Bachelor- und Masterstudies at the Medical Faculty University Basel

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Vice Rector University Basel
Studyreform 1996-2005

• Triggered by the changing demands and the necessity of patient-oriented medicine.

• Change of the image of an ideal medical doctor:
  WHO 5* doctor: care provider
  decision maker
  communicator
  community leader
  manager
Where we started from

1. Modular Curriculum with organ specific modules
2. Integration of several disciplines in each module
3. Life Long Learning, Problem based Learning
4. Training in three dimensions:
   • Knowledge
   • Skills
   • Attitude
Where we started from

- The healthy body
  - 1. and 2. year
    - Exam
  - 3. and 4. year
    - Exam

- The ill patient
  - 3. and 4. year
    - Exam
  - 5. and 6. year
    - Federal Exam

- Differential diagnosis
  - 5. and 6. year

- Organ specific integrated modules

  - „LAP“
    - Plan an function of the healthy body, Communication statistics
  - „Einzeltutoriat“
    - Plan and function of the ill body, taking history, skills

- 10 month stage at a hospital A GP or scientist
  - „small“ Specialties
  - Differential-diagnosis Skills

Social and communicative Kompetencies, scientific basics, emergency
Why Bologna?

Decision of the Federal Government

• All curricula have to be changed till 2010
• No exception for Medicine, Dental Medicine
Bologna
Structure of the Curriculum

- 3 Cycles
  - Bachelor 3 years (180 ECTS)
  - Master 1.5 – 2 years (90 – 120 ECTS)
  - PhD 2 - 3 years

- „Exeption medical“
  - Master 3 years 180 ECTS
  - Dr. med and Dr. med. dent: 1 year
Graph 1: Bologna Model Medicine „Physician Track“

Federal approved Physician

Dr. med. 1 yr

Doctorate PhD 3 yrs

Federal examination, mandatory for international recognition and postgraduate training

6. yr
Clinical electives
60CP Master

5. yr
Clinical electives
60CP 180CP

4. yr
60CP

3. yr
60CP Bachelor

2. yr
60CP

1. yr
60CP

O = obligations, M = major
Graph 2: Bologna Model Dental Medicine

- Federal approved Dentist
- Dr. med. dent. 1 yr
- Doctorate PhD 3 yrs

Federal examination

5 yr: DM  60CP  **Master**  120CP
4 yr: DM  60CP

3 yr: HM  DM  60CP  **Bachelor**  180CP
2 yr: HM  DM  60CP
1 yr: HM  DM  60CP

DM = Dental Medicine
HM = Human Medicine
Outcome Definition Bachelor

Students have gained basic knowledge of healthy and ill individuals in organ-specific integrated modules.

They are able to recognize the clinical relation between symptoms and disease.

They have basic knowledge of skills and scientific work.

They show professional behavior in a clinical setting.

With a Bachelor Degree it is not possible to work as a medical doctor.

The Bachelor is an integrated part of the Master.
Outcome Definition Master

- Master of Medicine and Master of Dental Medicine are regulated in the Medizinalberufe Gesetz MedBG (law that regulates Swiss healthcare professions)

- Operation in the Swiss Catalogue of Learning Objectives for Medicine (www.smifk.ch)
## Basic Questions

How does our Bologna Curriculum differ from a Conventional Curriculum?

<table>
<thead>
<tr>
<th>Bologna</th>
<th>Conventional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student centered</td>
<td>Teacher centered</td>
</tr>
<tr>
<td>Integrated</td>
<td>Separated (preclinic / clinic)</td>
</tr>
<tr>
<td>Diversification</td>
<td>Same for all</td>
</tr>
<tr>
<td>Flexible</td>
<td>Rigid</td>
</tr>
<tr>
<td>Not so easy to manage</td>
<td>Easy to manage</td>
</tr>
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</table>
Structure of the Bachelor Medizin

Obligations

- Modules
  - Basic Competencies
    - Social, communicative skills
    - Scientific work
    - Humanities / Ethics

Major

- Clinical Medicine
- Dental Medicine

60 ECTS/Year

1 ECTS=
25 to 30h stud. workload
Modules – The idea behind......

**Master**
4th and 5th year
Clinical reasoning, Diagnostic, Therapy, Differential diagnosis

**Bachelor**
1st to 3rd Jahr
Anatomy, Histology, Physiology, Biochemistry, Pathophysiology
• The organspecific modules appear in the Bachelor and the same topics again in the Master.
• During the Bachelor we put special weight on Anatomy, Physiology, Pathology und Pathophysiology, illustrated with clinical examples.
• During the Master we integrate the basic science, and put emphasis on clinical reasoning, diagnosis, therapy and differential diagnosis.
Principles of Module Organisation

Modules of one organsystem in the BA and MA are an administrative entity.

In the BA the lead is taken by a basic scientist and the co-lead is taken by the clinical counterpart responsible for the integration of clinical content.

In the MA it is vice versa.
How it looks like....

Graph 3: structure of the Bachelor and Master programme in Basle

| Weeks  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | Semester Break | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | Start |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Bachelor 1. Year | Introduction | Components of Life | KSU | Blueprints of Life | Nervous System | Locomotion | 2008/07 |
| Bachelor 2. Year | Gastrointestinal Tract | Blood/Infection/Defense | Boundary Layers | Cardiovascular System | Respiration | Psyche/Ethics/Law | 2007/08 |

| Weeks  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | Semester Break | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | Start |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Master 3. Year | Clinical Electives | | | Master Thesis | EM | From Symptom to Diagnosis | 2011/12 |

Abbr.  
KSU  Body/Subjekt/Environment  
POEM  Patient-oriented evidence-based Medicine  
EM  Emergency medicine
Basic competencies (BC) and Extended Competencies (EC)

They are a continuum during BA and MA

1. Social and communicative competencies
2. Skills
3. Scientific Work
4. Humanities and Ethics
Graph 4: Longitudinal curriculum “communication and social competences”

**BA 1st year**
- Feedback, Group Process & Team Building
- Basics: Patient-Centred Communication
- Anti-Stress-Training
- Body-Subject-Environment

**BA 2nd year**
- Doctor-Patient-communication (Role play + video)
- Psyche/Ethics/Law

**BA 3rd year**
- Course Doctor-Patient Communication
  - Clinical Skills: History taking & examination
  - Major: Psychosocial Medicine
  - Patient-Oriented Evidence-Based Medicine

**MA 1st year**
- Course Breaking Bad News (Oncology)
- GI Tract: D-P-communication and functional disorders
- 1:1 Tutorial: GP Attachment; 24 half days

**MA 2nd year**
- Clinical electives: Application of knowledge and skills in clinical settings

**MA 3rd year**
- Reflection: Professional Identity

Legend: implemented planned 11/12

**Assessment**
- MCQ (organ-related modules)
- Portfolio (e.g. GP attachment)
- OSCE 1st, 2nd, 3rd, 4th year
Master Clinical Medicine

- Modules Part 2 of the learning coil
- Extended competencies
- Major: „Einzeltutoriat“, social and preventative medicine, prescription course
- Year for electives
- Modul „From Symptom to Diagnosis“
Year of Electives

4. and 5. semester of the MA
- 1st month mandatory: scientific work
- 3 month Surgery
- 3 month Internal Medicine
- 3 Monate free choice

Log-Book: all skills of the SLCO with signature of the tutor → 60 ECTS
The new „Eidgenössische Prüfung“

- Claimed by the Parliament → MedBG
- Condition of admission: successful finished studies of human medicine/ dental medicine in an accredited curriculum at Master level
- Organisation by the Federal Office of Health (Medizinalberufekommission)
- Format: MC + CS (clinical skills) + CBA
After Master of medicine / dental medicine and successful federal exam

1 year scientific work

Masterthesis can be the basis for further scientific work

Universities are responsible for further modalities

PhD curriculum: Development ongoing
Part 2

Bologna and the Healthcare System
Bologne survient à un moment de crise universelle dans le domaine de la santé


- US health care industry is in crisis
- The Symptoms
  - Prestigious teaching hospitals lose millions of $ every year
  - Health care delivery is convoluted, expensive, and often deeply dissatisfying to consumers
  - Managed care seems increasingly to contribute to these problems
  - Some best managed-care agencies are on the brink of insolvency

I thank Prof. C. Bader, Université de Genève for this slide
Pourquoi la crise dans le domaine de la santé?

Une analogie avec l’industrie en général

I thank Prof. C. Bader, Université de Genève for this slide
Les imprimantes HP: la gestion intelligente d’une TD inventée par HP

I thank Prof. C. Bader, Université de Genève for this slide
Why should this concern us?

- Costs in healthcare systems are exploding
- Are we producing „overshoot“ in our medical curricula?
- What are the options of a Bologna curriculum?
Le message de Christensen concernant le monde médical

If the histories of disruptive technological revolutions in other industries can serve as a guide, in the future, we should expect

- a healthcare system characterized by lower costs, higher quality, and greater convenience than ever could have been achieved under the prior system

- to be able to consume more healthcare in the future, precisely because of its quality, convenience and affordability (in contrast to present prescriptions that entail consuming less healthcare in order to control its costs [rationnement, clause du besoin, etc... ])

- However, we will reach this improved state only if disruptive competition, and not regulation or managed care, is the engine of improvement

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From a professional point of view, what would similar disruptive revolutions look like in healthcare?

They would be:

- technologies enabling individuals to do for themselves things that historically had required the service of nurses
- technologies enabling less skilled and lower-cost caregivers to do things that historically had required expensive specialists
- technologies in diagnostic and therapeutics enabling nurses practitioners or physicians’ assistants to do things that historically had required physicians to manage
- technologies allowing personal care physicians to provide services that historically had required more expensive specialists

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From a professional point of view, what would similar disruptive revolutions look like in healthcare?
From an institutional point of view, what would similar disruptive revolutions look like in healthcare?
Healthcare, an industry that is ripe for disruption?

- As a group, the medical schools, specialist physicians, hospitals and equipment suppliers have done an extraordinary job of learning to treat and resolve difficult, intractable problems at the high end.
- But precisely because of their achievements, healthcare is now an industry that is ripe for disruption.
Typical reaction of faculty members (in Germany)

- No low level medical staff (Barfussmedizin)
- High medical care for everyone
- Enough of reforms
- Bachelor offers new options to work in the field of healthcare, but this is not identical with high aims of the faculties.
But…..

• A curriculum designed in 2 steps, will allow to change the healthcare system in a disruptive manner.

• All responsible actors in this field are under obligation to think of new models instead of restriction.

• Cooperation of politicians, associations of medical professions, faculties, and industry is necessary!