

Patient Safety Indicators

Study tour for Norwegian hospital pharmacists
Berlin
08. April 2011



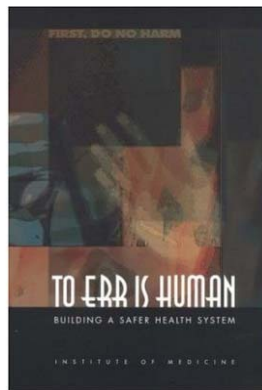
Content

- Patient Safety ?
- Patient Safety Indicators (PSI) ?
- PSI Project
(publicly sponsored by the German Ministry of Health)



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Patient Safety



„safety is defined as
**freedom from
accidental injury**“

Kohn et al. 1999

(Preventable) Adverse Event

„An **adverse event** is an injury resulting from a medical intervention, or in other words, it is not due to the underlying condition of the patient.“

„An adverse event attributable to error is a **preventable adverse event.**“

Kohn et al. 1999



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Quality Indicator

„An indicator is a **quantitative measure** that can be used **to monitor and evaluate** the quality of important governance, management, clinical, and support functions that affect patient outcomes. An indicator is **not a direct measure of quality**. Rather, it is a **tool** that can be used to assess performance that can **direct attention to potential performance issues** that may **require more intense review** within an organization.”

JCAHO 1990

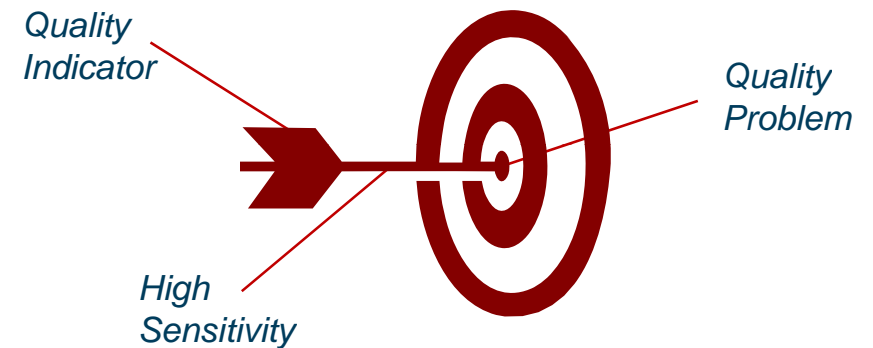


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Quality Indicator



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Patient Safety Indicators

„**Specific quality indicators** which also reflect the quality of care inside hospitals, but **focus on aspects of patient safety**. Specifically, PSIs screen for problems that patients experience as a result of exposure to the healthcare system, and that are likely amenable to prevention by changes at the system or provider level.”

Mc Donald et al., AHRQ 2002

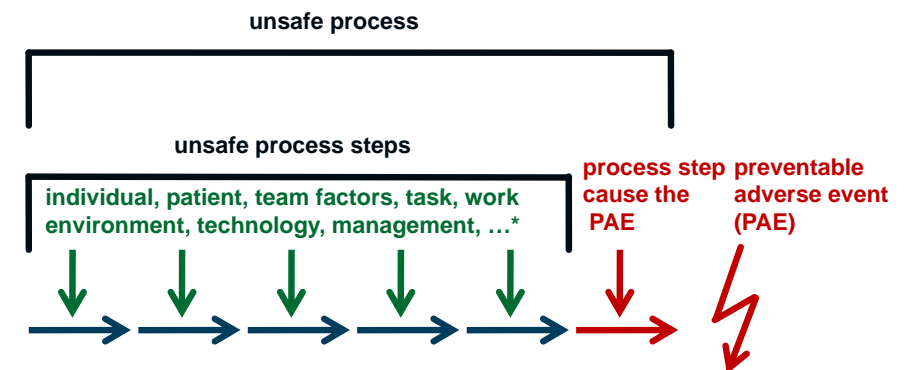


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Chain Of Errors



* London Protocol, Vincent et al. 1998

Schrappe 2010



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PSI Project

„Validity and feasibility of (area) patient safety indicators: international status and specification for the German health care system”

(publicly sponsored by the German Ministry of Health)

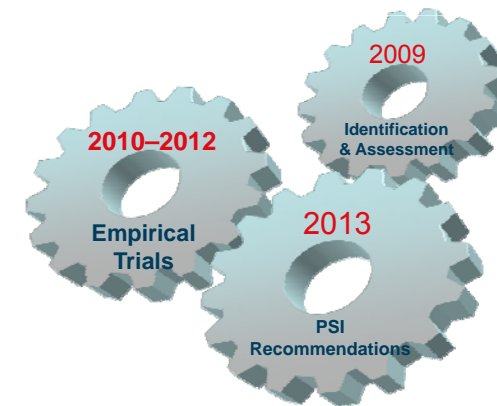


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Focus Areas



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Aims

- 1. identification and classification of internationally used patient safety indicators**



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Identification

Date of publication: Jan. 2000 – Dec. 2009

- Medline - based search (3.635 articles)
→ 1.568 PSI
- Web - based search (30 institutions)
→ 1.405 PSI

Σ 2.973 PSI



800 PSI in relation to drug-related therapy



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Aims

1. **identification** and **classification** of internationally used patient safety indicators
2. their **categorization** as a subgroup of quality indicators



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Categorization



based on

- serious (P)AE or
- death

including

- sentinel events or
- serious reportable events



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Aims

1. **identification** and **classification** of internationally used patient safety indicators
2. their **categorization** as a subgroup of quality indicators
3. their **prioritization**



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Prioritization



defined criteria in regard to

- the needs for action in the German health care system

and

- evidence - based quality.



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Aims

1. **identification** and **classification** of internationally used patient safety indicators
2. their **categorization** as a subgroup of quality indicators
3. their **prioritization** in regard to the needs for action in the German health care system
4. their **assessment** by reference to evidence-based quality criteria following the **QUALIFY-tool**



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Assessment

Table 1: QUALIFY: Criteria and Categories

Category	Criterion
Relevance	Importance of the quality characteristic captured with the quality indicator for patients and the health care system
	Benefit
	Consideration of potential risks / side effects
Scientific soundness	Indicator evidence
	Clarity of the definitions (of the indicator and its application)
	Reliability
	Ability of statistical differentiation
	Risk adjustment
	Sensitivity
	Specificity
Feasibility	Validity
	Understandability and interpretability for patients and the interested public
	Understandability for physicians and nurses
	Indicator expression can be influenced by providers
	Data availability
	Data collection effort
	Barriers for implementation considered
	Correctness of data can be verified
	Completeness of data can be verified
Complete count of data sets can be verified	



Identification
& Assessment



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Reiter et al., BQS 2007

Assessment

Delphi method*



Identification
& Assessment

- Delphi is an expert survey in two or more 'rounds'.
- Starting from the second round, a feedback is given (about the results of previous rounds).
- The same experts assess the same matters once more - influenced by the opinions of the other experts.

* Prepared by Kerstin Cuhls, Fraunhofer Institute for Systems and Innovation Research, Germany



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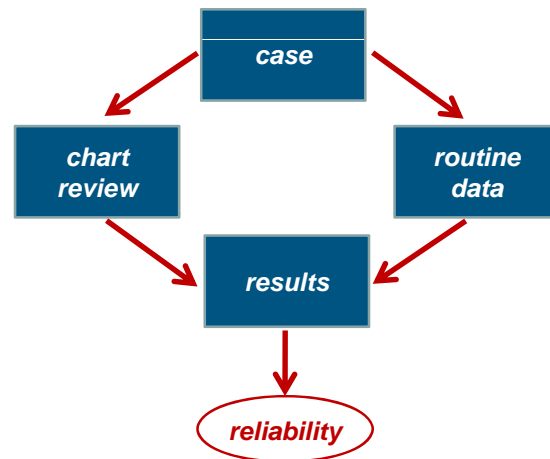
Aims

1. **identification** and **classification** of internationally used patient safety indicators
2. their **categorization** as a subgroup of quality indicators
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4. their **assessment** by reference to evidence-based quality criteria following the **QUALIFY-tool**
5. empirical trials: **reliability** and **validity** studies



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Reliability Study



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Validity Study



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Example

Time to Antibiotic Therapy

11. IF a VE is admitted to the hospital for pneumonia, THEN antibiotics should be administered within 4 hours of arrival, BECAUSE timely administration of antibiotics is associated with shorter length of stay and reduction in 30-day mortality.

Arora et al. 2007

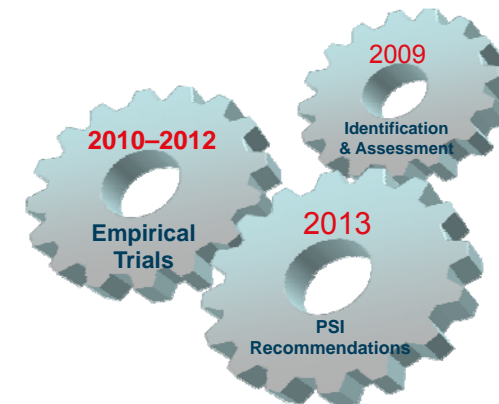


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Focus Areas



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Many thanks !

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