



*Evidence-Based Dentistry:
Challenges for Education and
Dental Research*

Information Missing from Databases and Access Problems

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Influences on dental clinical decision making

Evidence



The last patient



Litigation society



Audit prospect



Payment & -systems



Experience level



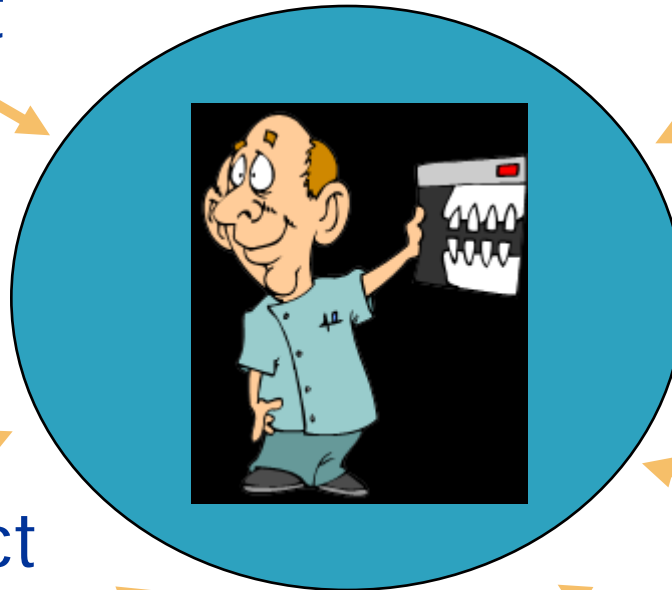
Education level



Resources available



Patient preferences

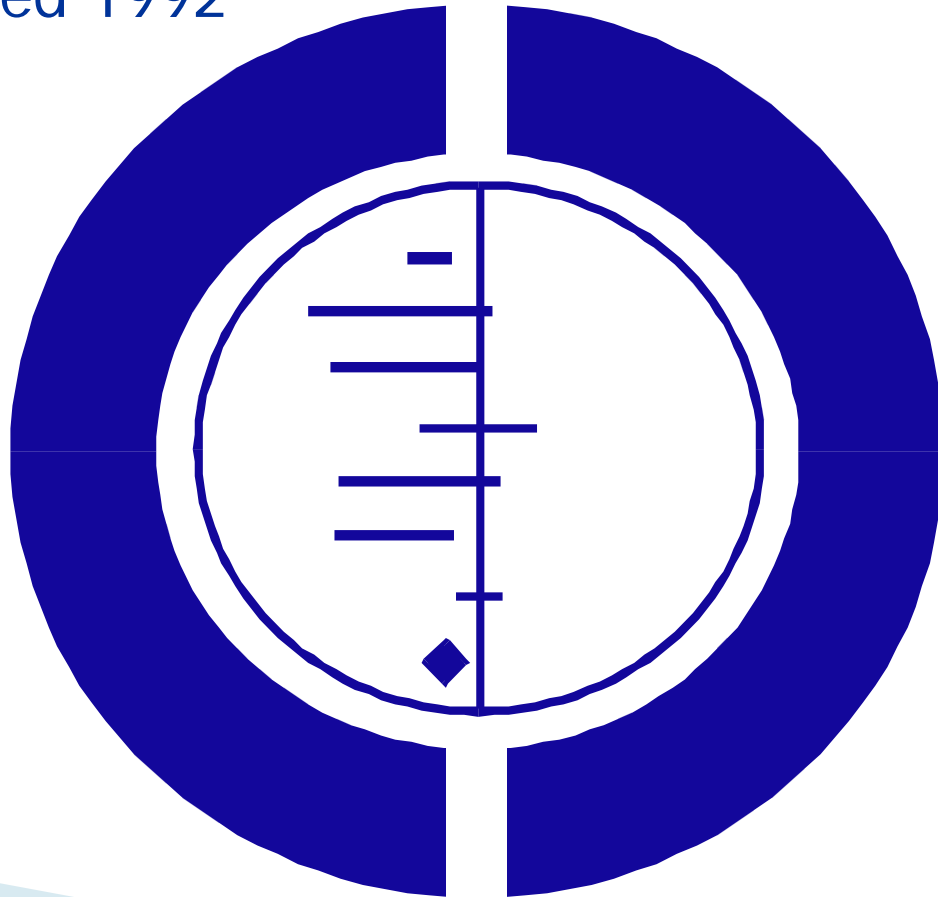




Influences on dental clinical decision making – initiatives



The Cochrane Collaboration
Established 1992



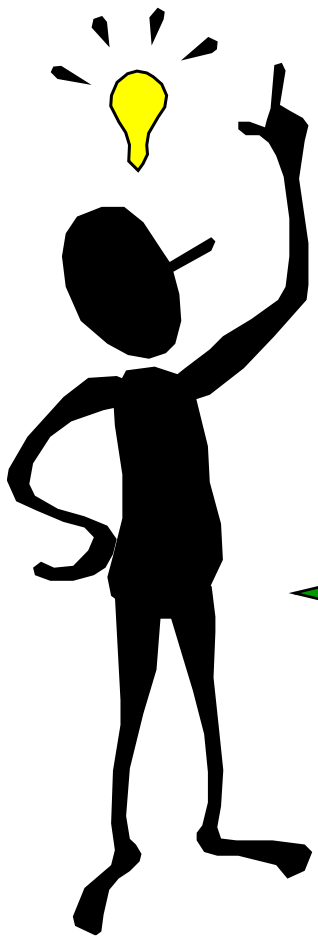
The "7 RCT
forrest-plot"
logo

Reflecting a
1989 SR of 7
interventional
trials that, if
implemented,
could have
averted the
suffering and
death of K
baby lives

Information Missing from Databases and Access Problems

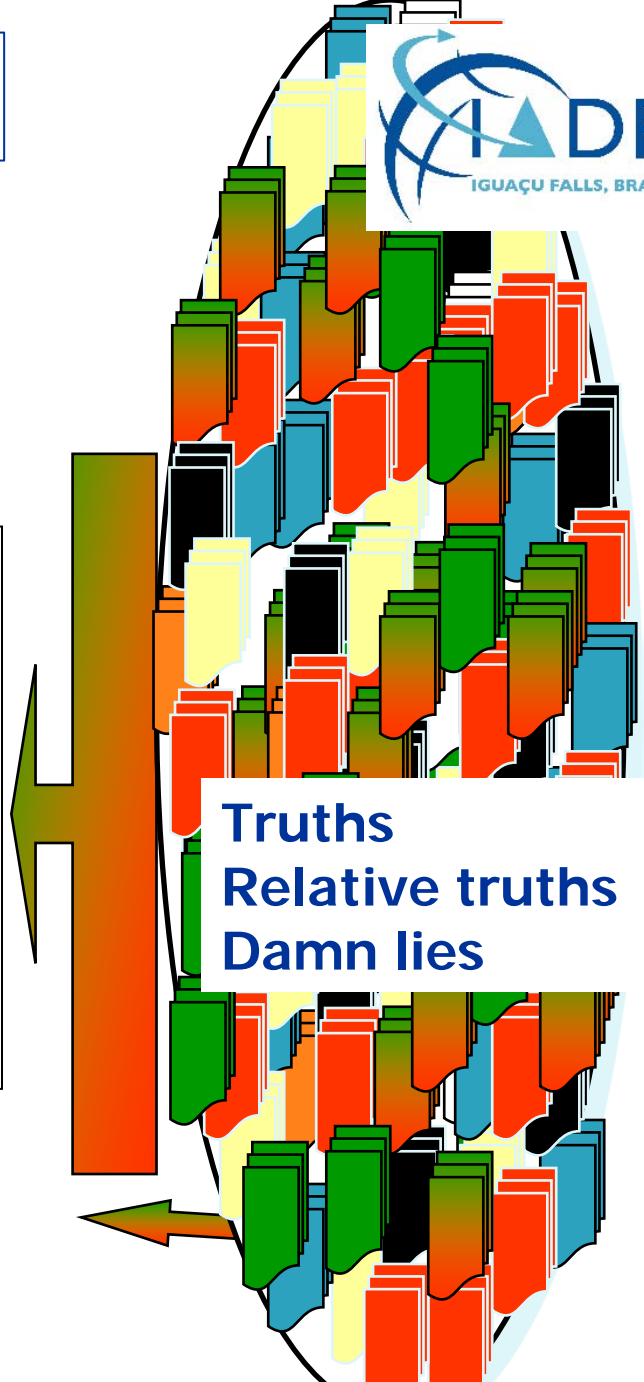


The new graduate



**Director/ teacher-
filtered:
"Curriculum"
&
"Classic literature"
&
"Select textbooks"**

Promotion a.k.a.
"Pizza-evenings"



**Truths
Relative truths
Damn lies**



The scientific basis for the practice of oral medicine and dentistry changes constantly, -

How can these changes effectively be implemented into education and into clinical practice?



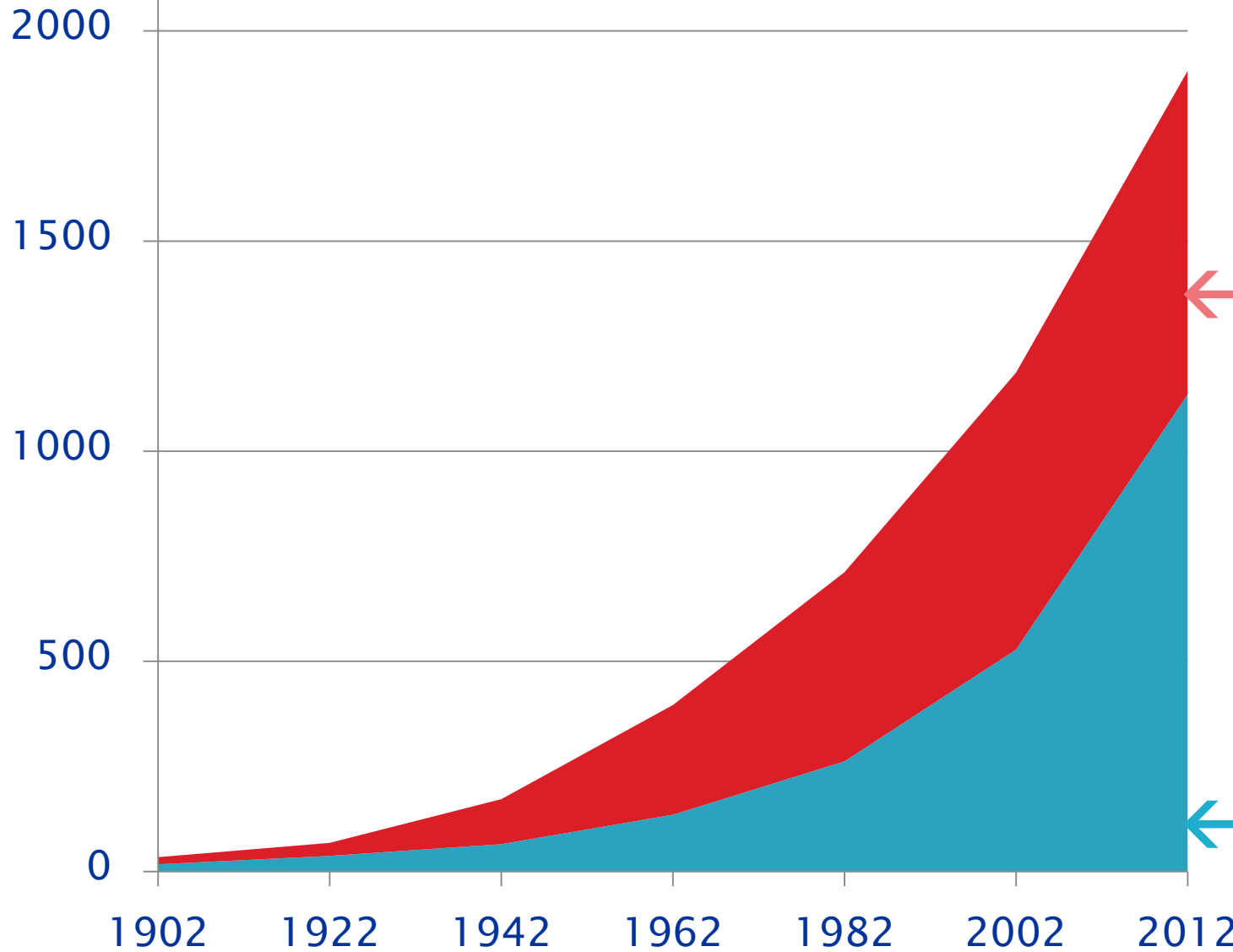
Periodicals within dentistry in circulation



1.6.2012:

- Magazine (250)
- Newsletter (114)
- Bulletin (43)
- Monography (33)
- Newspaper (26)
- Directory (21)
- Report (13)
- Proceedings (11)
- Handbook (9)
- Yearbook (9)
- Abstract/Index (5)
- Database (3)
- Catalog (2)

← Journal (1135)



Source: Ulrich's International Periodicals Directory

Information Missing from Databases and Access Problems



An EB-information overload too?



Ulrichsweb

Ulrich's Serial Analysis System



ULRICHSWEB™
GLOBAL SERIALS DIRECTORY

Search Workspace Ulrich's Update Admin

Enter a Title, ISSN, or search term to find journals or other periodicals:

evidence based



► [Advanced Search](#)

Retain my Advanced Search options

Narrow Results

► Key Features

▼ Serial Types

- Sort: Count | [Alpha](#)
- Journal (188)
- Monographic series (62)
- Handbook / Manual (59)
- Newsletter (29)
- Magazine (27)
- Directory (25)
- Proceedings (21)
- Report (15)
- Database (10)
- Newspaper (7)

Filter More...

► Formats

► Content Types

1 - 25 of 130 results for: **+(evidence based) +(title:(evidence based))**

[View Details](#) [Save to List](#) [Email](#) [Download](#)

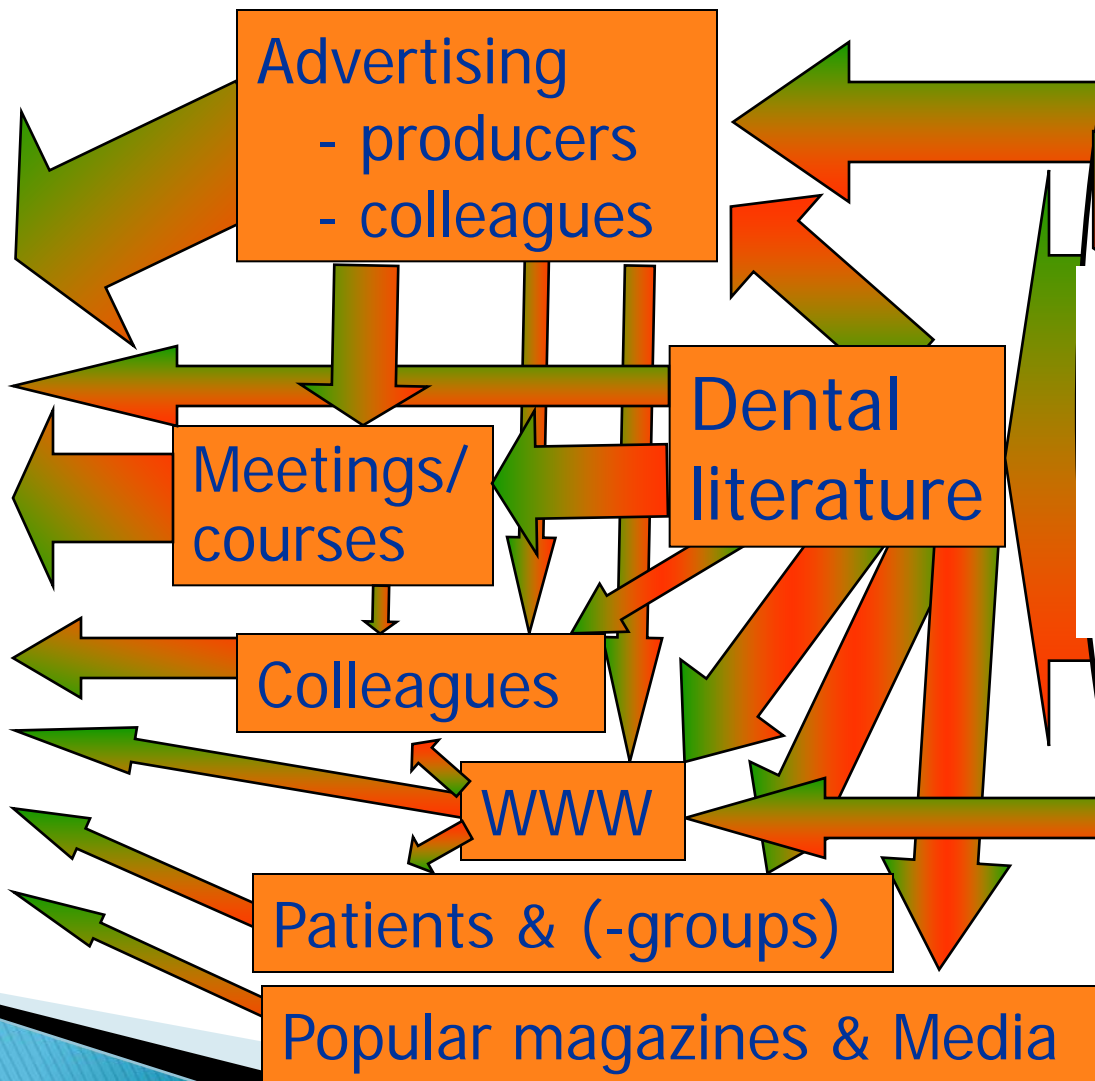
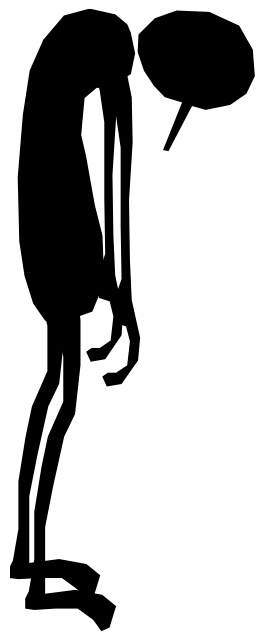
Page 1 of 6 25

	Title	Publisher	ISSN	Country
<input type="checkbox"/>	Evidence - Based Nursing	B M J Group		United Kingdom
<input type="checkbox"/>	Evidence - Based Nursing	B M J Group	1468-9618	United Kingdom
<input type="checkbox"/>	Evidence - Based Dentistry	Nature Publishing Group	1462-0049	United Kingdom
<input type="checkbox"/>	Evidence - Based Dentistry	Nature Publishing Group	1476-5446	United Kingdom
<input type="checkbox"/>	Evidence-Based Medicine (English Edition)	B M J Group		United Kingdom
<input type="checkbox"/>	Evidence - Based Oncology	Churchill Livingstone	1532-2203	United Kingdom
<input type="checkbox"/>	Evidence - Based Mental Health	B M J Group	1468-960X	United Kingdom
<input type="checkbox"/>	Worldviews on Evidence-Based Nursing	Wiley-Blackwell Publishing, Inc.	1741-6787	United States

Information Missing from Databases and Access Problems



A current Information Overload



Dental 'science'
~ 25 000 articles/year

Truths
Relative truths
Damn lies

Information Missing from Databases and Access Problems



Information need to answer a single clinical question



A 66 year old woman contacts your clinic due to oral lichen planus. She has read about a new treatment intervention described in her morning newspaper. Can you advise her?





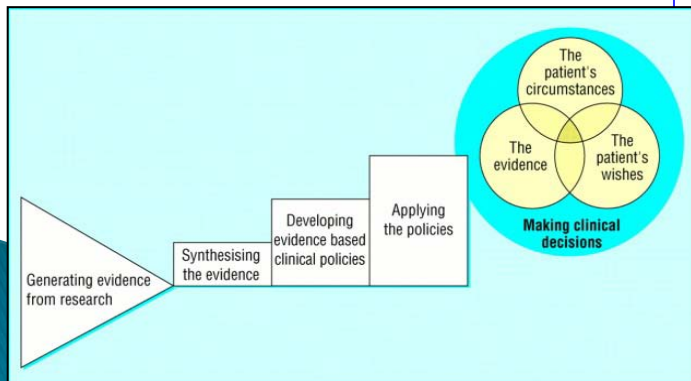
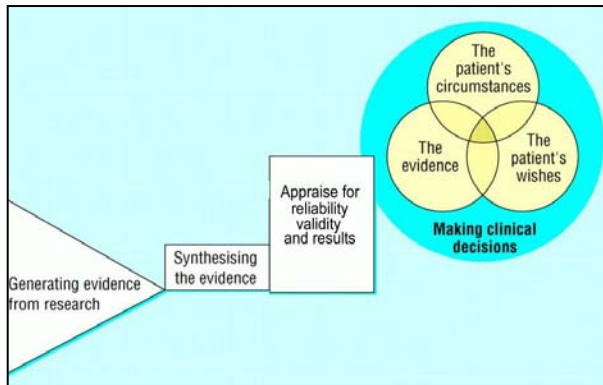
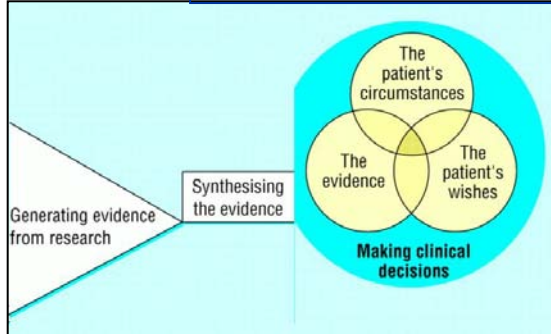
Evidence-Based decision-making



Modified from Haynes et al. BMJ 1998;317:273-6

Information Missing from Databases and Access Problems

Evidence-Based decision-making - alternative strategies



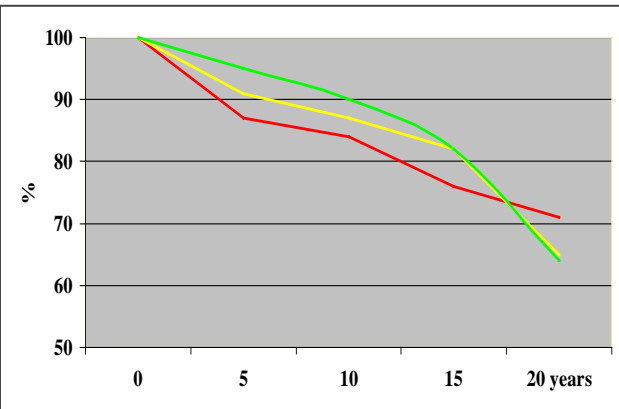
1. Identify & synthesize EB from primary and secondary literature

2. EB summaries generated by:

- Journals that critically appraise primary studies
- Systematic reviews

3. Clinical Practice Guidelines, Protocols and Policies based on EB principles

Information need to answer a complex clinical question, e.g., What is the optimal technical solution in prosthodontic therapy for a given condition?



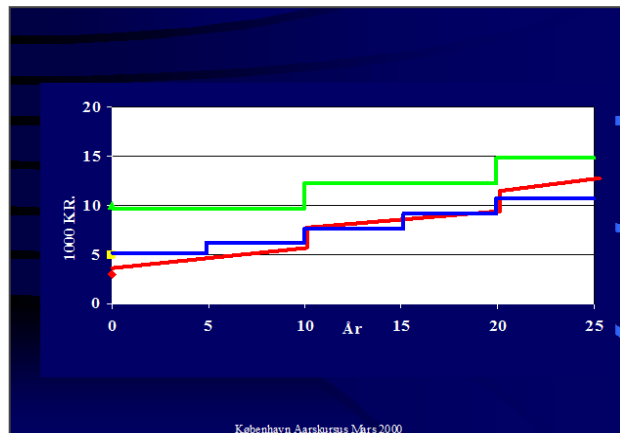
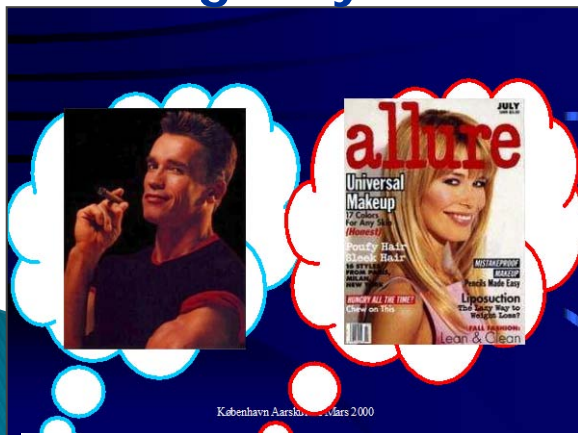
Independent variables	Bi-variate odds ratios	Bivariate significance	95% Confidence intervals bivariate odds ratios	Multi-variate odds ratios	Multivariate significance	95% Confidence intervals for multivariate odds ratios
Age group						
20-30	-	-	-	-	-	-
30-40	2.32	**	1.15 - 3.13	2.52	**	1.35 - 3.33
+40	2.63	***	1.43 - 3.08	2.63	***	1.83 - 3.8
Gender						
Male	-	-	-	-	-	-
Female	2.42	**	1.61 - 2.79	2.12	**	1.91 - 2.9
Material						
Amalgam	-	-	-	-	-	-
Composites	1.12	NS	0.13 - 1.56	1.42	NS	1.13 - 1.96
Glass ionom.	3.12	***	2.52 - 4.34	5.65	**	4.67 - 7.23
Dentists						
#1	-	-	-	-	-	-
#2	1.34	NS	0.35 - 1.61	1.04	NS	1.35 - 2.01
Location						
Mandible	-	-	-	-	-	-
Maxilla	1.55	*	1.17 - 2.04	1.15	*	1.57 - 2.14



Longevity

Risk factors

Outcomes probabilities



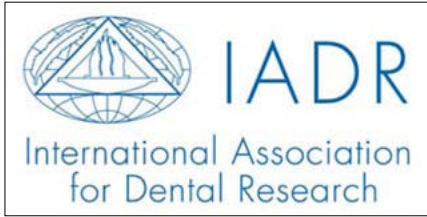
QOL-dimension

Incremental Cost

Worst Case Scenario



Databases with information for Evidence-Based decision making



IADR
A role to play?



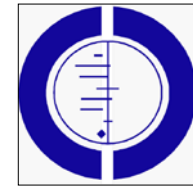
Databases
Primary /
Secondary
research



Systematic Reviews



Interventions (RCTs) only



Clinical Guidelines



Information Missing from Databases and Access Problems



Resume - current problems



- ▶ Students should not be trained to memorize select information but instead how to critically appraise new information as a prerequisite for life-long learning
- ▶ A main problem is not only lack of information – it's at times too much, and sometimes conflicting
- ▶ Many clinical questions are relatively straight-forward and hence EB for a treatment decision can – and should – be easy to find. However, other are complex and requires access to multi-dimensional information
- ▶ Current information sources have different scopes and formats, which are not directly applicable to many facets of clinical dental decision-making