

Benefits of a web-based error reporting system in general practice

What have we learned?

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Institut für
**Allgemein-
medizin**

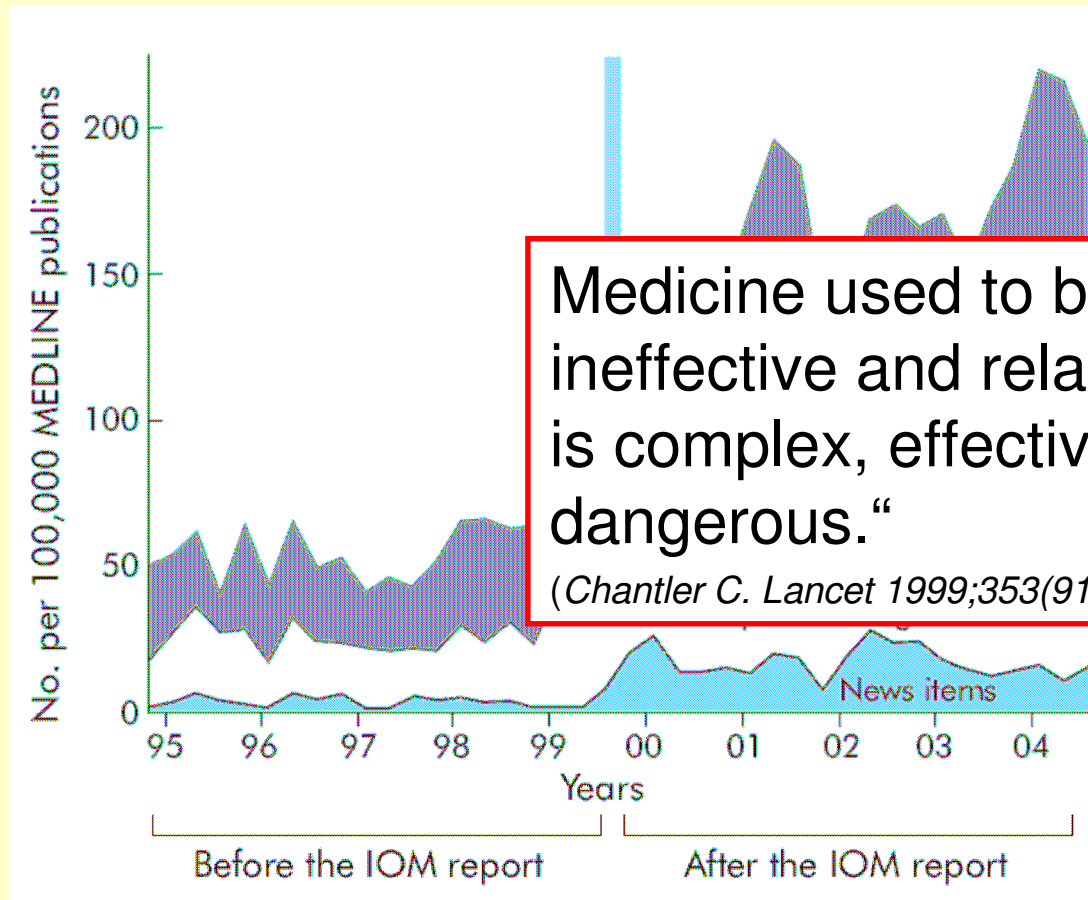


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Agenda

- Medical errors in primary care
- What is an error?
- Taxonomies of medical errors
- International Taxonomy of Medical Errors in Primary Care
- Reporting and Learning System
www.jeder-fehler-zaehlt.de
- Benefits, limitations, prospects

Patient safety – a new term coming into fashion?



Medicine used to be simple, ineffective and relatively safe; now it is complex, effective and dangerous.“

(Chantler C. *Lancet* 1999;353(9159):1178-81)

Patient safety publications in Medline. In *Stelfox HT et al. Qual Saf Health Care* 2006;15;174-178

Medical errors in primary care

- Systematic review: **5 - 80 medical errors occurred per 100,000 consultations** (USA, NL, SWE, UK, AUS)

(Sandars J et al. Fam Pract 2003; Family Practice Vol. 20, No. 3, 231-6)

- Threats to Australian Patient Safety TAPS study: incidence of **errors reported** by general practitioners using a secure web-based tool: **2 errors per 1,000 patients seen by GP**

(Makeham MB et al. MJA 2006;185(2):95-8)

- **PCISME** Primary Care International Study of Medical Errors 2001/2002: **reporting** by means of web-based tool using a taxonomy

(e.g. Beyer M et al. Zeitschrift für Allgemeinmedizin 2003;79:327-331)

What specific risks are there in primary care?

- **Increasing complexity of care** and poor chance of monitoring results
- Most primary care treatment involves **medication**
- **Uncertainty** (patients presenting with nonspecific symptoms in early stage of disease; minor pathology)
- Litigation and **malpractice claims**:
34 % diagnostic errors
(Phillips RL et al. Qual Saf Health Care 2004;13;121-6)
> 50 % diagnostic errors (failure or delay in diagnosis)
(Fenn P et al. Victoria University of Manchester 2004)
- **Lack of peer review**

What is an error?

- “There were **no consistent definitions** of what constituted an ‘error’.”

Sandars J et al. Fam Pract 2003; Family Practice Vol. 20, No. 3, 231-6)

- “The **terms** ‘error’ and ‘adverse event’ are **often used interchangeably**.”

(Jacobson L et al. Family Practice 2003; 20: 237–41)

- **Error: failure of a planned action to achieve it’s desired goal.**

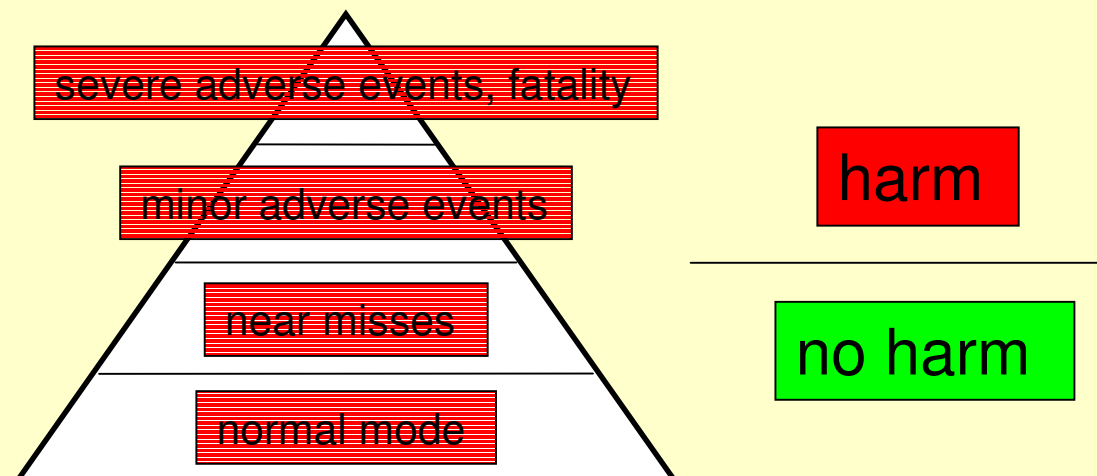
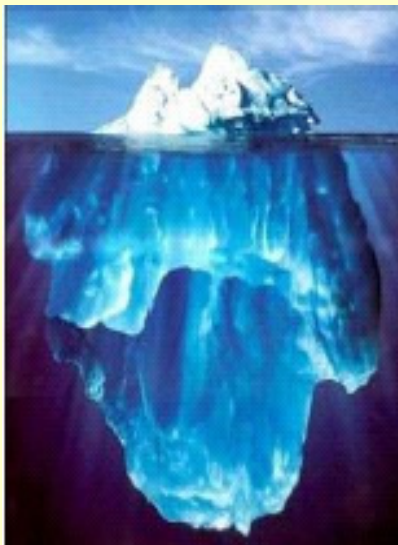
Plan is adequate, but the associated actions do not go as intended.

Actions may go as planned, but the plan is inadequate.

(Reason J. Qual Health Care 1997;4:80-9)

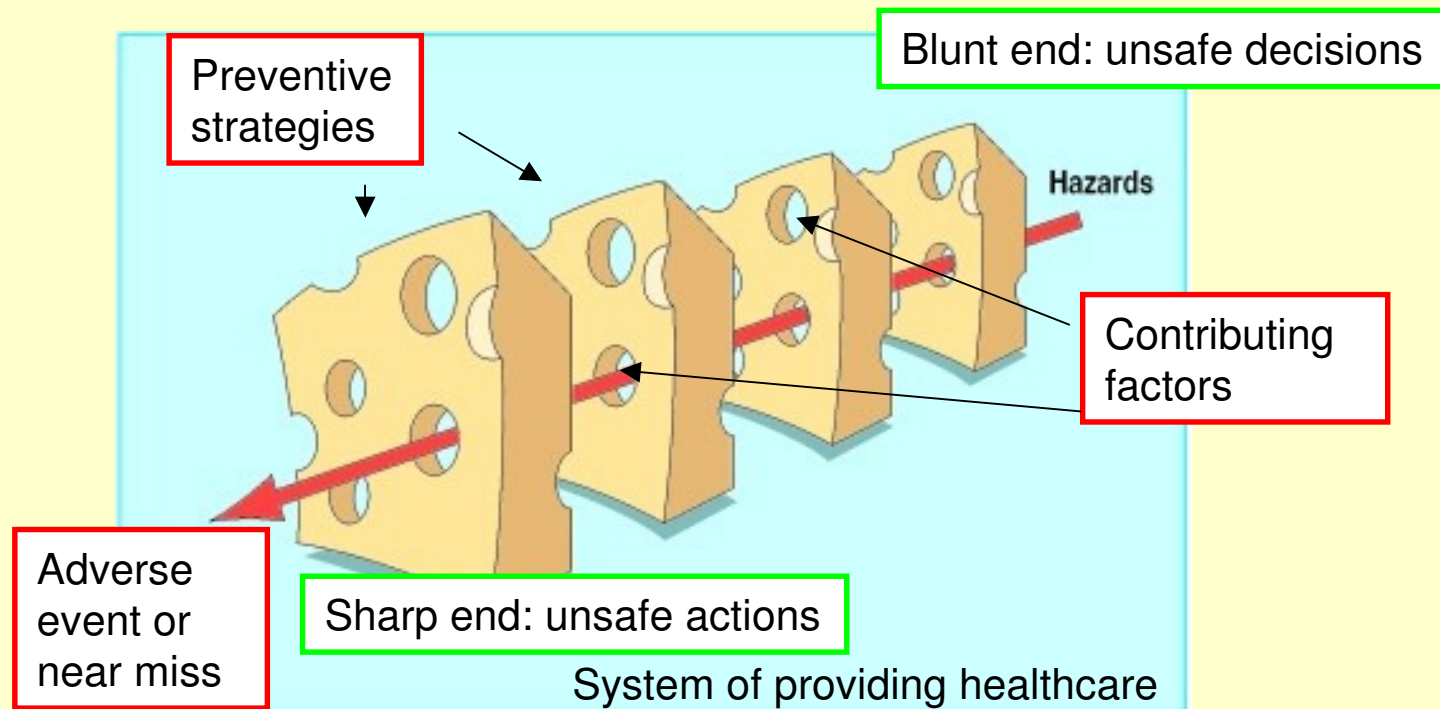
Adverse events and near misses

- Adverse events and near misses: same root causes, same contributing factors
- Near misses occur quite often
- Severe adverse events: the tip of the iceberg



Human factors and organizational accidents

- System's perspective on medical errors:
organizational *and* individual accountability



Do we need taxonomies of medical errors?

- To observe and study medical errors
- **Basis for detection, analysis, classification and to record errors**
- Measure frequency and severity
- Identification of priorities for research and action
- **Identification of causes and preventive strategies**
- ➔ Translate event reporting data into actionable knowledge
- ➔ Reduce the level of harm to patients

What should a taxonomy contain?

What went wrong?

- type of events
- impact/outcomes
- involved staff/patients
- setting

Why did it go wrong?

- Root causes and contributing factors

How can we prevent things from going wrong?

- Mitigating factors and preventive strategies

Taxonomies of medical errors in primary care

For primary care in particular

- International Taxonomy of Medical Errors in Primary Care (AAFP - Linnaeus-PC Collaboration, 2002/4)
- ASIPS DMO: Applied Strategies for Improving Patient Safety Dimensions of Medical Outcome (2003)
- Multilevel taxonomy (Kostopoulou, 2006)

Generic/universal taxonomies

- Generic Occurrence Classification (1998)
- JCAHO Patient Safety Event Taxonomy (2005)
- WHO International Patient Safety Event Classification (2007?)

International Taxonomy of Medical Errors in Primary Care

What goes wrong?

- **Error type**: process errors and knowledge/skills errors
- **Actions taken** (as a result of event)
- **Consequences**
- **Severity of harm**
- **Harm** (patient status at time of report)

Why do things go wrong?

- **Contributing factors**

How can we prevent things from going wrong?

- **Prevention strategies**

Error types

Process errors

- Office administration
- Equipment and physical buildings/surroundings/practice location
- Investigations
- Treatment errors
- Communication
- Payment
- Workforce and organization of care

Knowledge and skills errors

- in execution of a clinical task
- in execution of an administrative task

Contributing factors

- Patient
- Provider
- Provider team
- Task
- Working conditions
- organization
- Physical environment
- Regulatory/payment system

Learning opportunities from error reports

- Frequency of *reported* errors, not of errors which actually occurred!
“counting errors is a waste of time“
- Casuistic approach
- Systematic approach

www.jeder-fehler-zaehlt.de

- “Every error counts“
- Anonymous web-based reporting system
- Launched September 2004
- General practices in German-speaking countries
- Used in Germany and Austria

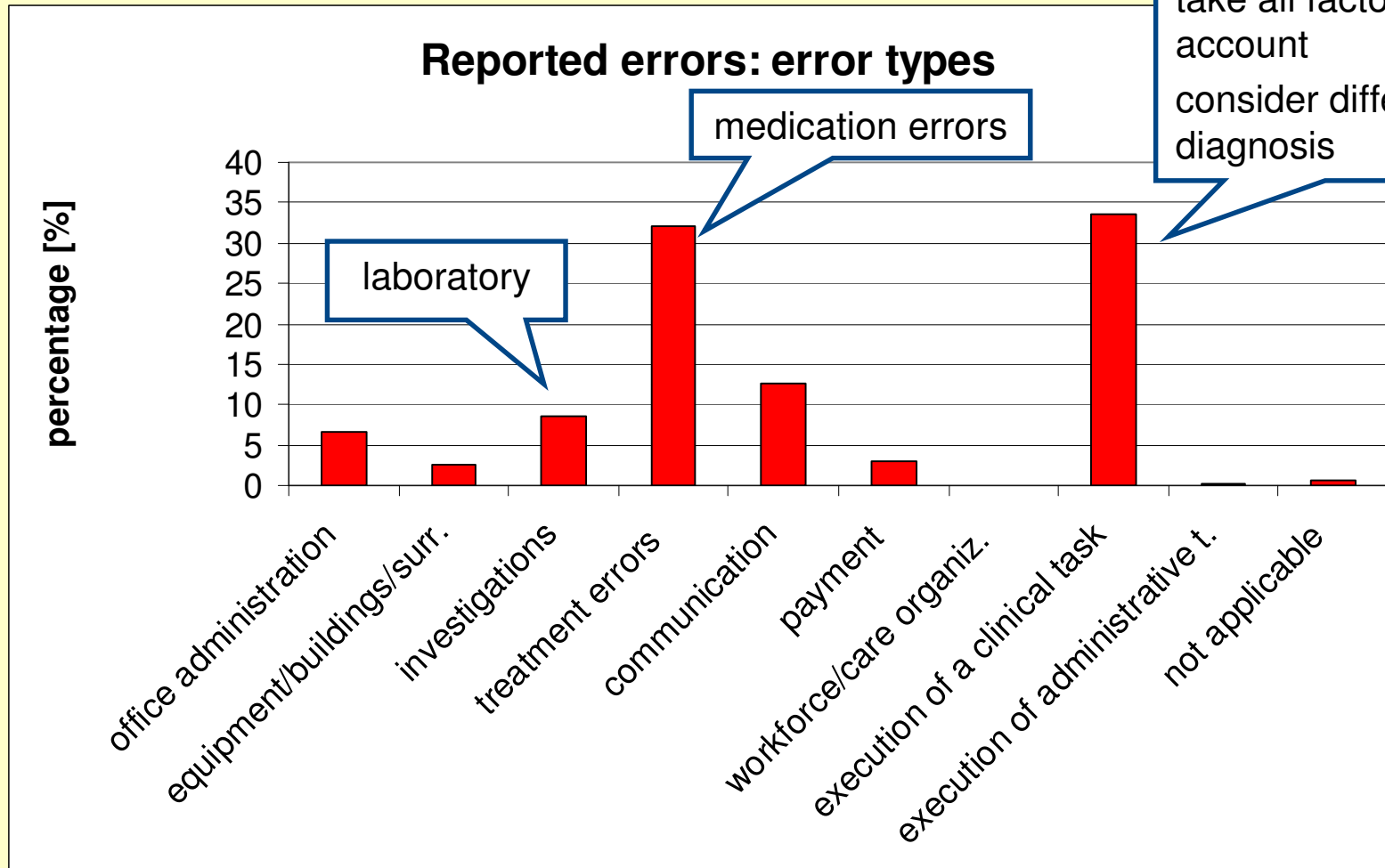
What should be reported?

- Definition of Institute of Medicine (USA):
“failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim“
- More pragmatic approach:
“Anything that was a threat to patient well-being and should not happen. I don’t want it to happen again.”

Results from www.jeder-fehler-zaehlt.de

- 199 reports analyzed
- 188 reports with at least one error
- 342 separate errors classified

Error types

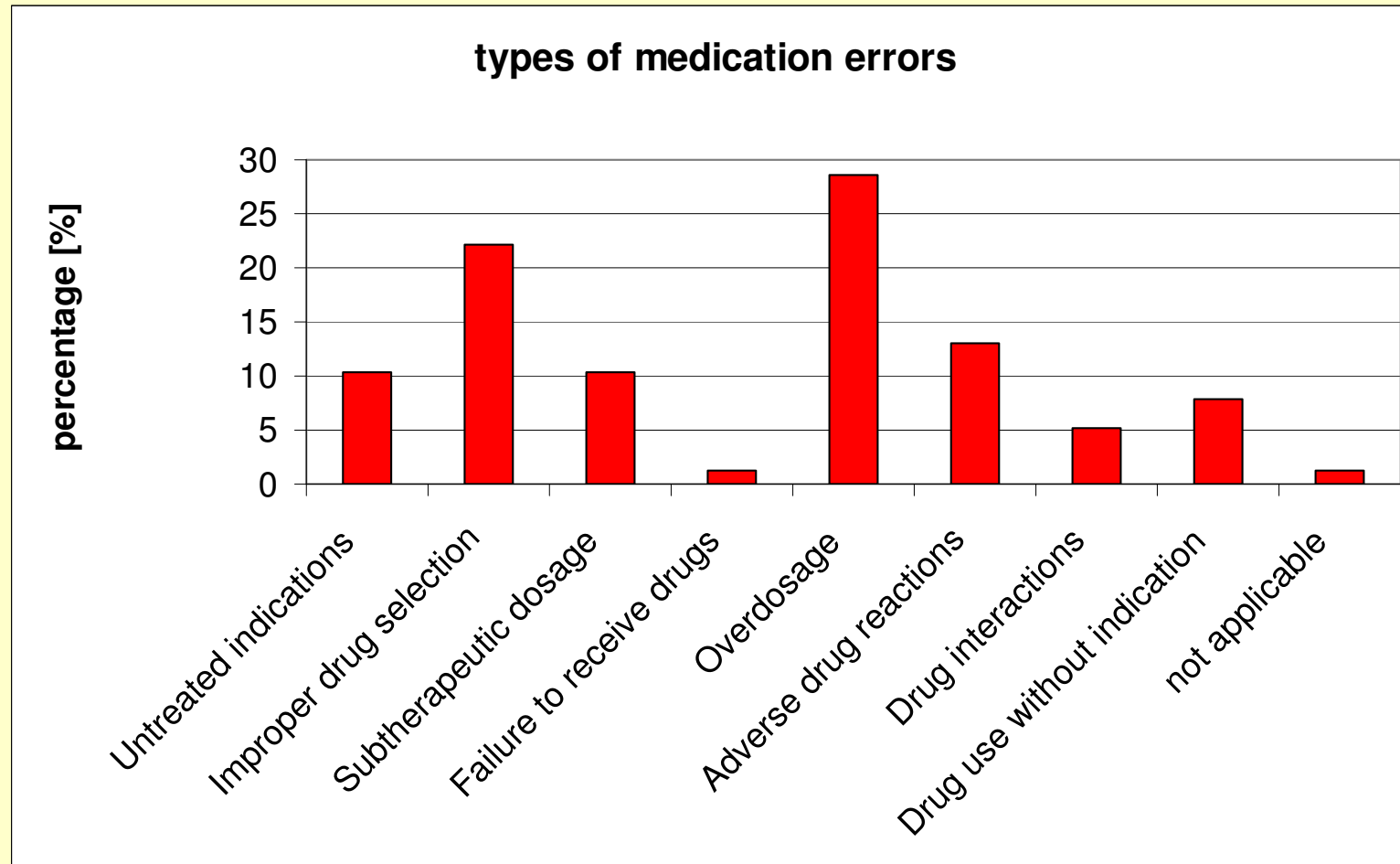


Failure to adequately examine,
take all factors into account
consider different diagnosis

medication errors

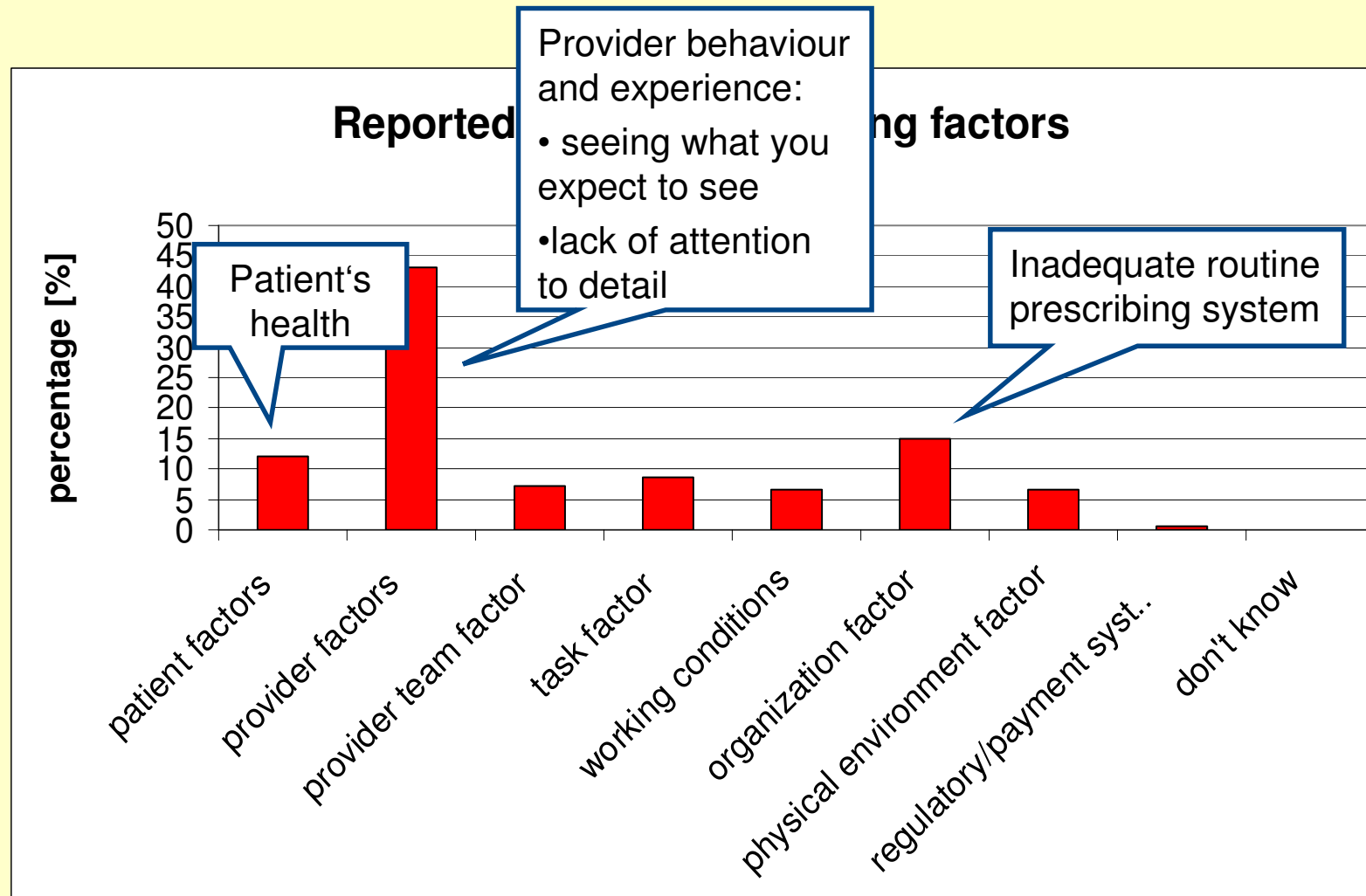
laboratory

Medication error types

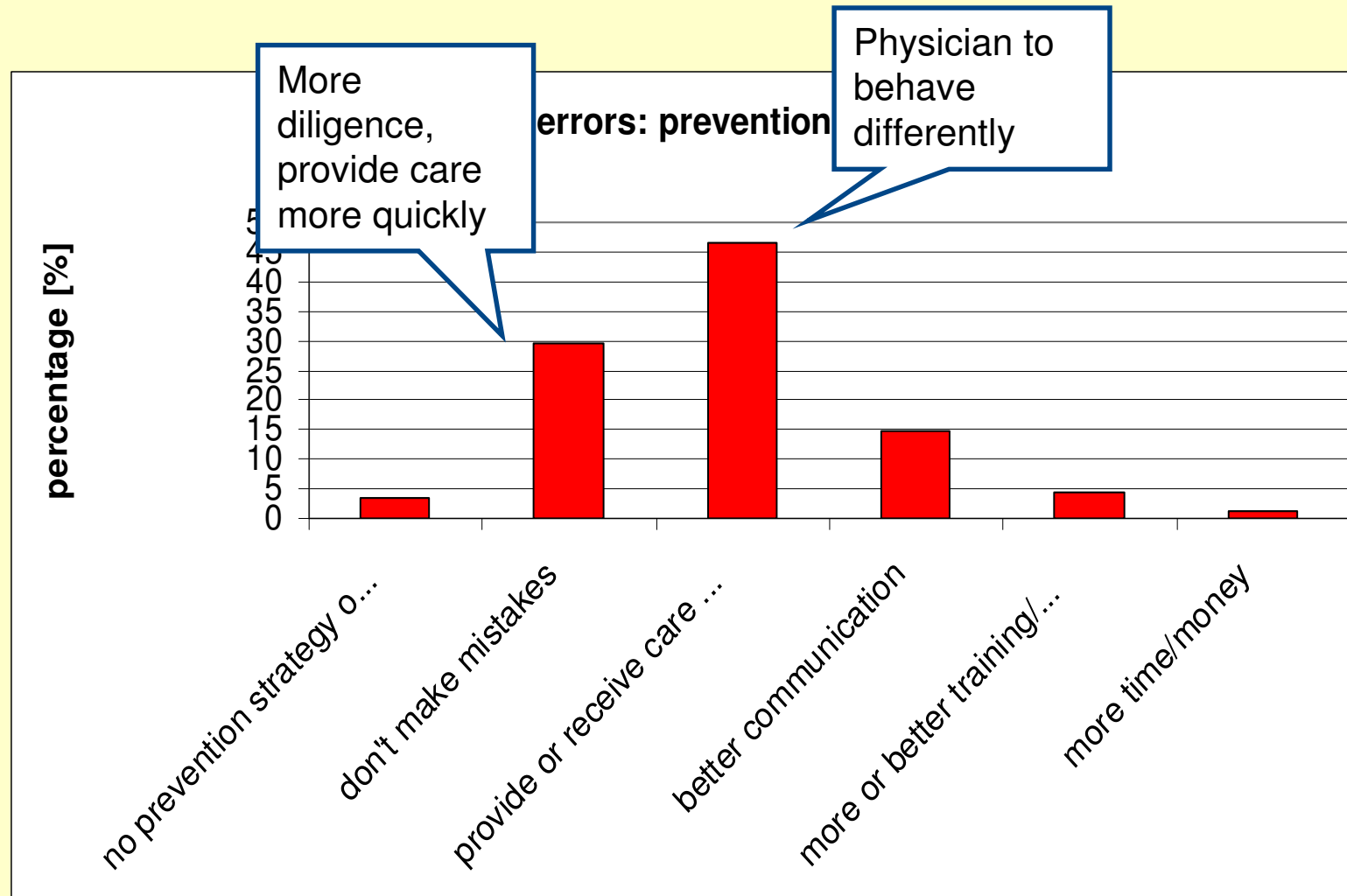


(Hepler CD, Strand LM. Am J Hosp Pharm 1990;47:533-43)

Contributing factors



Prevention strategies offered



Frequent error types and associated contributing factors

- Type: errors in ordering medication

Provider behaviour (**provider failed to check printout, failure to check chart**), provider experience, provider communication

task communication factor

dysfunctional primary care clinical services

- Type: failure to adequately examine etc.

patient's health (presenting with many problems)

provider behaviour (**seeing what you expect to see**), provider experience

time and location factor (home visit)

What have we learned about errors, causes and prevention?

- **Medication errors**

computerized physician order entry and decision support, establish protocols (e.g. read back, double check)

- **Laboratory errors**

reminder system, establish protocols (respond to results)

- **Communication errors**

encourage shared decision making, establish communicative culture

- **Diagnostic errors**

education, training, establish protocols, checklists

benefits of www.jeder-fehler-zaehlt.de

- Learn **what may go wrong**
(what is often reported, case reports)
- Learn **why some things go wrong**
(contributing factors)
- **Develop preventive strategies** to meet reported and classified contributing factors
(e.g. establish protocol for prescribing process)

Problems in classifying reported errors

- **Insufficient information** to classify correctly or to understand what happened
- **Cognitive mechanisms** often speculative (rule-based, knowledge-based mistakes, slips, lapses, violation?)
- In primary care: **provider = organization**
- Reporting by healthcare professionals inexperienced in error analysis tends to **overestimate the influence of the individual** on error causation
- **Few** offered promising **prevention strategies**

Limitations of the classification system

- **Structure of domains**

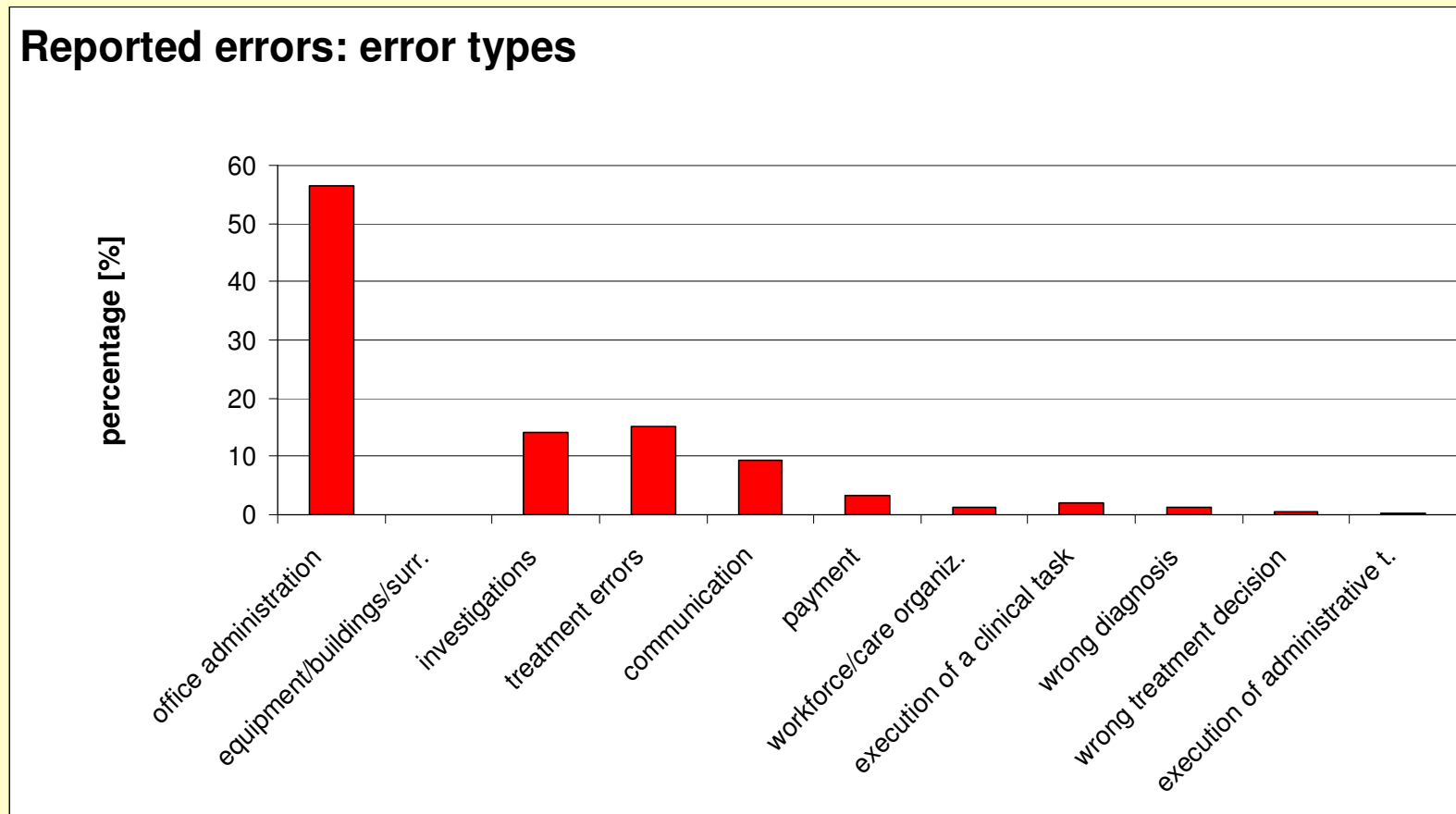
up to 15 items on the fifth level!
=> extensive training required

- **Error type**

mixture of concept-based (process errors, knowledge/skills errors) and descriptive classification

- Categories for **prevention strategies** and order of other categories to some extent arbitrary

Learning from different lenses: reports of medical errors in primary care by clinicians, staff and patients



(Phillips RL et al. J Patient Saf 2006;2(3):140-6)

How can we increase the benefits from reporting?

- Establish callback to improve informational content (**closed user group**)
- Further development of classification system
- Expand report form (ask for specific information, tick boxes)
- Designate free text passages (e.g. “What happened? Please consider what, where and who was involved.”)
- **Encourage non-physician staff to report**
- Training in error reporting and analysis

Thank you for your attention!