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Are we putting evidence based medicine (EBM) into clinical practice

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Outline

— EBM background of selected key-processes

— Methods
- ➔ how was the data collection performed?
- ➔ subjects of interest (health care providers)
- ➔ data analysis

— Results

— Conclusion

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Identified key processes in diabetes care

- (1) Treat hypertension
- (2) Statins if CAD and high cholesterol
- (3) Secondary prevention after myocardial infarction by insulin treatment
- (4) Not smoking / smoking cessation
- (5) Structured patient empowerment/education
- (6) Eye examination (retinopathy)
- (7) Feet examination (foot on risk)

Lit. „Evidence-Base for a Disease Management Programme for Type 2 Diabetes", Michael Berger, Peter Sawicki and Norbert Schmacke ISBN 3-9806621-2-8

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What is the evidence for the selected key processes?

- (1) Treat Hypertension
  - UKPDS 38. *BMJ 1998; 317:703-13*
  - Latini R, Tagnoli AP et al. *J Am Coll Cardiol 2000; 35: I801-I807*
  - Pahor M, Psaty BM, Furberg CD. *Lancet 1998; 351:689-690*
  - Sawicki PT, Siebenhofer A. *Int J Med 2001; 250: II-17*
- (2) Statins if CAD and high cholesterol
  - 4S. *Lancet 1994;344:1383*
  - CARE. *NEJM 1996; 335:1001*
  - LIPID. *NEJM 1998;339:1349*

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What is the evidence for the selected key processes?

(3) Secondary prevention after myocardial infarction by insulin treatment

- DIGAMI Study. *Am J Coll Cardiol 1995;26:57-65* (Evidence B)

(4) Quit smoking

- 40 years‘ observations on male British doctors, *BMJ 1994;309:901-911*
- Smoking cessation in relation to total mortality rates in women. *Ann Intern Med 1993;119:992-1000*

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Evidence for other key processes (not analysed)

Structured patient empowerment/education

- Mühlhauser I, Berger M. *J Intern Med 1993;233:321-326*
- Campbell M, Fitzpatrick R et al. *BMJ 2000;321:694-696*
- Norris SL, Engelau MM et al. *Diabetes Care 2001;24:561-587*

Eye examination (retinopathy)

- Klein R, Klein BEK, Moss SE et al. *Arch Ophthalmol 1984;I02:527-32*

Feet examination (foot on risk)

- Vileikyte L, Hutchings G, Hollis S, Boulton AJ. *Diabetes Care 1997;20:623-626*
- Edelman D, Sanders LJ, Pogach L. *Preventive Medicine 1998;27:274-278*

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Methods:

- **Data collection**
  - ➔ FQSD Basic Information Sheets
  - ➔ annual patient examination
- **Data transfer**
  - ➔ via ground mail
  - ➔ via internet (SSL)
- **Data entry**
  - ➔ high speed OCR scanner
  - ➔ online (Browser)
- **Data analysis**
  - ➔ online
  - ➔ STATA 7.0

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Methods: Kind of investigation

- **Subjects of investigation**
  - ➔ 15 health care providers (hospitals and diabetes specialists)
  - ➔ in charge for at least 10 MI patients (Type 2 Diabetes)
- **Type of study**
  - ➔ retrospective cohort
  - ➔ baseline 1998
  - ➔ endpoint 2001
- **Type of outcome**
  - ➔ process indicators
  - ➔ degree of process implementation

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Methods: Data Analysis

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- **Data basis**
  - ➔ 2487 patient records (FQSD-BIS) in 1998
  - ➔ 1993 patient records (FQSD-BIS) in 2001
- **Analyses**
  - ➔ (1) degree of antihypertensive treatment start/ continuation on hypertensive patients (RR > 140/90)
  - ➔ (2) degree of dyslipidaemia treatment if CAD and hyperlipidaemia (chol > 5.5 mmol/l)
  - ➔ (3) degree of change/continuation to insulin treatment after myocardial infarction
  - ➔ (4) rate of non-smoking patients

paired t-tests were used

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Results (1998-2001)

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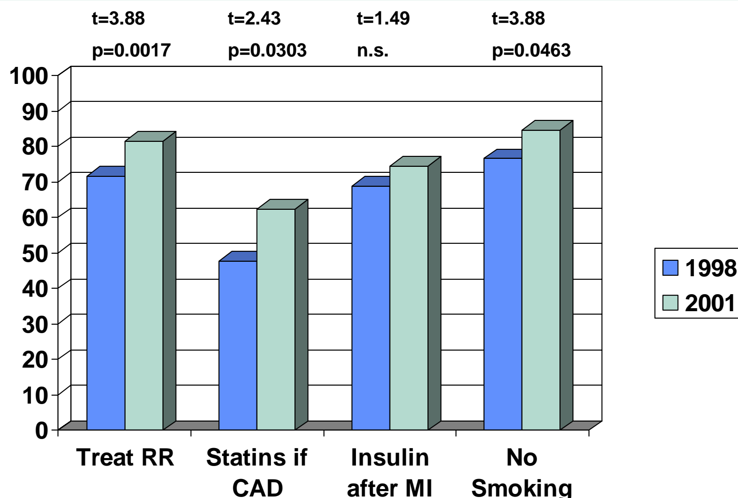

N=15 Healthcare Providers

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Conclusion

- Implementation of CQI (continuous quality improvement) improves decision making
- There are still lacks in EBM-based process indicators to overcome
- CQI is also necessary for the QM-tools used
- stable process improvement needs frequent reports and feedback mechanisms

- We are not always putting EBM into clinical practice, but more frequently - and with success

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