Minutes IDoC-Symposium 14.11.2013

Assessing the Impact of Diagnosis Related Groups (DRGs) on Patient Care and Professional Practice

The IDoC Project

Location: KOL-G-217, Main building University of Zurich, Rämistrasse 71, 8006 Zurich

Date: Thursday November 14th 2013 13:00 -17:00

Participants: 52 (registered)

Subgroup A: Nikola Biller-Andorno NBA, Verina Wild VW, Margrit Fässler MF, Carina Fourie CF

Subgroup B: Bernice Elger BE, Thomas Gächter TG, Agnes Leu AL

Subgroup C: Rebecca Spirig RS, Michael Kleinknecht MK, Jacqueline Martin JM

Subgroup D: Corine Mouton Dorey CMD, Dragana Radovanovic DR

Subgroup E: Bernard Burnand BB

Minutes: Regula Frouzakis RF

Agenda:

13.00 - 14.15	IDoC Project Presentation		Nikola Biller-Andorno (chair)
14.15 - 15.00	Q&A Session on Results		
15.00 - 15.15	*Coffee break*		
15.15 - 16.15	Panel Presentation		
	Comment 1:	Annina Tschalär	Dachverband Schweiz. Patientenstellen
	Comment 2:	Francesca Giuliani	Qualitätsmanagement USZ
	Comment 3:	Simon Hölzer	SwissDRG AG
	Comment 4:	Alexander Geissler	Technische Universität Berlin / EuroDRG
16.15 - 16.50	Discussion and Final Wrap-Up		
16.50 - 17.00	Closing Remarks		Prorektor Daniel Wyler

IDoC Project Presentation

- Presentation of results by each subgroup (see slides in Appendix)
  Subgroup A: NBA
  Subgroup B: TG, BE, AL
  Subgroup C: RS
  Subgroup D: CMD
  Subgroup E: BB
- Collaborative results
  Main outcome: areas of concern detected (quality and safety of patient care; state of professional practice for nurses and physicians; vulnerable groups and access to health care services) which need to be further monitored with the developed tools (Physicians' questionnaire; Nurses' questionnaire; Hospital managers/experts interview guide; SAMI-Q (EBM tool); Patient safety indicators).
- Collaborative recommendations
  - *Conceptual analysis:* There are subtle effects on the quality of patient care and professional standards that merit attention. To capture these effects, a nuanced, comprehensive understanding of quality of care is necessary.
  - *Methodological refinement:* We need a refined set of tools to capture the outcomes that are of interest/capture more fine grained aspects of quality (which matter to patients). With regard to IDoC, the tools that were piloted during IDoC I need to be refined, validated, and (possibly) pulled together into a package.
  - *Empirical/outcome research*: Further research is needed to investigate the more long-term (positive and negative) effects of DRGs on the quality of health care delivery and on professional practice.
  - *Monitoring:* The monitoring tools that have been produced by the IDoC project need to be tested for their suitability for routine Quality Management or similar mechanisms (cf. AHRQ patient safety indicators)
  - *Implementation:* We need an increased effort to bridge the gap between research, monitoring and use of data for management/policy decisions.

Q&A

- Shift of inpatient to outpatient care; some nurses report more interesting work in outpatient care / education of physicians more difficult now, since "easier" cases are lacking
- Early hospital discharge difficult for young parents with newborns
- Investigation of state of preventive and preop. care necessary
- Acute / versus "Übergangspflege", higher out-of pocket costs
- Important for further research to focus on patient outcome (satisfaction)
- "Umsetzung bestmögliche Medizin sei von Gesetzes wegen nicht verlangt sondern ‚Wirksamkeit', ‚Zweckmässigkeit' und 'Wirtschaftlichkeit' WZW"
  Comment: WZW ist ja eigentlich „bestmöglich"

- The concern was expressed that under a DRG payment system personal medicine would not be possible
- Interesting to investigate the whole process of health care services of patients from the moment they fall ill until the end (cure, death) (and not only of inpatient care)
- Concern mentioned: the situation with DRGs is very difficult for children's hospitals

Commentators

Annina Tschalär

Nurse, counselor and administrator at the Swiss Patient Representative Group "Dachverband Schweizerischer Patientenstellen", responsible for Department SwissDRG

- Each reform, such as the Swiss DRG-System, requires a survey of the persons involved, to obtain information on quality, ethical values and access to health care for all patient groups.
- In order to guarantee adequate care for patients in the future, appropriate countermeasures are necessary.
- The top priority is a good quality healthcare system, which stresses that the security and well-being of the patient is guaranteed.
- A system is only as good as it adheres to its rules. The part-studies show what steps will lead in the right direction.

Francesca Giuliani

Head of the department for quality management and patient safety at the University Hospital Zurich

- **Comments on study:**
  Broad study design:
  - Ethical dimension explicitly considered and related to quality
  - Perceptions and experiences of collaborators important
  - Clinical Indicators: quality of EBM treatment / outcome and access for clinically vulnerable populations
  - Quality can be defined as combination of efficacy, safety and efficiency (economic)
  - Standardization is one response to DRG or economic restrictions (but caution is necessary since there are different working contexts: three contrasted safety models "Ultra Resilient", "HRO model" and "Ultra Safe")

- **Comments on study results**

	Quotes from study results	Current projects in hospital
QM	"3/4 of the physician think that current QM activities cannot compensate the potential negative consequences"	Focus on effective impact We need orientation towards common success
Time for patient	Time for patient decreased, time for administration work increased	Reduction of administrative work
Consultation Services	Less consultation services? Reduction of multidisciplinarity? Influence of the outcome?	Consider the dynamics of consultation services in e.g. incentives projects implement multidisciplinary boards(e.g.Tumour boards)
Behaviour change	No change of attitude and behavior - yet	Change of behavior- needed…

The reality requires changes

- Changes (in behavior / processes) are needed to increase patient safety and to manage tight resources better

- **Comments on future monitoring**
  - Quality and safety of patient care: Incorporation of patient perspective / experience is desirable
  - State of professional practice for nurses and physicians: Additional study looking into team performance of all professionals?
  - Vulnerable groups and access to health care services: Is the impact of DRGs appropriately assessed not only for standard, but for complex diagnostic cases as well?

Simon Hölzer

Since 2007 managing director of SwissDRG AG

SwissDRG has indicated direct positive effects, such as the ability to access hospitals in other cantons and the private sector

- SwissDRG implies more transparency in terms of pricing and the quality of hospital services
- All available studies and feedback have shown no major catastrophe so far
- DRG = Tool; similar to a knife that can do harm (you can kill people) but has a lot of beneficial effects if used reasonably
- IDoC presents a reference model / framework to follow up and monitor changes in behavior, e.g. of physicians. Findings of different studies have to be combined to get a full picture
- SwissDRG is a learning system, not only at a technical level (medical logic) but also with regard to all measures related to its introduction and application, even at the level of the federal law
- With DRGs, as a tool for health services research, we are able to answer more questions, such as
  a) What is the complexity of the cases in different populations and its trends?

b) What are meaningful resources needed to care these populations?
c) How does overall cost develop in relation to services provided?
d) How does the quality of care develop in relation to different / distinct services?

SwissDRG Inc. will help to bring the results to a bigger audience, especially to stakeholders and policy makers

Alexander Geissler

Member of the coordinating team of EuroDRG project comparing DRG based hospital payment systems across Europe; researcher at the Department of Health Care Management of the Berlin University of Technology (since 2008)

General (Intro)

- CH late adopter of DRGs → advantage to learn from early adopters
- CH one of the few countries which implemented and designed a research protocol in order to identify possible drawbacks of DRG based hospital payments
- DRGs might affect the quality of care, patient safety as well as medical professionals' satisfaction in terms of their working environment

Subproject A

- Support of physicians for DRG based payments is always a crucial aspect of the introduction phase
- Several countries suffer from lacking of support from physicians (e.g. Korea)
- Results show physicians expect and currently feel more economic pressure
- Quality time (with the patient) decreased and administrative work increased
- Both effects are internationally known
- The first is based on the incentive to treat as many patients as possible; the second is based on the incentive of right-coding in order to guarantee the best possible revenue
- Nevertheless work satisfaction among physicians is high and quality is rated as good
- This needs to be monitored within the upcoming years in particular by this research project

Subproject B

- Legal experts and managers are very well aware of the recent changes in the incentive structures even if the interviews were conducted early on in the process of introducing DRGs
- Focus on quality expectations:
    - Structural: where to set priorities is mainly a question of hospital planning and should not be based solely on the goodwill of hospitals in order to avoid cherry picking.
    - Therefore authorities are needed to define where patients with certain (elective) diagnoses should be treated.

- Process: We see clearly the move from FFS to DRG. Only really necessary care is covered. This is also an opportunity to redesign and rethink medical processes within hospitals in order to implement efficient care pathways without wasting resources.
- Outcome: more regulation is needed in order to avoid e.g. bloody discharges or cost shifting. In addition stakeholders might have to enter into a discussion about the most appropriate place of treatment for patients with specific conditions. The hospital is often not the safest place (e.g. Infections).
- Adjust payments for delivered quality: tools are internationally available. However none of them have been evaluated.

Subproject C

- Always a risk that nursing capacities will be reduced because physicians become more important in DRG settings as they trigger revenues according to their coding practice.
- Compared to other European countries (RN4cast study) Swiss nurses have a much higher work satisfaction.
- But we saw that work satisfaction of nurses decreased in many countries after the introduction of DRGs for direct case payments.
- Therefore (and again) this project needs to collect data in the future years in order to monitor satisfaction and behaviour of nurses critically.

Subproject D

- Very interesting approach to monitor the adherence to medical guidelines before and after a health system reform.
- Suggestion: add an elective treatment because more variety in adopting medical guidelines can be assumed. In acute settings there is often not much space for variation. Also legal circumstances can be incorporated regarding the aftermath of worse outcomes due to missing adherence to medical guidelines.

Subproject E

- Other indicators such as PSI 5 (foreign body left) can be added in order to control for sentinel events
- Beside PSIs we had very good experiences with other safety and quality indicators such as urinary tract infection (UTI) or wound infection
- These are good proxies for missing quality time and/or hygiene standards in hospitals as those infections can be due to decreasing nursing capacities

Conclusions

- An ongoing research project is more than desirable
- Considering the huge impact of DRGs, funding for this research should be without any difficulty
- In order to ensure patient safety, good quality care and satisfactory working environments a set of well defined legal instruments (regulations) is necessary:

- Structural regulations regarding
  - Physician and nursing capacities
  - Medical equipment and its distribution
    - Who is doing what? Steering services!
- Transparent and high quality data should be available
  - Patients can make informed decisions (voting with their feet).
- Payments which incorporate/reflect the quality of service delivery
  - Best practice tariffs (England)
  - Structural requirements to be allowed to provide specific services (DRGs) (e.g. Stroke) (Hungary)

Discussion session

- Personal medicine important, health care system should be evaluated throughout all settings, not only inpatient setting
- More considerations on patient perspective when designing studies on the impact of DRGs
- Important to validate and to assess the reliability of quality measurements in order to further monitor developments in the health care system

Closing remarks by Prorektor Daniel Wyler

Appendix: IDoC-project presentation

Assessing the Impact of Diagnosis Related Groups (DRGs) on Patient Care and Professional Practice *The IDoC Project*

Symposium on Results & Recommendations
14 November 2013
Zurich

Agenda

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14.15 - 15.00	Q&A Session on Results	
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Structure of presentation

- **1. Introduction to IDoC**
- 2. Ethical Framework
- 3. Results of Sub-projects A-E
- 4. Collaborative IDoC Results
- 5. Collaborative IDoC Recommendations

Introduction to DRGs

- Partial revision of Federal Health Care Insurance Law ('KVG')
  - Majority of Swiss hospitals required to implement DRG-based prospective reimbursement system for in-patient hospital care
  - SwissDRG replaced: AP-DRG system; mixed systems; per diem; fee-for-service reimbursement
  - DRG payment: fixed and standard amount according to case
- Any health care reform can have a major impact on ethically relevant aspects of the health care system, e.g.
  - quality
  - access
  - cost
  - professional standards
- Health care reform needs to be assessed to determine its impact

Gaps in research and policy-making

- What are the challenges?
  - Isolated & unsystematic research on DRGs
  - Isolated & unsystematic ethical analysis of DRGs
  - Insufficient quality indicators & monitoring tools in Switzerland
  - Lack of systematic guidance for policy-makers & health economists
- What are we missing?
  Systematic, collaborative and ethically contextualized:
  - empirical research;
  - monitoring tools;
  - policy guidance.

IDoC Project

- IDoC: Assessing the **I**mpact of **D**RGs **o**n Patient **C**are and Professional Practice
- Sinergia Project of the Swiss National Science Foundation (SNF)
- Consists of 5 sub-projects in 4 disciplines:
  - Medical Ethics (University of Zurich);
  - Law & Ethics (University of Basel and University of Zurich);
  - Nursing Sciences (University of Basel and University of Zurich);
  - Health Services Research I (University of Zurich);
  - Health Services Research II (University of Lausanne)
- Individual results, systematized and connected

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Ethical framework

- Lack of systematic framework for assessment of the ethical implications of a DRG-based PPS
- We have developed a matrix for identifying the ethical values which may be affected by the implementation of a DRG PPS
- Methodology:
  - i. literature review and empirical studies
  - ii. literature review of ethical frameworks
  - iii. analysis of results

1. Value/s	2. DRG-specific factors	3. Levels of Policy-Making		
		Macro-level	Meso-level	Micro-level
	Effects of DRGs on primary ethically relevant parameters:			
i. Utility	Cost & Efficiency			
ii. Producing benefits	Quality of care			
iii. Distributive justice	Access to health care			
iv. Transparency	Transparency			
v. Autonomy	Patient autonomy			
	Effects of DRGs on secondary ethically relevant parameters:			
vi. Professionalism (and links to above values)	Adherence to ethical standards			
vii. (Potential links to above values)	Work environment& job satisfaction			
	Ethics of DRG-related decision-making procedures:			
viii. Procedural justice	Fairness of health care reform procedures			

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DRGs and changes in health care: an analysis of the ethical issues and their perception by physicians

Subproject A:

Nikola Biller-Andorno and Verina Wild (heads of subproject), Caroline Clarinval, Margrit Fässler, Carina Fourie, Regula Frouzakis

Universität Zürich
Institut für Biomedizinische Ethik

Background & Aims

- DRG-based system – potential important effects on ethically relevant parameters of health care, e.g. cost, quality and access.

  Aim 1: Ethical Analysis:
  - To provide an overview of ethical issues raised in the context of DRGs;
  - To provide normative and conceptual analysis of significant ethical issues.
- DRGs - incentive system; affects the behavior of health care workers, therefore a thorough analysis of the various effects of DRGs on physicians and nurses is necessary.

  Aim 2: Empirical Study:
  - To explore the perspective of physicians working under DRG conditions

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Ethical Analysis

1. Matrix for the ethical assessment of the implementation of DRGs
2. Clarification and application of benchmark of public accountability
3. Philosophical analysis of the definition of moral distress
4. Systematic literature review of the impact of DRGs on health care access

Conclusions from both surveys

- Each reform or adaption of the **hospital financing system needs to be surveyed** to determine whether quality of health care is impaired, and whether significant ethical values such as fair access to health care are ensured. In our quantitative studies, the physicians working in Swiss hospitals' subjective assessment of quality of health care is that it is on a high level ("very good" or "good"). Despite this, there is **some indication that quality could be impaired if more economic pressure** is put on physicians in the future.
- We have determined that the physicians' answers indicate the **existence of different forms of under- and overtreatment** that burden them. If economic pressure grows, under- and overtreatment could increase.
- Subproject A has developed a **tool consisting of sets of questions for physicians which can help to identify possible problem areas** in daily practice with regard to quality of health care and fair access.

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DRGs in Switzerland: Critical analysis of the legal aspects and their perception by experts and hospital managers

Subproject B:

Bernice Elger and Thomas Gächter (heads of subproject), Agnes Leu

Universität Zürich

Background

- Goals partial KVG-Revision 2007: SwissDRG, but also:
  - single hospital market (free choice of hospital; entrepreneurial freedom)
  - safe-guarding quality
- Expected advantages:
  - transparency, accountability, comparability (benchmark)
  - rationalisation of procedures
- Expected risks:
  - more or less visible rationing
  - early patient discharge
  - patient and cost shifting
- Crucial legal issues:
  - Protection of access to health care
  - Prevention of rationing

Universität Zürich

Aims

Part 1: Analysis of legal aspects

- Analysis of legal aspects concerning SwissDRG as a form of rationing and the risk of discrimination.
  Does SwissDRG create a form of more or less visible rationing?
  How are decisions concerning health care costs presently made by hospital experts?
  How much control do experts have to ensure just and equal access to health care?

Part 2: Empirical study

- Describtion and analysis of the expectations and fears of experts in Swiss hospitals concerning legal issues related to rationing and discrimination in particular.
- Findings concerning awareness and knowledge of legal provisions related to SwissDRG.

Universität Zürich

Methods

- Qualitative interviews
- 40 hospitals: Target sample consisted of 7 university hospitals and university children's hospitals, 19 central utilities, 9 primary health care units and 5 private clinics according to the hospital typology of the Federal Office of Statistics (legal-economic status).
- 43 experts who qualify for expertise within the domain of health care costs and hospital management in Switzerland agreed in participating. The purposive sample covered hospital directors, responsible persons for quality, coding, finance, medicine controlling.

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Methods

- The semi-structured interviews were conducted in 24 cantons of Switzerland.
- The target sample by language region resulted in 11 interviews in French-and Italian-speaking Switzerland as well as 32 interviews in German-speaking Switzerland.
- Interviews were conducted from February to August 2012. All interviews were tape recorded, transcribed word-for-word (Atlas.ti).
- The interpretation of the extensive text material (1'708 quotations, 531 pages, 215'547 words) by means of qualitative content analysis was carried out after Mayring.

Key Results I

- **Perception of incentives**
  SwissDRG changed incentive structures in various ways, namely with respect to
  - *the duration of hospital stays*
  - *resources and productivity*
  - *general cost awareness*
  - *vulnerable groups*
  - *structural and process quality*
  - *transparency*
  - *medical training activities*

  ⇒ no fundamental changes in attitude and behavior
- **Awareness of new legal regulations and their implementation**
  - *Duty to admit all patients (Art. 41a Abs. 1 KVG)*
    no indication of major problems concerning hospital admission
  - *Acute and transitional care (Art. 25a Abs. 2 KVG)*
    instrument principally welcome, practicability of the current regulation questioned

Key Results II

- **Risk of insufficient medical treatment of vulnerable patient groups**
  - *representation within the tariff structure to its complexity*
  - *malfunctioning of new legal instrument «acute and transitional care»*
- **Access to health care services for vulnerable patient groups**
  - *primarily an issue of social, fiscal or health policy ⇒ passed on to health care service providers*
  - *refunding vulnerable patient groups ⇒ negotiation of additional financial support with the cantons: comparability? open competition?*
  - *Diversity of and the low-threshold access to the offers*
- **Changes in quality**
  a) process quality
  - *positive aspect of SwissDRG - opportunity for a quality leap*
  - *intensified and optimized collaboration with home care, long-term inpatient care, rehabilitation clinics*

Key Results III

- **Quality of care**

  b) structural quality
  - *positive aspect of SwissDRG:*
  - *considerations of existing services and infrastructure*
  - *where to set medical priorities and where to be invested?*
  - *pressure to focus medically and technically on one site*

  c) outcome quality
  - *risk of "bloody discharge" is not given*
  - *fear of decreasing outcome quality when fewer resources available*
  - *saving on labor costs at patient security expense?*
  - *less consultation services: deteriorates the reduction of multidisciplinarity the quality of care?*

Limitations

- **Time limitation**
  SwissDRG introduced in January 2012, first research interviews in February 2012
  ⇒ short time period
  ⇒ modified by use of previous system
- **Simultaneous implementation** of the new hospital financing model
  ⇒ a lot of changes not related to the implemention of SwissDRG

Monitoring the Impact of the DRG-Payment System on Nursing Service Context Factors in Swiss Acute Care Hospitals

Subproject C:

Rebecca Spirig (head of subproject), Michael Kleinknecht-Dolf, Irena Anna Frei, Elisabeth Spichiger, Marianne Müller, Jacqueline S. Martin

Background

- Internationally, DRG payment systems have been shown to trigger a restructuring of inpatient acute care services that can lead to a deterioration in patient safety and a decrease in quality of care.
- Compromises in treatment and care, shifting treatment and care to inadequately prepared institutions and a decline in job satifsaction are some of the possible consequences of the implementation of DRGs.
- There is no comprehensive monitoring instrument capable of measuring the relevant context factors regarding nursing service provided and quality of care.

Aims

- Development of a monitoring system and a corresponding instrument for measuring the impact of DRGs on nursing service context factors in Swiss acute care hospitals
- Preparation and carrying out of the first monitoring
- Presentation and analysis of the relationship between nursing service context factors, quality of care and patient outcomes
- Description of the experiences of nurses within the framework of nursing service context factors

Methods

- Evaluation study using a mixed methods design ("Sequential Explanatory Strategy")
- **Quantitative Part:** Cross-sectional study surveying all RNs and unit managers (n = 5156) of inpatient units (n = 204) at the five study hospitals as well as assessing the complexity of nursing care of all inpatients over a one-month period
- **Qualitative Part:** 224 RNs and unit managers at the five hospitals

Methods

- **2011** Pilot study with two new questionnaires (Moral Distress, Complexity of Nursing Care)
- **2011** Quantitative data collection with online questionnaire regarding the quality of the work environment, leadership style, moral distress, job satisfaction, nursing performance und complexity of nursing care
- **2012-13** Qualitative data collection with 31 focus group interviews
- **2013** Synthesis

Limitations

- Total response rate of 44 – 47% within the normal framework, however, response rate of individual hospitals low, at just over 30%.
- The two new questionnaires on moral distress and complexity of nursing care are still in an early stage of development.
- The selected nursing sensitive outcomes falls and decubitus are not prevalent and/or representative enough to be used to examine the influence of nursing service context factors on nursing sensitive patient outcomes.
- The findings represent the baseline. How the DRG-based payment system (along with other influences) will impact nursing service context factors will be shown in the next cross-sectional survey.

The impact of the implementation of the DRG system in Switzerland on evidence-based treatment of patients with acute myocardial infarction

Subproject D:

Dragana Radovanovic (head of subproject),
Corine Mouton Dorey

University of Zurich
Institute of Social and Preventive Medicine, AMIS Plus

Background & Aim

- Concerns about whether the DRG system leads to less intensive care, lower treatment quality or early hospital discharge for the patients.
- Acute Myocardial Infarction has established evidence-based medicine guidelines for acute treatment.
- Observational data could investigate how clinical trial results and corresponding evidence-based guidelines are applied.
- AMIS Plus registry: 45 000 continuously enrolled patients since 1997.

➢ **Project's Aim:** to assess the quality of evidence-based treatment for AMI patients following the introduction of the DRG system in Switzerland.

Methods

"SAMI-Q" tool developed within the AMIS Plus registry, and then applied to compare the treatment delivered to AMI patients, one year before (2011) and after (2012) the introduction of the DRG system.

✓ Inclusion criteria:
- Hospitals participating in the AMIS Plus registry for both years (CL+ and CL-)*
- All patients with AMI enrolled in 2011 and 2012

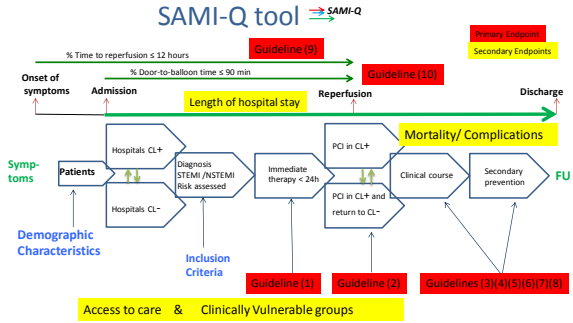
✓ Primary end-point: Quality as EBM implementation
- Ten indicators as individual adherence rates to treatment guidelines

✓ Secondary endpoints:
- In hospital outcomes, access to healthcare for clinically vulnerable populations

**CL+: hospitals with cardiac catheterization laboratory "Cathlab". CL- without Cathlab.*

University of Zurich
Institute of Social and Preventive Medicine, AMIS Plus
A Acute M Myocardial I Infarction in S Switzerland

SAMI-Q tool



University of Zurich
Institute of Social and Preventive Medicine, AMIS Plus
A Acute M Myocardial I Infarction in S Switzerland

Limitations

SAMI-Q tool	LIMITATIONS
Large number patients at the point of care, subgroups' analysis	Quality of underlying registry, bias Pre-defined purpose
Useful to physicians for peer-to peer review	Willingness to participate
Identifying changes/benchmark	Causality, confounding factors
Contribution to CER* with nurses, patients, administrative staff	Not a stand-alone tool
Development as perennial tool, with follow-up, for other key diseases	Sustainable funding

** CER: comparative effectiveness research*

University of Zurich
Institute of Social and Preventive Medicine, AMIS Plus
A Acute M Myocardial I Infarction in S Switzerland

Developing and refining indicators to measure the impact on patient safety of generalized use of DRGs for hospital reimbursement in Switzerland

Subproject E:

John-Paul Vader and Bernard Burnand (heads of subproject), Jean-Marie Januel

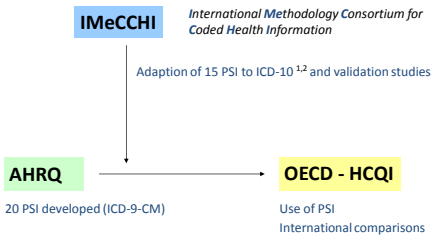
Background

- **Patient Safety Indicators** (PSI)
  - outcome indicators
  - potential avoidable healthcare adverse events
  - using routine hospital discharge data
- **Algorithm**

$$\text{PSI} = \frac{\text{ICD Codes for Secondary Diagnoses related to Adverse Event Identification}}{\text{Population at risk, defined using Diagnostic codes, Procedure codes, DRG codes}}$$

UNIL | Université de Lausanne
IUMSP
Institut universitaire de médecine sociale et préventive, Lausanne

History & Development of PSI



[1] Quan H., et al. AHRQ Advances in Patient safety 2: News Directions and Alternatives Approaches. Vol 1. Assessment. Taxonomies and Measurement. Agency for Health Care Research and Quality Publication 2008.

[2] Januel JM, et al. Rev Epidemiol Sante Publique 2011;59 :341-350.

Aim

- **To use selected Patient Safety Indicators (PSI) and their algorithm refinement for assessing the impact of DRG implementation**

1. To explore and document the **frequency**, **variations** and **potential biases** of PSI, using Swiss hospital data collected by the Federal Office of Statistics
2. To evaluate **trends in PSI in Swiss hospitals**
   2008 – 2015
   Impact of 2012 changes in DRG implementation
3. To assess the **accuracy** of a subset of PSI

Methodology : Data sources

- **ICD-10 hospital discharge diagnoses codes**:
  - WHO ICD-10 since 1998
  - German modification (ICD-10-GM) since 2011
- **Medical and Surgical Procedures**:
  - CHOP (ICD-9-CM)
- **Diseases Related Groups**
  - SWISS-DRG, mandatory since 2012

Methodology : PSI Selection

- Decubitus ulcer
- Bloodstream infection related to vascular catheter
- Postoperative physiological and metabolic disorders
- Post-operative Deep Vein Thrombosis and Pulmonary Embolism (VTE - Venous Thrombo-Embolism)
- Post-operative sepsis
- Obstetric Trauma during vaginal delivery with/without instrument

Conclusions - Limitations

- Feasibility of use and interest of PSI
- Limitations - Obtaining data
  - Availability - year xxxx + 2
  - Impossibility to follow each hospital over years
- - Validating PSI using chart review of medical record
  - Resources
  - Availability of sufficient number of different hospitals
- Observation during hospital stay only

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Gaps in research and policy-making

- What are (were) we missing?
- Systematic, collaborative and ethically contextualized:
  - empirical research;
  - monitoring tools;
  - policy guidance.

IDoC Results: Areas of Concern for Future Monitoring

1. The quality and safety of patient care
2. The state of professional practice for nurses and physicians
3. Vulnerable groups and access to health care services

IDoC Results: Monitoring tools

1. Physicians' questionnaire
2. Nurses' questionnaire
3. Hospital managers/experts interview guide
4. SAMI-Q (EBM tool)
5. Patient safety indicators

1. Value/s	2. DRG-specific factors	3. IDoC Project		
		Macro-level	Meso-level	Micro-level
	Effects of DRGs on primary ethically relevant parameters:			
i. Utility	Cost & Efficiency			
ii. Producing benefits	Quality of care		x	x
iii. Distributive justice	Access to health care	x	x	x
iv. Transparency	Transparency			
v. Autonomy	Patient autonomy			
	Effects of DRGs on secondary ethically relevant parameters:			
vi. Professionalism (and links to above values)	Adherence to ethical standards		x	x
vii. (Potential links to above values)	Work environment& job satisfaction		x	x
	Ethics of DRG-related decision-making procedures:			
viii. Procedural	Fairness of health care	x		

Structure of presentation

- 1. Introduction to IDoC
- 2. Ethical Framework
- 3. Sub-projects A-E
- 4. IDoC Collaborative Results
- **5. IDoC Collaborative Recommendations**

IDoC Collaborative Recommendations

1. *Conceptual analysis* (Policy-makers; Researchers)
2. *Methodological refinement* (Researchers)
3. *Empirical/outcome research* (Hospitals; Researchers)
4. *Monitoring* (Policy-makers; Hospitals; Researchers)
5. *Implementation* (Policy-makers; Hospitals; Researchers)

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Thank you for your attention!

13.00 - 14.15	IDoC Project Presentation: Nikola Biller-Andorno (Chair)	
14.15 - 15.00	Q&A Session on Results	
15.00 - 15.15	Coffee break	
15.15 - 16.15	Panel	
	Comment 1:	Erika Ziltener, Dachverband Schweizerische Patientenstellen
	Comment 2:	Francesca Giuliani, Qualitätsmanagement USZ
	Comment 3:	Simon Hölzer, Swiss DRG AG
	Comment 4:	Alexander Geissler, Technische Universität Berlin/ EuroDRG
16.15 - 16.50	Discussion and Final Wrap-Up	
16.50 - 17.00	Closing remarks: Prorektor Daniel Wyler	