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## E-Health in Practice: Business Opportunities

Re-adjusting the Focus:  
Priority on Prevention to Avoid Health Care

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## What We All Hear Daily...

- *Ageing Societies due to demographic change*
- *Collapsing public health systems*
- *Unhealthy but longer average life expectation*
- *+++*

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## All Statistics Prove It...

Insurance Premiums (% of Gross Salary)

Year	Insurance Premiums (% of Gross Salary)
1970	8.2
1980	11.4
1990	12.6
2000	13.5
2010	14

Life Expectancy (Years)

Year	Life Expectancy (Years)
Stone age	21
Romans	22
1970	45
1980	64
1990	75
2000	81
2010	86

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## Implications For Tomorrow...

a closer look at: <http://www.destatis.de/bevoelkerungspyramide/>

- *Strategic Thinking*
- *Trans-sector initiatives*
- *The "empowerment of the patient"*
- *ICT based self-monitoring as regular "hygiene habit"*

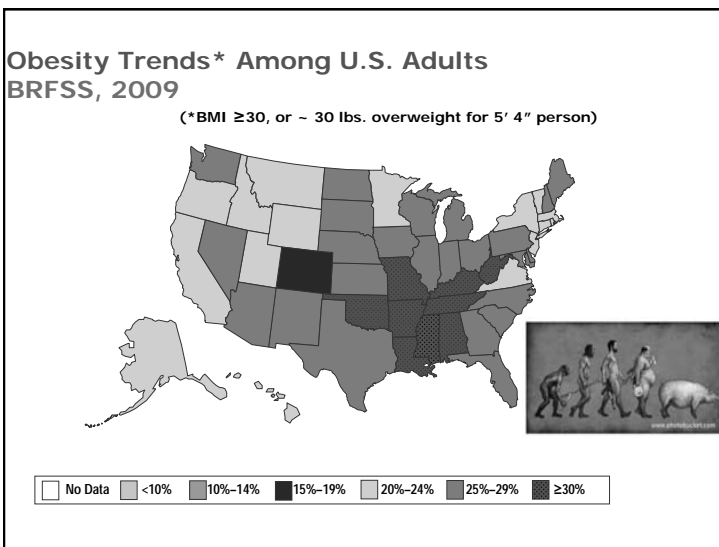
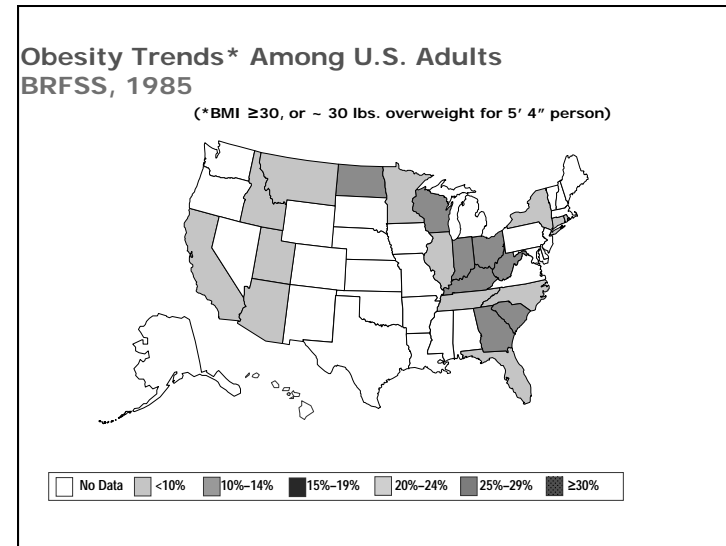
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## US Population at Risk: The Time Line of Obesity Trends

- *More adds on TV for healthy living than anywhere else in the world*
- *Strong initiatives from many groups*
- *Little effect so far for decades*
- *Strong differentiation between blue- and white-collar groups*

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## Yes, Action is Urgently Needed

- ◇ Focus on Diabetes Type II
  - ◆ Increasing number of patients
  - ◆ Many juvenile patients
  - ◆ Result of drastic overweight and malicious nutrition habits
  - ◆ High long term health risks beside
- ◇ High risk for cardiac insufficiency
- ◇ Approx. 1/3 will need dialysis
- ◇ Unseen cost explosion for health systems

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## Yes, Risks Can be Managed

UKPDS: decreased risk of diabetes-related complications associated with a 1% decrease in A1C

Observational analysis from UKPDS study data

Complication	Percentage decrease in relative risk
Any diabetes-related endpoint	21%
Diabetes-related death	21%
All cause mortality	14%
Myocardial infarction	14%
Stroke	12%
Peripheral vascular disease†	43%
Micro-vascular disease	37%
Cataract extraction	19%

†Lower extremity amputation or total peripheral vascular disease  
\*P < 0.05; \*\*P < 0.0001

Adapted from Stratton M, et al. UKPDS 33. BMJ 2000; 321:405-412.

[http://www.bledconference.org/proceedings.nsf/Proceedings/1D7BC21317328DABC1257757003B20A4/\\$File/16\\_Wickramasinghe.pdf](http://www.bledconference.org/proceedings.nsf/Proceedings/1D7BC21317328DABC1257757003B20A4/$File/16_Wickramasinghe.pdf)

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## Asking Seriously for the Business Opportunities?

- ✦ A Huge Market for Health Prevention
  - ◆ Healthy living programs
  - ◆ Nutrition products and advice
  - ◆ Fitness gear and communities
  - ◆ 3<sup>rd</sup> party sponsoring (insurances)
- ✦ Economic wealth decreases with growing disease figures
- ✦ Health is objective of public welfare

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## Our Approach "in a nut shell"

mHealth support may be regarded as

**Mobile Value Service**

*„Freedom becomes value by expanding the limits of the possible in the structures of everyday life.“*

(Braudel, 1982 and Keen et al., 2001)

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## mHealth Services to Support Efficient Medical Prevention Programs

**Empowerment of the Patient**

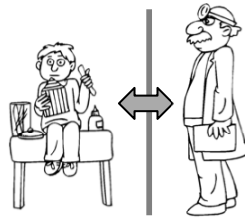
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## Why and How Empowerment?

- Washing hands, brushing teeth and hair, cutting nails: standard routines
- Nearly continuous compliance to common behavioral patterns
- Weight or blood pressure measuring?
- Which medical relevant data owns the patient?
- Nearly total delegation of health related issues to some Doctors
- Self responsibility of health issues as teaching subject in school



Health Coach Program  
Revitalize Your Health

<http://www.onco-coach.org/>

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## Empowerment by "Mobile Self Monitoring"

- Holistic Health Concept
- Factors
  - Self responsibility
  - Nutrition Consciousness
  - Physical fitness
  - Stress management
  - Environmental sensitivity
- Nearly Continuous Compliance
- ICT for Monitoring Support
- Convenience / Usability
- Trust / Medical Guidance



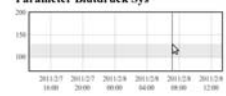
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## Research: Mobile Health Wallet

**Test**

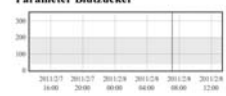
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Parameter Blutdruck Dia

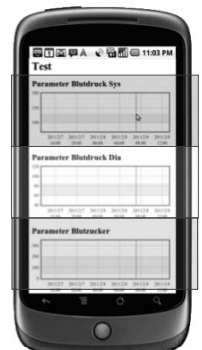


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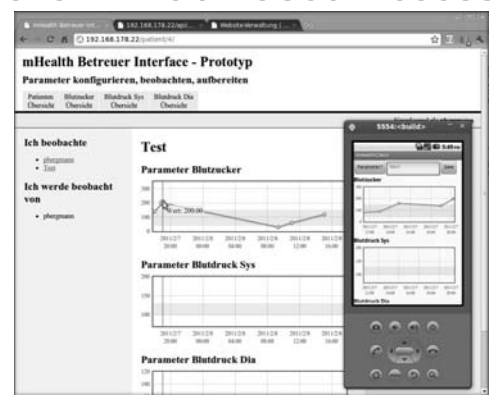


Thesis material from P. Bergmann, IWWI, Uni-Koblenz

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## Research: Web Based Access



mHealth Betreuer Interface - Prototyp  
Parameter konfigurieren, beobachten, aufbereiten

Parameter konfigurieren, beobachten, aufbereiten

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## Yes, it is Already a Relevant Topic in Our Market Sphere!

**Mhealth Alliance**



At the GSM Mobile World Congress in February 2009, the Rockefeller Foundation, United Nations Foundation, and Vodafone Foundation announced an agreement to form the mHealth Alliance to facilitate global innovation and ensure maximum impact in the field of mobile health (mHealth).

<http://dl.dropbox.com/u/1581581/mHealth%20-%20slideshare.pdf>

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## But, We Need More: Transsector Cooperation and Investment

- ✧ Mobile carriers may be platform provider
- ✧ Strong political initiative is mandatory
- ✧ Medical business (doctors, health insurance companies etc.) have to take leadership
- ✧ Educators (teachers, parents, nurses, kindergarten workers) need to be trained
- ✧ Self-responsibility and patient empowerment need to be long term goals
- ✧ Data protection issues have to be carefully reflected
- ✧ profit vs empathy considerations need to be emphasised for public welfare

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## As Food for Thought...

*"The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds"*

John Maynard Keynes, 1935

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Please take a look at our newest development: DEFI Now!



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