



UNIVERSITY OF OSLO

An attempt to integrate Knowledge management, Leadership and Quality Improvement

(KLoK)

in the clinical attachment period in the 5th year of a 6 years curriculum

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With great help from Frederik Frøen and Per Hjortdahl

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The Medical Faculties reluctant self realization

- 4 medical faculties in Norway
- Still half-a-sleep
- Something is happening in Oslo

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Medical Education & The University of Oslo

UiO established in 1811, modernized in 1996

220 students/year (110 x 2/year)

6 years curriculum (12 semesters):

3 “basic” + 6 “organ” oriented + 3 “clinical” integrated

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Oslo 96

- **Early patient contact**
- **Integrated teaching**
 - few formal lectures
 - many seminars, group work
- **Problem based learning (PBL)**
 - All through the 12 semesters (20 - 6)
 - Written problems (cases)
 - Each case; one week, two sessions á two hours
 - Max 8 students, randomly assigned each semester
 - Same PBL-tutor throughout semester
 - All scientific staff has to participate as tutors

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History of getting PS&QI into the curriculum

3 main driving forces for getting into the medical school curriculum:

- Professional understanding (NMA)
- Public demand, outside pressure (Government)
- Reluctant self understanding (universities themselves)

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Outside pressure

- Newspapers – medical errors
- Other professions – aviation, car industry
- 1995 Dep of health
 - ”National strategy for QI in health care”
 - little or no effect on medical education
- 2005 Dep of health
 - ” and better it will be”
 - a 10 year plan for implementing improvement knowledge into the education of all health care professions

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The health care system we all want to be part of
have services that

- are effective
- are safe and secure
- involve users and allow them to have influence
- are coordinated and integrated
- utilize resources appropriately
- are available and equally distributed

Nasjonal kvalitetsstrategi: ...og bedre skal det bli!

Målet er tjenester av god kvalitet, som:

- er effektive
- er trygge og sikre
- involverer brukerne og gir dem innflytelse
- er samordnet og preget av kontinuitet
- utnytter ressursene på en god måte
- er tilgjengelige og rettferdig fordelt

Target areas and recommendations

Innsatsområder og anbefalinger

Styrke brukeren	Styrke utøveren	Forbedre ledelse og organisasjon	Strengthen improvement knowledge in health professions' education	Følge med og evaluere tjenestene
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Strengthen the impact of improvement knowledge in education

- Incorporate improvement knowledge in all general and professional programmes and devise teaching modules to complement these in basic and further education
- Build competency in quality improvement work among educators
- Conclude agreements between institutions of education and practitioners on participation in joint quality improvement projects
- Perform quality improvement work during studies and during periods of work experience
- Promote knowledge management, the user perspective and user involvement in education

In short: Aims of doctors' training

- Enabling the doctor to deliver evidence based health care – accountable and empathic
- Enabling the doctor to organise and administer health care in a just and cost-effective way
- Enabling the doctor to lead and develop health care teams for continuous improvement of care and reduction of errors

History of PS&QI at UiO

Dean of education; "How to implement"

- **"PS&QI"**, committee summer 2004
- **"Knowledge management"**, committee summer 2004
 - (Learning how to ask the relevant questions and where to find scientific valid answers)
- **"Leadership"** (Doctors as naturally born leaders?)
 - (Systems understanding, teamwork, microsystems. "To lead and to be led")
- **"Integrating quality improvement, knowledge and leadership as the grand finale of the medical school curriculum"**
 - implemented fall semester 2006 (but preparing the students for this way of thinking must start when entering med school!)

Structure of PS & QI

- Main goals in planning the structure
 - Integrate PS & QI in existing curriculum
 - The first 10 semesters: Forcing a minimal amount of didactic teaching. 3 x (2 x ½ day)
 - Slowly changing PBL problems in the pace they are revised by the faculty
 - Integrated with EBM & management in the 11/12 semesters

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Structure of PS & QI

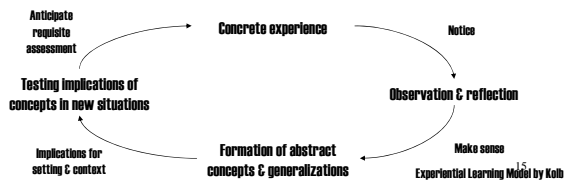
- Our main goals in planning the structure
 - Integrate PS & QI in existing curriculum
 - Bringing students from explorer to competency

- | | |
|---------------------|-----------------------|
| – Explorer | - investigate |
| – Novice | - rules |
| – Advanced beginner | - "shopping list" |
| – Competent | - plan |
| – Proficient | - avoid waste |
| – Expert | - complex situations |
| – Master | - transform knowledge |

The expanded Dreyfus model by Batalden

Structure of PS & QI

- Our main goals in planning the structure
 - Integrate PS & QI in existing curriculum
 - Bringing students to competency
 - A teaching spiral



Structure of PS & QI

- Our main goals in planning the structure
 - Integrate PS & QI in the existing curriculum
 - Bringing students to competency
 - A teaching spiral
 - A learning spiral
 - Quality? For me? My patient? The health care system?
- **1. Semester:** Quality – Understanding the concepts and need for quality in learning, medicine and health care.
- Volume: 2 x ½ day seminars + PBL

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Structure of PS & QI

- Our main goals in planning the structure:
 - Integrate PS & QI in existing curriculum
 - Bringing students to competency
 - A teaching spiral
 - A learning spiral
 - Quality? For me? My patient? The health care system?
- **6. Semester:** Evaluating my own practice. My impact on quality in learning, medicine and health care.
- Volume: 2 x ½ day seminars + PBL

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Structure of PS & QI

- Our main goals in planning the structure:
 - Integrate PS & QI in existing curriculum
 - Bringing students to competency
 - A teaching spiral
 - A learning spiral
 - Quality? For me? My patient? The health care system?
- **10. Semester:** Patient safety: What is my role as a doctor in protecting my patients from harm?
- Volume: 2 x ½ day seminars + PBL

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Integrating quality, knowledge and leadership: a grand finale

How?

- Integrating a total of 4 weeks of KLaQ (KLoK) into a clinical learning experience running through the semester
- Completing the "Experiential Learning Cycle"
- Didactic teaching combined with
- CIP (Clinical Improvement Project)
 - Small groups, interactive, projects
 - Related to the students clinical rotations, concentrate on the KaP-gap and how to bridge the gap in real life

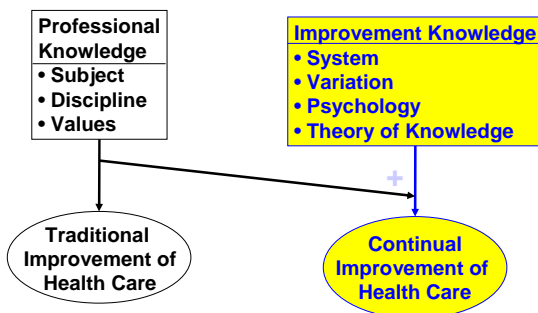
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Preparing the students for the 4 weeks attachment mentored by a hospital doctor (clinical lecturer)

A half day seminar presenting the ideology and tasks to be performed

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Traditional & continual improvement (Batalden and Stoltz 1993)



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"Every system is perfectly designed to get exactly the results it gets"

Paul Batalden

Center for Evaluative Clinical Sciences, Dartmouth Medical School
www.clinicalmicrosystem.org



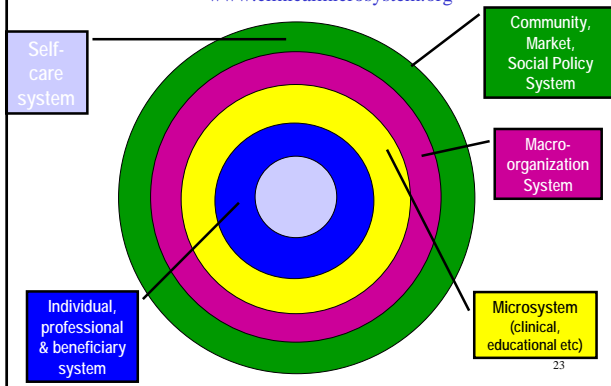
"We envision a system of care in which those who give care can boast about their work, and those who receive care can feel total trust and confidence in the care they receive"

Don Berwick

Institute for Healthcare Improvement (IHI), Boston



The way we work to make health care www.clinicalmicrosystem.org



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We have all two jobs:

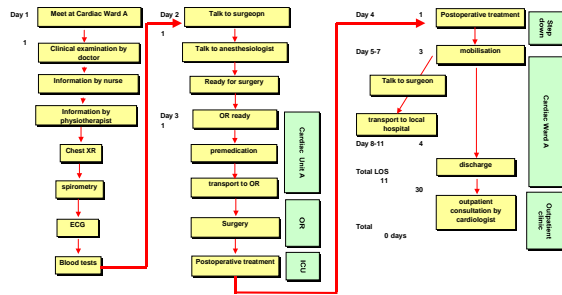
1. Doing a good job
2. Improving the job we are doing, together with other health professionals, in the microsystem, and as leaders and educators!

Leadership is crucial!

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"Cooperation among clinicians is a priority"
Hand-offs are critical for patient safety

The process of open heart surgery

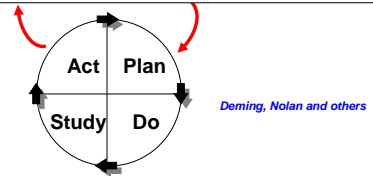


Brandrud et al

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Model for improvement

- What do we want to accomplish? (**aim**)
- How will we know if a change leads to improvement? (**measurement**)
- What changes are likely to lead to improvement? (**change**)



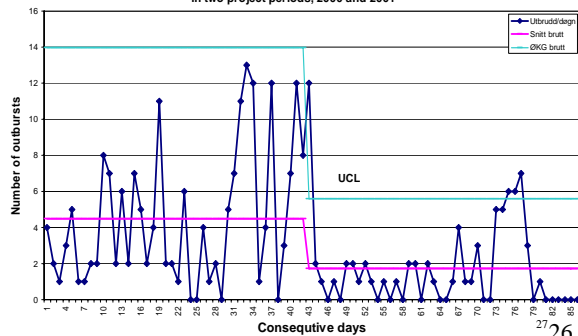
Deming, Nolan and others

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Monitoring intentional change

(Brandrud & De Grève)

XmR-diagram: Number of aggressive outbursts pr. day
in two project periods, 2000 and 2001



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What are the common features in projects leading to improved care?

- strong (organisational) leadership
- doctors' involvement
- professions working together
- share a common vision
- strong patient focus/ strong link to practice
- a supportive and learning environment
- build on best evidence of practice
- ability to view and analyse health care as a process
- informed by (balanced) outcome measures

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Assignment no 1

Observing patient's process through the system

Follow ("shadow") a patient through the system, map the process, observe the system "through the patient's eyes". Question the patient about his or her experiences. (Validated questions available)

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Assignment no 2 "Your Microsystem"

View the system from a microsystem perspective, based on our knowledge of the characteristics of a well functioning clinical microsystem (available in their work book)

Methods: Observe, talk to people, ask questions (examples in the work book)

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Assignment no 3

Knowledge management in a practical setting

Evaluation of a clinical guideline: Select one of the guidelines used in your clinical, preferably one that is relevant to the patient you have shadowed. Make a critical analysis based on the criteria copied in the work book, or check the Medical Knowledge Center website (The Agree Collaboration)

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Summing up seminar

After the attachment a half day seminar is organized at the medical school. The students present and discuss their findings with those responsible for the program at the medical school, and there is a general feed back realated to the functionality and perceived learning outcome of the attachment period.

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In the following semester they will use their newly acquired competence to carry out actual improvement projects in the teaching hospitals in Oslo where they have their regular training.

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Evaluation?

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Thank you!

