

Adrienne Zsófia Nagy
Hungary

Prospects of school healthcare

In respect of
Positive health
&
Big data medicine

Significant developments affecting medicine in the 21st century

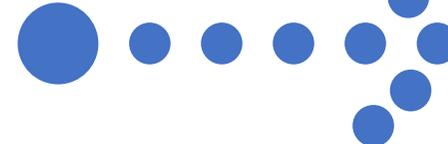
Genome Project:

personalized data,
promises precision



System biology:

acknowledging complexity,
holistic approach using big
data



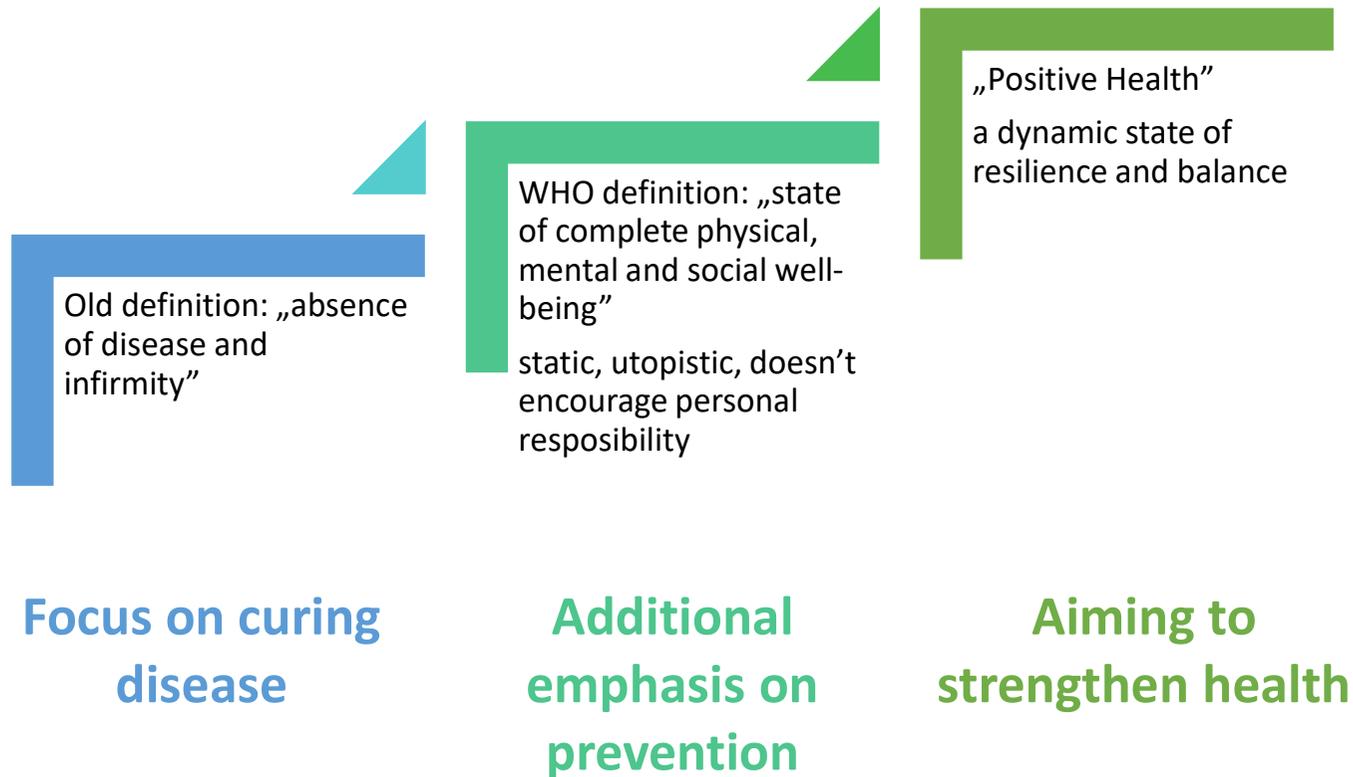
„P4 Medicine”
Predictive
Preventive
Personalised
Participatory

Risking „O4”:
Over-testing
Over-diagnosing
Over-treating
Over-charging

Building on the gathering and sharing of
personal data from large numbers of patients
and healthy people

Fast computing and other technologies needed
to facilitate the analysis and interpretation

„*health*” the definition is changing



Important steps in the evolution of the concept „Positive Health”

- **Aaron Antonovsky**

- "health-ease versus dis-ease continuum"
 - Instead of the traditional medical dichotomy that separated health and illness
- Study of „salutogenesis” instead of pathogenesis
- „Sense of coherence” - a global and pervasive sense in individuals, groups, populations, or systems that serves the capacity for resistance

- **Positive psychology** Mihály Csíkszentmihályi, Martin Seligman

- "the scientific study of positive human functioning and flourishing on multiple levels of life
- Key factors: PERMA acronym: Positive emotions, Engagement, Relationships, Meaning and purpose, and Accomplishments.

Applying Positive Health two different examples

Institute for Positive Health (IPS)

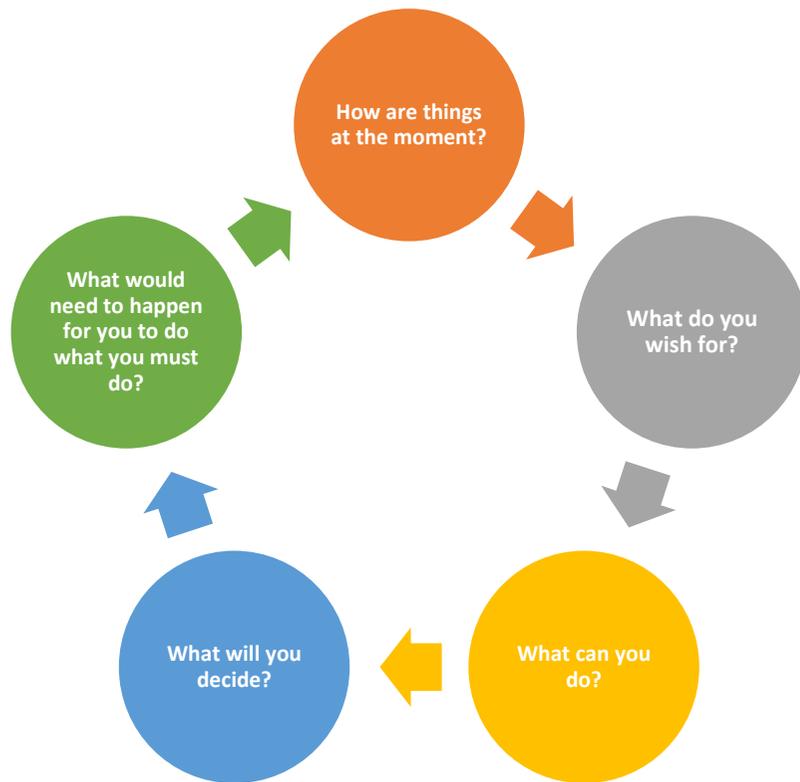
M.Huber Netherlands

Positive Health initiative

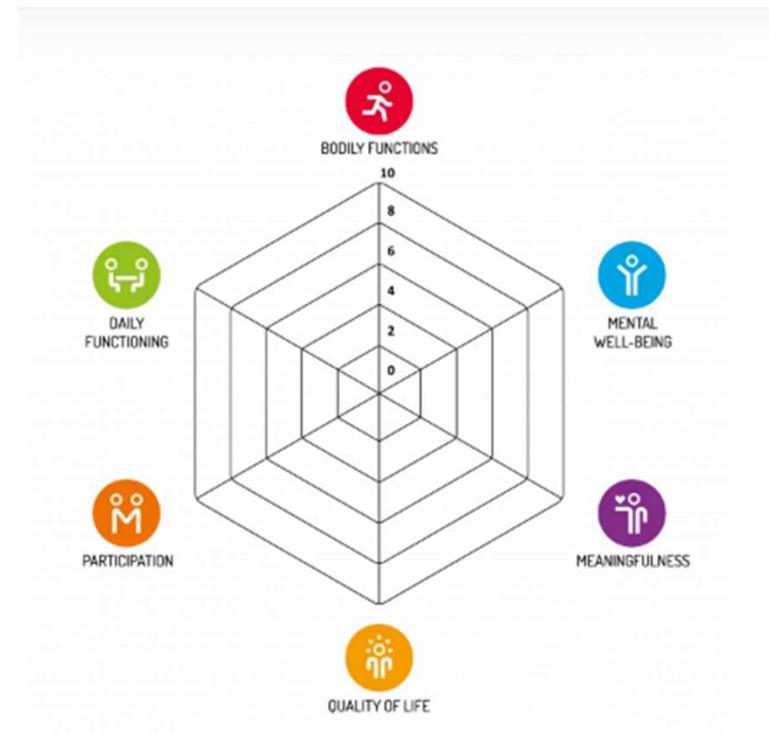
*Supported by the Robert Wood Johnson Foundation
(RWJF) at the University of Pennsylvania*

Institute for Positive Health (Netherland)

”The emphasis is not on illness, but on the people themselves, on their resilience and on what it is that makes their lives meaningful.” <https://www.iph.nl/en/>



„action wheel”



„spider web”

Positive Health initiative

Robert Wood Johnson Foundation; University of Pennsylvania

<https://www.authentic happiness.sas.upenn.edu/learn/positivehealth>

Basic principle:

Individuals in the state of Positive Health should have optimal ability to respond adaptively to environmental change and challenge whether physical, chemical or psycho-social

Defining it precisely in terms of distinct measurable criteria is difficult, therefore research is needed

Positive Health is considered as a new scientific discipline aiming at the empirical study of health assets

- an empirical and systematic discipline that employs an explicitly interdisciplinary scientific approach to build an evidence base.

First task in the development of Positive Health is to identify likely candidate health assets

- A *health asset* is an individual factor that produces longer life, lower morbidity, lower health care expenditure, better prognosis when illness does strike, and/or higher quality of life.
- 3 classes of health assets: biological, subjective and functional

Applying Positive Health two different examples

Institute for Positive Health (IPS)

- *M.Huber Netherlands*
- focusing on individual health and well-being
- aims to manage health care costs
- to improve cooperation and medical consultation
- achieve greater work enjoyment
- involve citizens in decision-making

Positive Health initiative

- *supported by the Robert Wood Johnson Foundation (RWJF) at the University of Pennsylvania*
- scientific approach based on big data
- aims to build an evidence base for positive health
- now in its first step, to scientifically identify likely candidate health assets

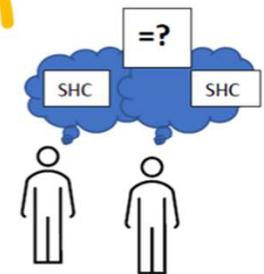
How much could be the task of school healthcare if ...
... if we accept the multidimensional concept of positive health,
... we acknowledge that gathering health data will be important ?

2022. 09. 29.

Adrienne Zsófia Nagy

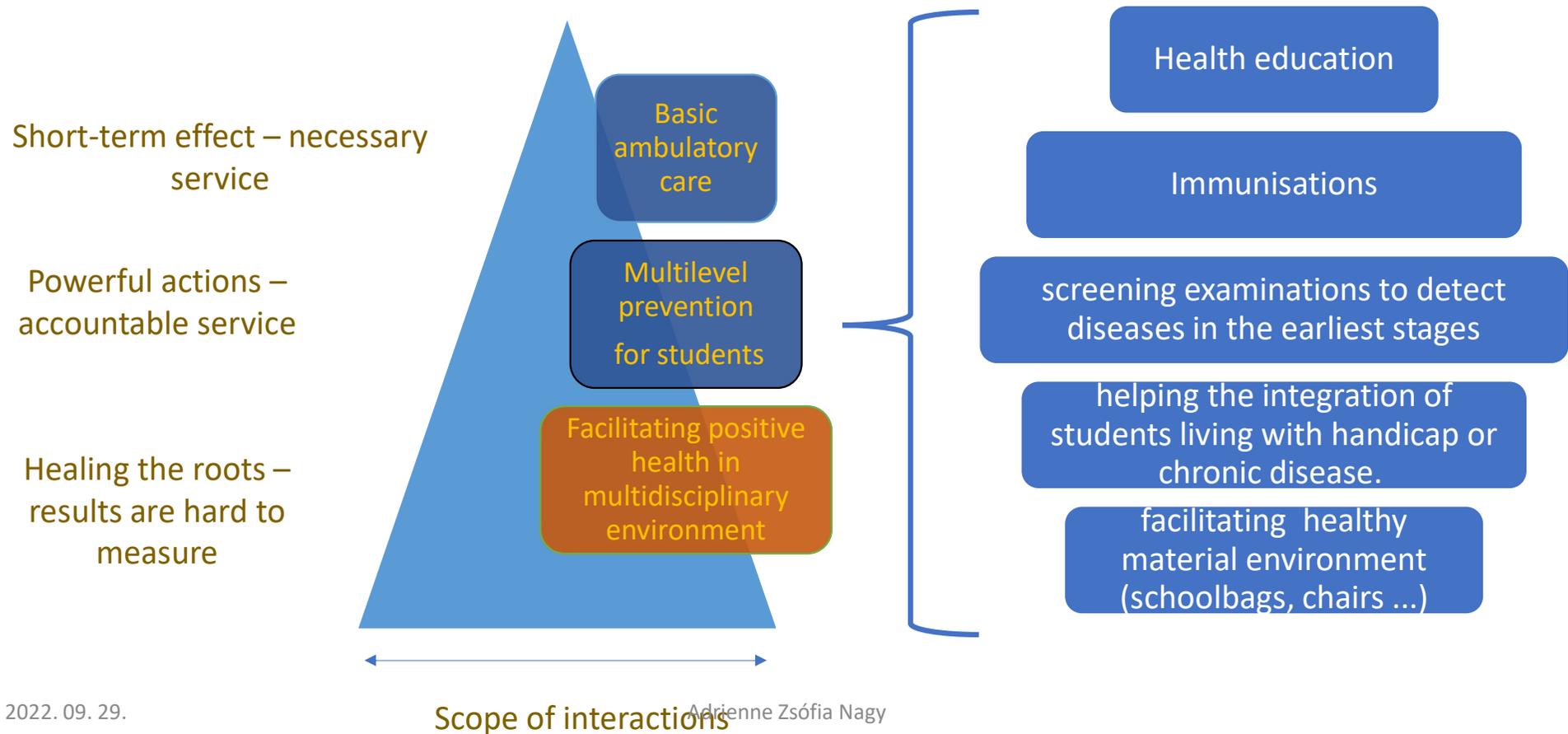
How I use the term School Healthcare (SHC)

- Services provided by one or more health workers to students enrolled in primary or secondary education, preferably within school premises or in a health service situated outside the school.
 - Modified from WHO guideline on school health services
22 June 2021 | Guideline



Potential tasks of school health care

apart from gathering data



How can we put the new tendencies into practice?



1

Embracing the concept of Positive Health, and using it in our routine

2

Gathering data for science and for strategic planning of public health

3

Keeping the right balance between the previous two, because they can become competing forces!
Eye contact/screen contact

What the concept of Positive Health teaches us #1



Use the interview to provide personalised „health+” support

Become part of the solution, not only pointing out problems when screening

1. Aid the student in evaluating and activating his/her resources of health
2. An effective interview briefly covers different dimensions of life:
 - a) Satisfaction with school performance,
 - b) hobbies,
 - c) family, friends,
 - d) purpose,
 - e) time management,
 - f) material and financial circumstances
3. Use „an action wheel” when needed
4. Create a health-promoting microclimate

Trust-relationship and eye contact with youngsters is an asset

Example matters more than directives





2022. 09. 29.

Adrienne Zsófia Nagy

What the concept of Positive Health teaches us #2



Health might be improved by strengthening likely health assets.
It needs a multidisciplinary approach

Examples:

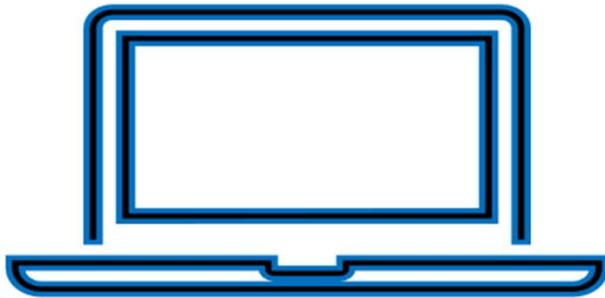
- BMI in healthy range – dietician
- well balanced posture – physiotherapist
- positive emotions – psychologist
- practicalities – social worker

Role of school healthcare specialist to connect eligible students to the right provider based on interview and screening





Gather reliable data
for science and public health strategy



- Information technology,
Big data and School-
healthcare

What SHS receives:

- Well organised administration
- Readily available information
 - On individual student history
 - On best practices
- Easier cooperation

What SHS as part of public health can provide

- Large scale health data suitable for both horizontal and vertical analysis

Direct risks:

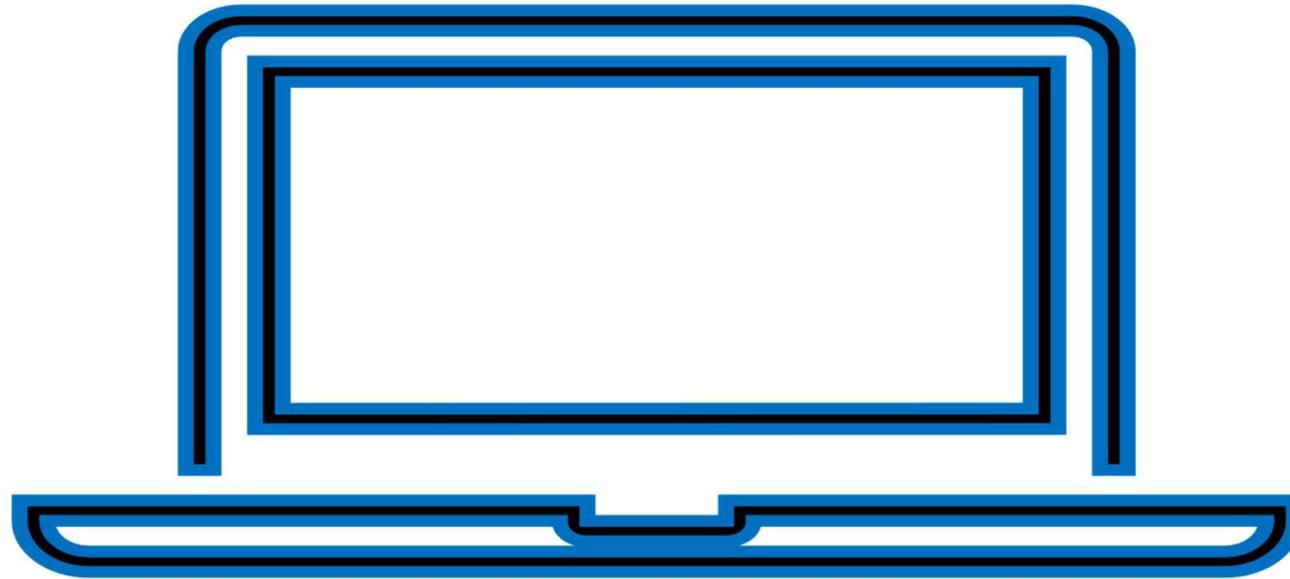
- Inappropriate standardisation leads to false results
- Breach of privacy rights
- Breach of data security

Indirect risks:

- Replacing spontaneity with monoton automatism
- Loss of individual creativity
- Burn-out

J. Naisbit: A 20th century forecast of 21st century healthcare trends

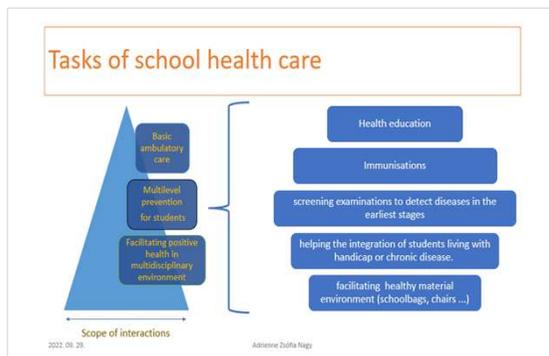
„And with recent developments in genetic engineering now raising the possibility of a future that will someday be free of birth defects, disabilities, and disease, what then will be natural, what will be artificial, and what will it truly mean to be human?“



gather reliable data

Questions to consider organising school-healthcare

- How much to use of its potential?



Create health-promoting microclimate



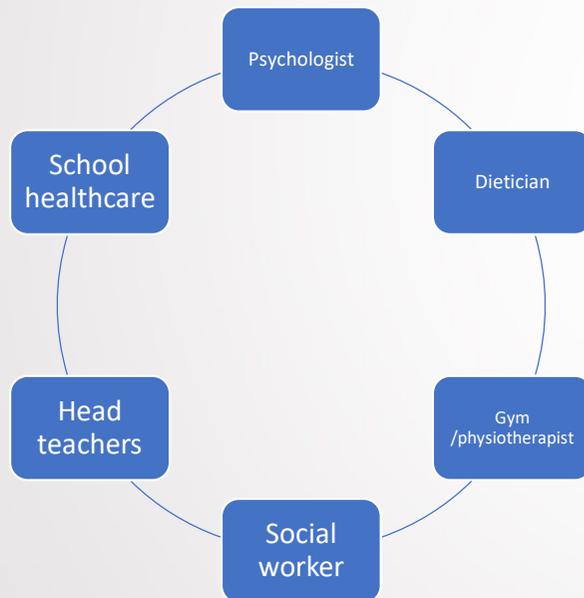
Conduct multidisciplinary cooperation



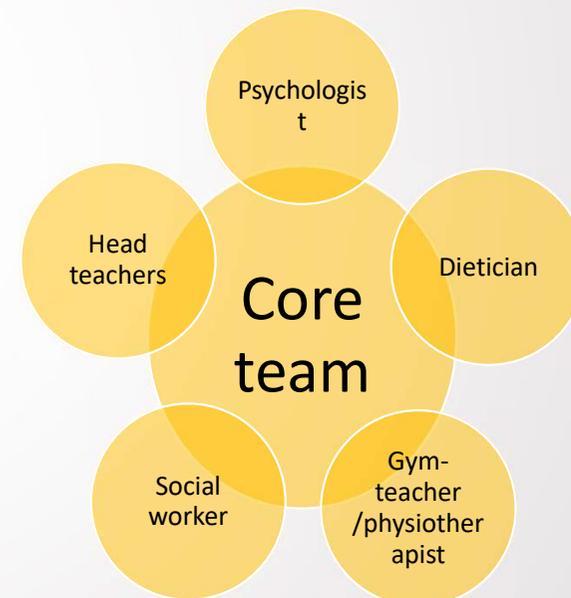
- What are the costs of it?
 - Consultation room
 - Simple equipment (faucet, precise scale, height measure tool, blood pressure meter, vision test tool, PC ...)
 - School Health Care Professionals - the key asset to contribute to the quality
 - One person is insufficient to achieve a comprehensive result

School healthcare professionals in a multidisciplinary team

Segmented structure



Holistic structure



The core team has to meet all the students

Professional qualities needed to fulfill core functions:

- Good understanding of the holistic concept of health, especially of healthy physiology and mental health
 - understanding interconnections in physiology
 - capability to weigh processes - both organic and mental – that can lead to the development of disease
 - up-to-date knowledge of self-help technics and easy first-line interventions
- Capability to create a health-promoting microclimate
 - good communicational and motivational skills – in relation to students and colleagues as well
 - willingness and ability to cooperate
- Practical management skills
 - local networking
 - IT and administrative skills
 - accuracy,
 - knowledge of clear-cut mutually understood definitions
 - objectivity
- Leadership skills to have adequate representation in multidisciplinary team
- Analytical and strategic thinking, understanding public health

Conclusions

School healthcare has extended potential to improve the health of future generations

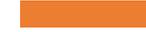
- Directly activating local resources of health
 - screening examination completed with a personalized interview (spider web, action wheel)
 - cooperation with a multidisciplinary team
- Indirectly by gathering objective health data for science and strategic planning
- **Keep the balance! Resist possible pressure to serve big data medicine without utilizing simple local resources, but don't give up on facilitating science**

Short term it might seem to be cheaper to finance only accountable results

- Limited to screenings with strict data gathering, immunizations, and basic ambulatory care provided by one single nurse
- Problems are pushed to a „higher level” to specific institutions, and root problems are not tackled

Holistic view with creating a health-promoting microclimate might pay back in the long-term

- Needs quality work of a team of motivated professionals
- Special training for the SHC team
- Objective scientific guidance and feedback on results



Thank you for
your attention!
