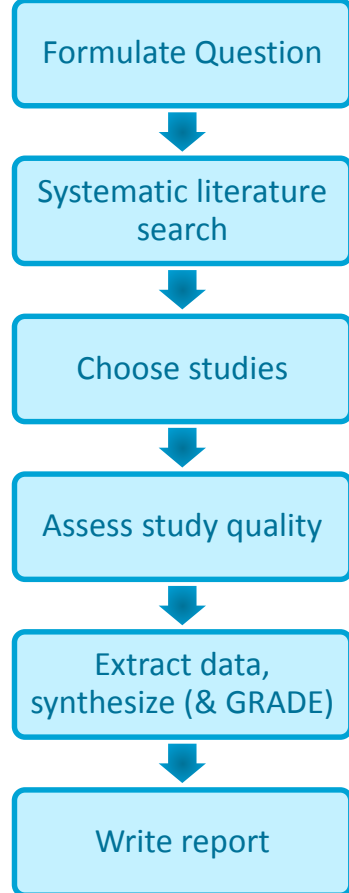
Sunt med vin - eller bare en myte?



Undersøkelser har vist at hele 4 av 10 nordmenn mener at moderate mengder rødvin har positive helseeffekter. Forskere er enig, og de har spesielt pekt på at mengden av antioksidanter i vinen kan ha positiv effekt i forhold til sykdommer. Blant annet mot livsstilssykdommer som for eksempel hjerte- og karsykdommer, noen krefttyper, Alzheimers, Parkinsons, diabetes og ulike typer infeksjoner, samt den generelle aldringsprosessen.

Systematic review

P	I	C	O
Population Patient Problem	Intervention Or Exposure	Comparison	Outcome
Who are the patients? What is the problem?	What do we do to them? What are they exposed to?	What do we compare the intervention with?	What happens? What is the outcome?



- Two results:**
- Estimated effect
 - Quality of evidence

Health technology Assessment (HTA)

- Efficacy

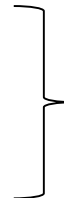
- Safety



Is the new method safe and effective?
Is it better compared with alternatives?

- Cost effectiveness

- Societal costs



Is the new method cost-effective?
What will be the overall costs?

- Ethics

- Organisational issues

- Legal issues



What are the consequences for patients,
health care services and society?

Thromboprophylactic treatment with rivaroxaban or dabigatran compared with enoxaparin or dalteparin in patients undergoing elective hip- or knee replacement surgery

Report from Kunnskapssenteret
No 13-2011
Health Technology Assessment

kunnskapssenteret
Norwegian Knowledge Centre for the Health Services

Background: Due to a major orthopaedic surgical prophylactic treatment or without addition or commissioned by Helsylaxis with rivaroxaban (LMWH, i.e. enoxaparin) and cost-effectiveness analysis of life years and life time significant differences between embolism, deep vein thrombosis ranged from very low to high. We found statistically

Efficacy and cost-effectiveness of alendronate for the prevention of fractures in postmenopausal women in Norway

Report from Kunnskapssenteret (Norwegian Knowledge Centre for the Health Services)
No 10-2011
Health Technology Assessment (HTA)

kunnskapssenteret
Norwegian Knowledge Centre for the Health Services

Background: The Norwegian Knowledge Centre for the Health Services (NOKC) commissioned the Norwegian Knowledge Centre for the Health Services (NOKC) to conduct a systematic review about the factors promoting and hindering female genital mutilation/cutting (FGM/C), from the viewpoints of stakeholders residing in Western countries. The review would answer the question: What are the factors promoting and hindering the practice of FGM/C, as expressed by stakeholders residing in Western countries? **Methods:** We developed a conceptual model from the viewpoints of stakeholders residing in Western countries. The model follows fractures of the hip, spine and pelvis. During the course of the model, the result of the fractures. Half of the alendronate, calcium and vitamin D

Factors promoting and hindering the practice of female genital mutilation/cutting (FGM/C)

Report from Kunnskapssenteret (Norwegian Knowledge Centre for the Health Services)
No 23-2010
Systematic review

kunnskapssenteret
Norwegian Knowledge Centre for the Health Services

Background: In November 2008, the Norwegian Knowledge Centre for Violence and Traumatic Stress Studies (NKVTS) commissioned the Norwegian Knowledge Centre for the Health Services (NOKC) to conduct a systematic review about the factors promoting and hindering female genital mutilation/cutting (FGM/C), from the viewpoints of stakeholders residing in Western countries. The review would answer the question: What are the factors promoting and hindering the practice of FGM/C, as expressed by stakeholders residing in Western countries? **Methods:** We searched systematically for relevant literature in international scientific databases, in databases of international organisations that are engaged in aspects related to FGM/C, and in reference lists of relevant reviews and included studies. Additionally, we communicated with professionals working with FGM/C related issues. We selected studies according to pre-specified criteria, appraised the methodological quality using checklists, and summarized the study level results in tables before performing an integrative evidence synthesis. Our conclusions were summed in a conceptual model. **Results:** We included 10 studies (continued)

BMJ

RESEARCH

The influence of study characteristics on reporting of subgroup analyses in randomised controlled trials: systematic review

Xin Sun, research fellow,^{1,2} Matthias Briel, assistant professor,^{1,3} Jason W Busse, scientist,^{1,4} John J You, assistant professor,^{1,5} Elie A Akl, associate professor,^{1,6} Filip Mejza, research fellow,⁷ Malgorzata M Bala, research fellow,⁸ Dirk Bassler, associate professor,⁹ Dominik Mertz, research fellow,¹⁰ Natalia Diaz-Granados, doctoral candidate,¹ Per Olav Vandvik, researcher,¹¹ German Malaga, associate professor,¹² Sadeesh K Srinathan, assistant professor,¹⁴ Philipp Dahm, associate professor,¹⁵ Bradley C Johnston, postdoctoral fellow,¹ Pablo Alonso-Coello, researcher,¹⁶ Basil Hassouneh, research fellow,¹ Jessica Truong, undergraduate student,¹⁷ Neil D Dattani, medical student,¹⁸ Stephen D Walter, professor,¹ Diane Heels-Andsell, statistician,¹ Neera Bhatnagar, librarian,¹⁹ Douglas G Altman, professor,²⁰ Gordon H Guyatt, professor¹

ABSTRACT

Objective To investigate the impact of industry funding on reporting of subgroup analyses in randomised controlled trials.

Design Systematic review.

Data sources Medline.

Study selection Randomised controlled trials published in 118 core clinical journals (defined by the National Library of Medicine) in 2007. 1140 study reports in a 1:1 ratio by high (five general medicine journals with largest number of total citations in 2007) versus lower impact journals, were randomly sampled. Two reviewers, independently and in duplicate, used standardised, piloted forms to screen study reports for eligibility and to

frequent prespecification of subgroup hypotheses (31.3% v 38.0%, adjusted odds ratio 0.49, 0.26 to 0.94), and less use of the interaction test for analyses of subgroup effects (41.4% v 49.1%, 0.52, 0.28 to 0.97) than non-industry funded trials.

Conclusion Industry funded randomised controlled trials, in the absence of statistically significant primary outcomes, are more likely to report subgroup analyses than non-industry funded trials. Industry funded trials less frequently prespecify subgroup hypotheses and less frequently test for interaction than non-industry funded trials. Subgroup analyses from industry funded trials with negative results for the primary outcome should be viewed with caution.

- Systematic reviews
- Meta-analyses
- Health Technology Assessments
- Methodology research

Transparency and usefulness

- Decision makers
 - Politicians
 - Managers
 - Clinicians
- Students
- Patients and the public



kunnskapssenteret
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The Norwegian Knowledge Centre for the Health Services (NOKC) supports the development of quality in the health services by summarising research, promoting the use of research results, contributing to quality improvement, measuring the quality of health services, and working to improve patient safety.

See our ongoing projects

Our products and services include:

- Systematic reviews
- Health economic evaluations
- Consequence assessments for the Norwegian health services
- Patient and user experience surveys
- Other quality measurements
- Training sessions
- Helsebiblioteket.no (The Norwegian Electronic Health Library - useful information for health professionals)
- Mednytt.no (MedNews - a database with early assessments of emerging technologies)
- Home to The Campbell Collaboration's Headquarters (The office facilitates the work of Campbell's international network)
- Secretariat for The Norwegian Council for Quality Improvement and Priority Setting in Health Care
- Running the Norwegian patient safety campaign "In Safe Hands"

See our published reports and memos

Ownership and organisation

The knowledge centre is organised under the Norwegian Directorate of Health but is scientifically and professionally independent. The Knowledge Centre has no authority to develop health policy or responsibility to implement policies. A separate Advisory Board counsels our management.

We carry out work for regional health authorities, The Norwegian Directorate of Health, the Norwegian Medicines Agency, and the Norwegian Health and Care Services Research Institute for clinical environments and for patients internally.

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See map

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WHAT DOES THE RESEARCH?

In summary, the research

All research on a topic gathered, reviewed and summarized.

- ▶ Cochrane Library
- ▶ More information overviews

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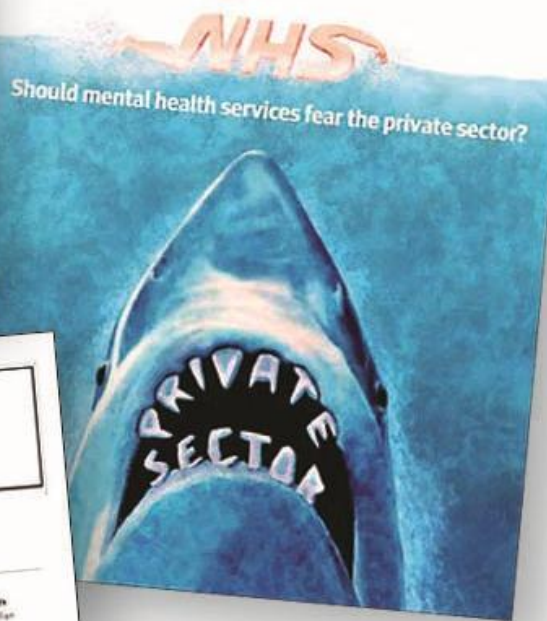
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THE LANCET

"The New Stop TB Strategy and the Global Plan, with the important new developments outlined in this issue, present an ideal opportunity to turn the tide against tuberculosis."

See Lancet.com page 10

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The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 JANUARY 26, 2009



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Monitoring quality and patient experience

RN4CAST Nurse forecasting in Europe

Personell og pasientsikkerhet

Ingeborg Strømseng Sjetne, Nasjonalt kunnskapssenter for helsestøtten (ing@noks.no)
Christine Tvedt, Nasjonalt kunnskapssenter for helsestøtten (ctg@noks.no)

Introduksjon

Personell er en betydelig innsatsfaktor i sykehus, og prognoser tyder på at det vil bli en utfordring å balansere tilbud og etterspørsel i løse som kommer. Det vil bli enda viktigere med god forvaltning av personellressurser for å sikre pasienter trygg behandling og å styrke fellesskapets ressurser best mulig.

Et EU-finansiert internasjonalt prosjekt kalt "RN4CAST: Nurse forecasting in Europe" har som formål å utvikle kunnskap som grunnlag for bedre forvaltning av disse ressurser. Sykepleiere utgjør den største yrkesgruppen i samfunns sykehus, og denne studien retter oppmerksomhet mot sykepleierens opptilgang og sin arbeidspluss i Norge og eldre andre europeiske land.



Metode

Prosjektet ble gjennomført i samarbeid med helsebiblioteket.no og helsebiblioteket.no. Prosjektet ble gjennomført i samarbeid med helsebiblioteket.no og helsebiblioteket.no.

Rest Det ble i totalt 1000 sykehus i Norge og i andre europeiske land.

User experience surveys with maternity services: a randomized comparison of two ways of combining postal and electronic data collection

Øyvind Andresen Bjertnæs¹, Hilde Hestad Iversen¹

¹Norwegian Knowledge Centre for the Health Services, Oslo, Norway

Background

Large-scale surveys of user reported experiences are a core component of quality evaluations in many western countries. However, low response rates are threatening the validity of such surveys, creating a need to identify initiatives to increase response rates and methods to assess the amount of non-response bias. The objectives of this study were to compare the effectiveness of two ways of combining postal and electronic data collection in a user experience survey with maternity services, and to assess the amount of non-response bias for both data collection procedures.

Methods

As part of a national development and validation project related to user experience with maternity services, a randomized trial was conducted at a university hospital in Norway in 2010. Women giving birth in the period 1 June – 27 July were randomized to the following data collection models (n=734): Group A, postal distribution of questionnaires with electronic and paper response option in both postal requests; Group B, postal distribution of questionnaires with electronic response option in first request, electronic and paper in reminder. The primary outcome measure was response rate for each group, in addition we used three methods to assess the amount of non-response bias.

Guideline epidemic? The proliferation of local clinical guidelines in Norway

Erling Øi¹, Øystein Pedersen MP², Kjetil Nafstad³, Jostein West⁴

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Background/Purpose

- Clinical practice guidelines can be adapted and embedded in hospitals' local procedural descriptions, possibly increasing uptake through stronger local ownership.
- In Norway local clinical practice guidelines and procedures are maintained within mandatory electronic quality systems within each hospital trust.
- The methodological quality of this work and the amount of measures used to generate guidelines within these local systems is unknown.

Objectives

The owners and main administrators of the quality systems in the trusts, followed by telephone interviews.

Results

29 out of 39 hospital trusts replied.

Scope: The number of local clinical practice guidelines and procedures is above 45 000, in a country of 4.5 million inhabitants.

People: Approximately 4200 health professionals in the hospitals are involved in the development of guidelines and procedures.

for a clinical tools, but to fulfill legal requirements, the health authorities have to require guidelines and procedures are made as local web.

Implications for guideline developers

In order to transform Norwegian local clinical guidelines and procedures into evidence user-friendly tools that improve practice, measures are necessary.

New technical solutions

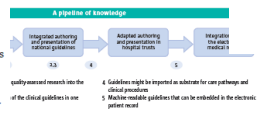
A requirement specification for an online and presentation tool is currently being developed. The tool should enable automatic support in the content in the guideline, local adaptation of national guidelines, and integration of the in the electronic medical record, enabled by formal representation languages.

Better collaborations

The Norwegian Knowledge Centre for the Health Services coordinates a network of local developers of evidence-based clinical guidelines and procedures. The members of the network actively work on their efforts and share their work.

A common methodology

The locally developed, clinical guidelines that with the requirements of AGREE are published on the Norwegian Electronic Health Services website. Local ownership and adaptation should be maintained.



Integration of guidelines and procedures into the electronic medical journals of the health trusts.

Conclusion

Providing postal and electronic response options in both survey requests produced the highest response rate. However, both data collection models had little amount of non-response bias, indicating adequate generalizability of both approaches.



WEB FIRST

By Cathy Schoen, Robin Osborn, David Squires, Michelle Doty, Roz Pierson, and Sandra Applebaum

New 2011 Survey Of Patients With Complex Care Needs In Eleven Countries Finds Care Is Often Poorly Coordinated

Original research

Overall patient satisfaction with hospitals: effects of patient-reported experiences and fulfilment of expectations

Øyvind A Bjertnæs, Ingeborg Strømseng Sjetne, Hilde Hestad Iversen

ABSTRACT

Background: Patient satisfaction and experiences are important parts of healthcare quality, but patient expectations are seldom included in quality assessments. The objective of this study was to estimate the effects of different predictors of overall patient satisfaction with hospitals, including patient-reported experiences, fulfilment of patient expectations and socio-demographic variables.

Methods: Data were collected using a national patient-experience survey of 53 hospitals in the five health regions in Norway during the autumn of 2006. Postal questionnaires were mailed to 24 141 patients after their discharge from hospital. Non-respondents were sent a reminder after 4 weeks. Multivariate linear regression analysis including multilevel regression was used to assess the predictors of overall patient satisfaction with hospitals.

Results: Thirteen variables were significantly associated with overall patient satisfaction: two variables about fulfilment of expectations, eight about patient-reported experiences and three socio-demographic variables. The regression model explained 59% of the variation in overall patient satisfaction. The most important predictor of patient satisfaction with hospitals was patient-reported experiences with the nursing services ($\beta=0.27$, $p<0.001$), followed by fulfilment of patient expectations ($\beta=0.21$, $p<0.001$), experiences with doctor services ($\beta=0.12$, $p<0.001$) and perceived inpatient treatment ($\beta=0.12$, $p<0.001$). Multilevel regression analysis confirmed most of the findings, but revealed that age was not a significant predictor of overall patient satisfaction.

Conclusions: The study showed that both fulfilment of expectations and patient-reported experiences are distinct from but related to overall patient satisfaction. The most important predictors for overall patient satisfaction were patient-reported experiences with the nursing services, followed by fulfilment of patient expectations, experiences with doctor services and perceived inpatient treatment. The most important predictors for overall patient satisfaction were patient-reported experiences with the nursing services, followed by fulfilment of patient expectations, experiences with doctor services and perceived inpatient treatment.

BACKGROUND

There is no consensus in the literature as to how to define and measure the patient perspective on healthcare. Four different approaches have been described in a systematic review of the patient-satisfaction literature: approaches based on expectations; approaches based on health-service attributes; economic approaches; and holistic approaches.¹ These approaches differ in various ways. For example, expectation-based approaches focus on the association between expectations, perceived experiences and patient satisfaction, while the health-service attribute approach normally excludes satisfaction and expectations, instead focusing on patient-reported experiences on different health-service factors. Holistic approaches try to include all important predictors of patient satisfaction, thus providing a comprehensive framework for exploring interactions between variables that affect consumer evaluations.¹

One distinction between the approaches is that the health-service attribute approach is based on a model (conditions), while the expectation-based approach is based on a model (conditions).

ious illnesses or chronic care of national health care needs in eleven countries, the Netherlands, New United Kingdom, and the United States, care is often poorly coordinated with attributes of care—gave higher ratings for to experience coordination the survey, patients in ten countries reported significantly more positive countries surveyed. Reported and with recent reforms there States reported difficulty as of costs. Our study ntries through redesigning table across sites of care, and The United States in lverse payment innovations rther study countries.

DOI: 10.1371/journal.p201.0923
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EMBARGOED Not for release before 12:01 a.m. ET Wednesday, November 9, 2011

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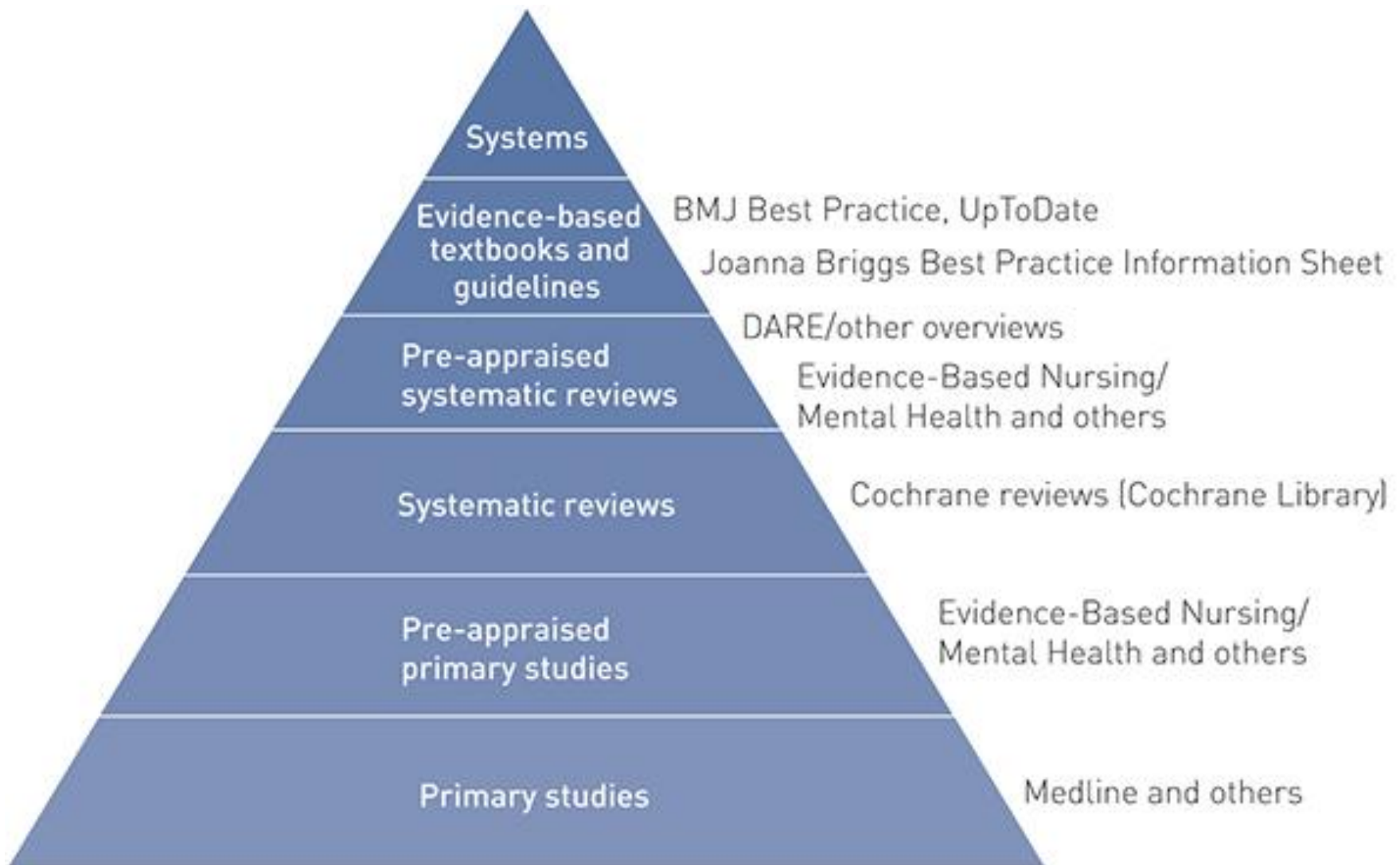
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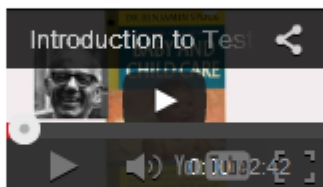


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