Medical Faculty Heidelberg

Impact of continuing education in health professions

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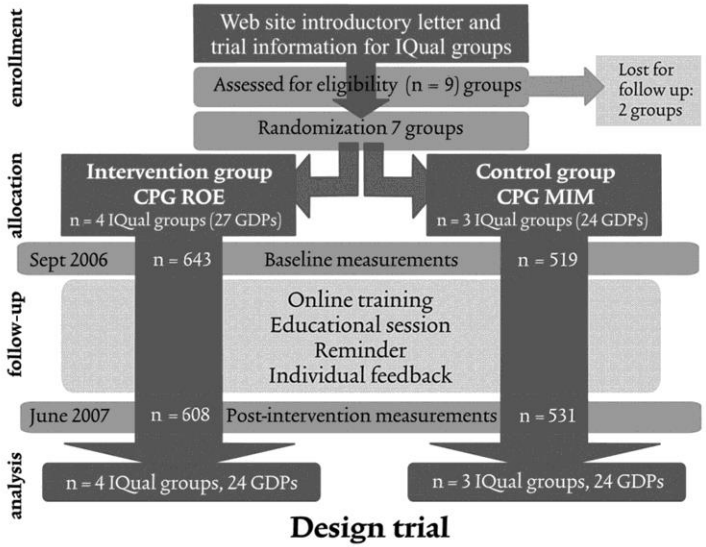
Topics

- How to measure impact of continuing education
- What do studies show on the impact of continuing education

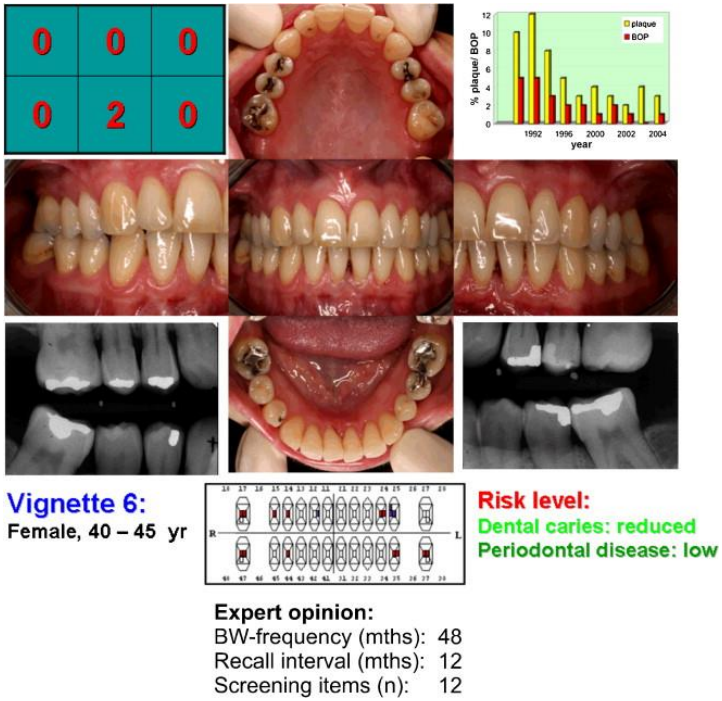
Examples

- lectures and conferences
- small group meetings
- skills training
- online distant learning
- multidisciplinary teamwork training
- educational outreach visits

Quality program for general dentists



Design trial



Adherence to ROE interval:

	Intervention	Control
High risk-baseline	90%	95%
High risk-follow up	89%	98%
Low risk – baseline	21%	17%
Low risk – follow up	29%	11% *

Mettes D, Van der Sande W, Grol R, Wensing M, Plasschaert F. Impact of guideline implementation on patient care: randomized trial. J Dent Res 2010;89:71-76.

Key messages

- Focus on professional performance in real clinical practice
- Impact of continuing education is related to wide range of factors

My profile

Roles

- Professor of health services research
- Head of M.Sc. Program HSR and implementation science
- Adjunct head of department of general practice
- Editor in Chief of journal Implementation Science

Themes

- Primary and ambulatory care
- Professional performance
- Organisation of healthcare
- Implementation science

Impact and how to measure it

Concepts

- Knowledge
- Skills
- Professional practice

- Health outcomes

Measures

- Knowledge test
- Tests in skills lab
- Direct observation, medical records, etc.
- Clinical measure, patient questionnaires, etc.

Lessons from research

- Performance in real practice is only moderately related to knowledge and skills tests
- Minimum numbers of observations are required for a reliable assessment

Professional practice

- Clinical decisions (e.g. drug prescribing)
- Technical practice (e.g. nursing, surgery)
- Counseling of patients
- Patient-centred communication
- Organization of practice
- Cost implications
- …

To conclude

- Measurement of impact requires careful planning
- Balancing validity, impact and feasibility

Impact of continuing education

How much is changed after a continuing education course?

Surgical team training

- One day with surgical team (operating room is closed), using lecture, group interaction, and videos
- Team training based on ‘crew resource management theory’ (from aviation), focused on communication routines, e.g.:
  - Challenge each other when safety risks are identified
  - Structured briefings and debriefings
  - Stepping back to reassess situations

Neily J. Association between implementation of a medical team training program and surgical mortality. JAMA 2010;304:1693-1700.

Effect of surgical team training on mortality (Neily 2010)

- Observational study in VA with 2 year follow up :
  - 74 facilities with training
  - 34 facilitaties without training
- Improvement, although not statistically significant:

Risk-adjusted yearly mortality per 1000	Training	No training
Baseline	17	15
Follow up	14	14

Neily J. Association between implementation of a medical team training program and surgical mortality. JAMA 2010;304:1693-1700.

Cochrane reviews

	Number of studies	Effects on professional performance
Printen educational material	23	+ 4%
Educational meetings	56	+ 6%
Educational outreach visits	34	+ 5%
Audit and feedback	118	+ 5%

Why is it not more effective?

- Program missed crucial components
- Program was not sufficiently intensive
- Program did not reach the targeted group
- Contextual factors inhibited change (financial incentives, organisation of care, work force regulations)
- …

Another reason…

- Educational strategies are listed by delivery format (by Cochrane-EPOC)

- Perhaps we need a different or additional classification, for instance based on theory on behaviour change

Audit and feedback (Ivers 2012)

- Median effect: 4.3% improvement
- Lowest quartile: 0.5% improvement
- Highest quartile: 16.0% improvement
- No change in effect size since 1990 (with 16 trials)

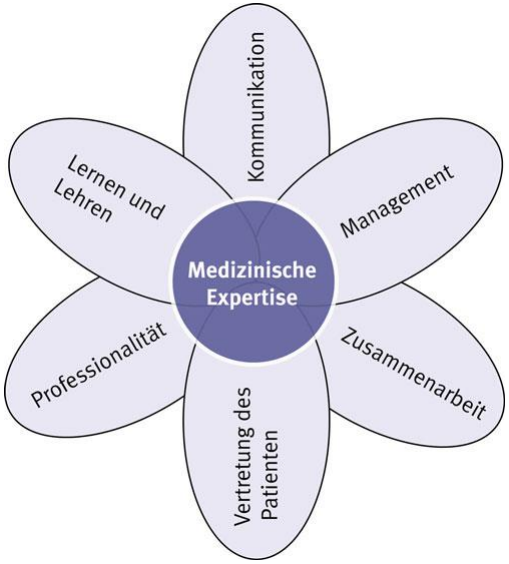
Predictors of effect (Ivers 2012)

- Low baseline performance
- Feedback by supervisor or senior colleague
- Delivered written and oral
- Repeated feedback
- Inclusion of targets and action plan

Recommendations for evaluation

- Measure outcomes
- Compare with control condition
- Identify relevant program components
- Identify relevant context factors
- Collect participant experiences
- Use this information for feedback and program improvement
- Allow scientific research linked to evaluation

Feedback of residents to clinical teachers in three medical specialties



Canmeds

EFFECT questionnaire for medical residents on clinical teachers

Feedback to clinical teachers and their supervisors: improved teaching (n=237 residents on 24 teachers)

Fluit C, Bolhuis S, Grol R, Laan R, Wensing M. Assessing the Quality of Clinical teachers. A systematic review of Content and Quality of Questionnaires for Assessing Clinical Teachers. J Gen Intern Med 2010;25(12): 1337-1345.

Key messages

- Focus on professional performance in real clinical practice
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Thank you!

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