




HEALTHCARE FOR HEALTHY AGEING

3-4 JUNE 2014

Personalized Health

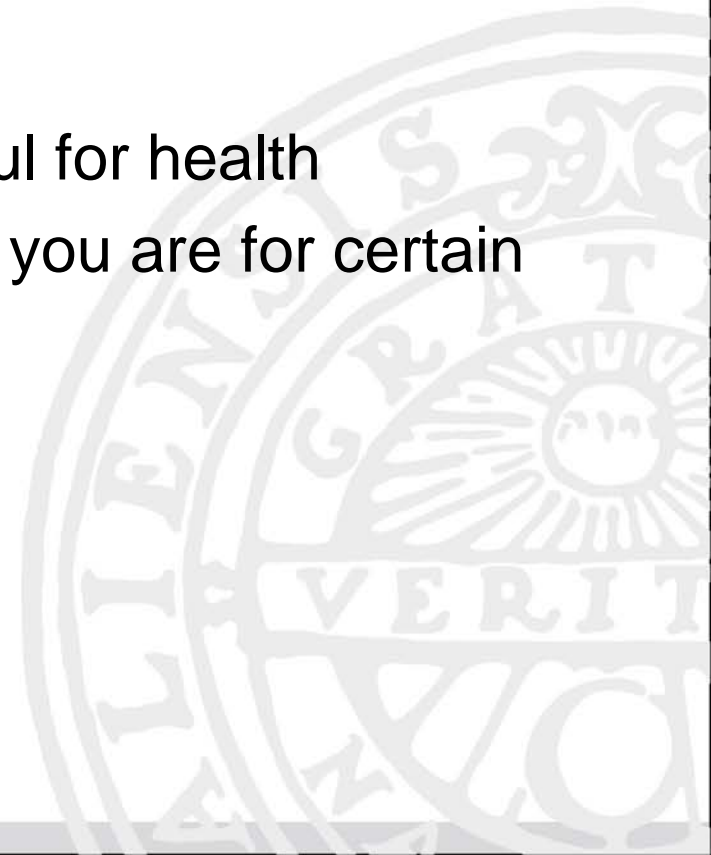
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Life-style vs genes

- We are born with our genes
- We all have different habits
- Some life-style patterns are harmful for health
- Genes determine how susceptible you are for certain life-style patterns





Life-style vs genes

- Since 7-8 years we have the tools to analyze the genes in at a affordable prize
- We are now collecting data for the next big step in medicine; PERSONALIZED HEALTH
- Individualized advices on life-style modification
- Also applicable on medication
- Requires another 10 years before we are there



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EpiHealth

The EpiHealth cohort study

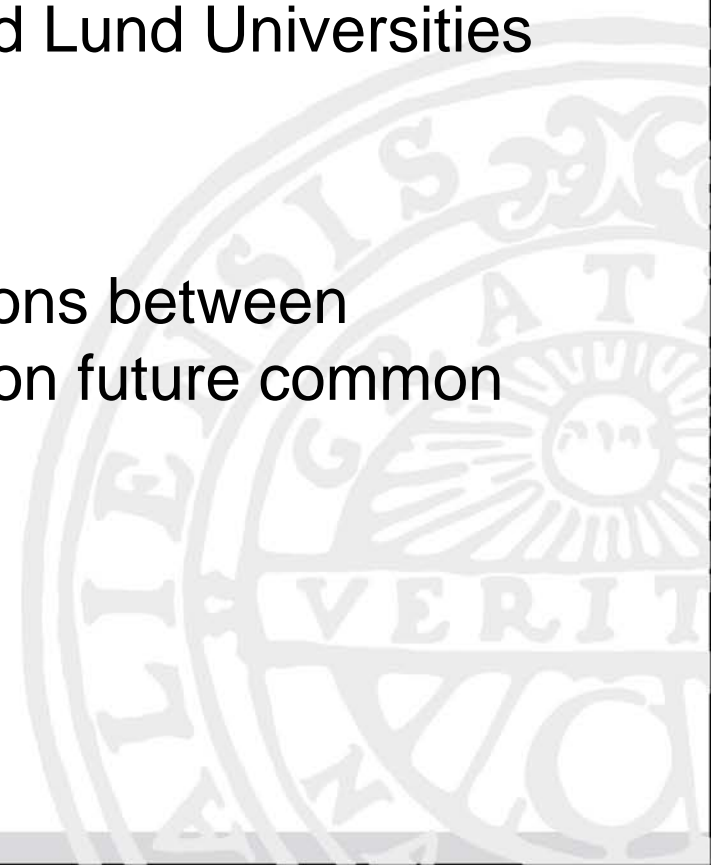


The EpiHealth cohort

300,000 Swedish subjects aged 45-75

Collaboration between Uppsala and Lund Universities

Primary aim is to explore interactions between environmental factors and genes on future common diseases in the elderly



The EpiHealth cohort

300,000 Swedish subjects aged 45-75 years

Initially recruited in Uppsala/ and Lund/Malmö

IT-based history of diseases and
life-style factors
(Diseases, medications, diet, smoking,
social network, exercise, QoL,
occupational exposure, etc)

Visit: Blood, DNA,
Blood pressure, weight, height,
waist circumference, fat mass,
Glucose and lipids, TMT B, Lung
function, ECG

Follow-up through registers:
Death, hospitalization, cancer

Exposures included in the questionnaire

- Family structure
- Social group
- Education
- Reproduction
- History of diseases
- Medication usage
- Food intake
- Alcohol consumption
- Smoking/snuff history
- Physical activity
- Work life history
- Pain history
- History of injuries
- Environmental exposures

Links to registers for exposures and outcomes

- *Swedish Population Registry*; regarding address, place of birth, parents place of birth and marriage
- *Swedish Censuses (1960-90)*; regarding social group, income, living conditions, education
- *Longitudinell integrationsdatabas för sjukförsäkrings- och arbetsmarknadsstudier (LISA) (from 1990)*; regarding employments and sick leave
- *Swedish National Insurance Agency*; regarding sick leave.
- *Utbildningsregistret (UREG)*; regarding education
- *Swedish Multi-Generation Register*; regarding family members
- *Medicinska födelseregistret (MFR)*; regarding pregnancies and deliveries, birth-weight
- *Swedish Patient Registry*; regarding in-hospital care
- *Swedish Prescription Registry*; regarding use of medication
- *Swedish Cause-of Death Registry*; regarding vital status and cause of death
- *Swedish Cancer Registry*; regarding cancer
- *Outpatient Registries*; regarding care in primary care facilities (includes *Day Surgery Registry*)
- *Swedish military service conscription register*; regarding blood pressure, exercise capacity, body height and weigh
- *Swedish Information System on Occupational Accidents and Work-related Diseases*; regarding occupational accidents and work-related diseases

Collaboration with LifeGene

- Sharing IT-system
- Common information on exposures
- Common physiological test

Other studies doing the same

- UK biobank (500,000 subjects)
- DeCode Genetics, Iceland (150,000)
- LifeLines, Holland (200, 000)
- Estonian biobank (100,000)
- US veterans (1M)
- Initiatives in China, Germany.....



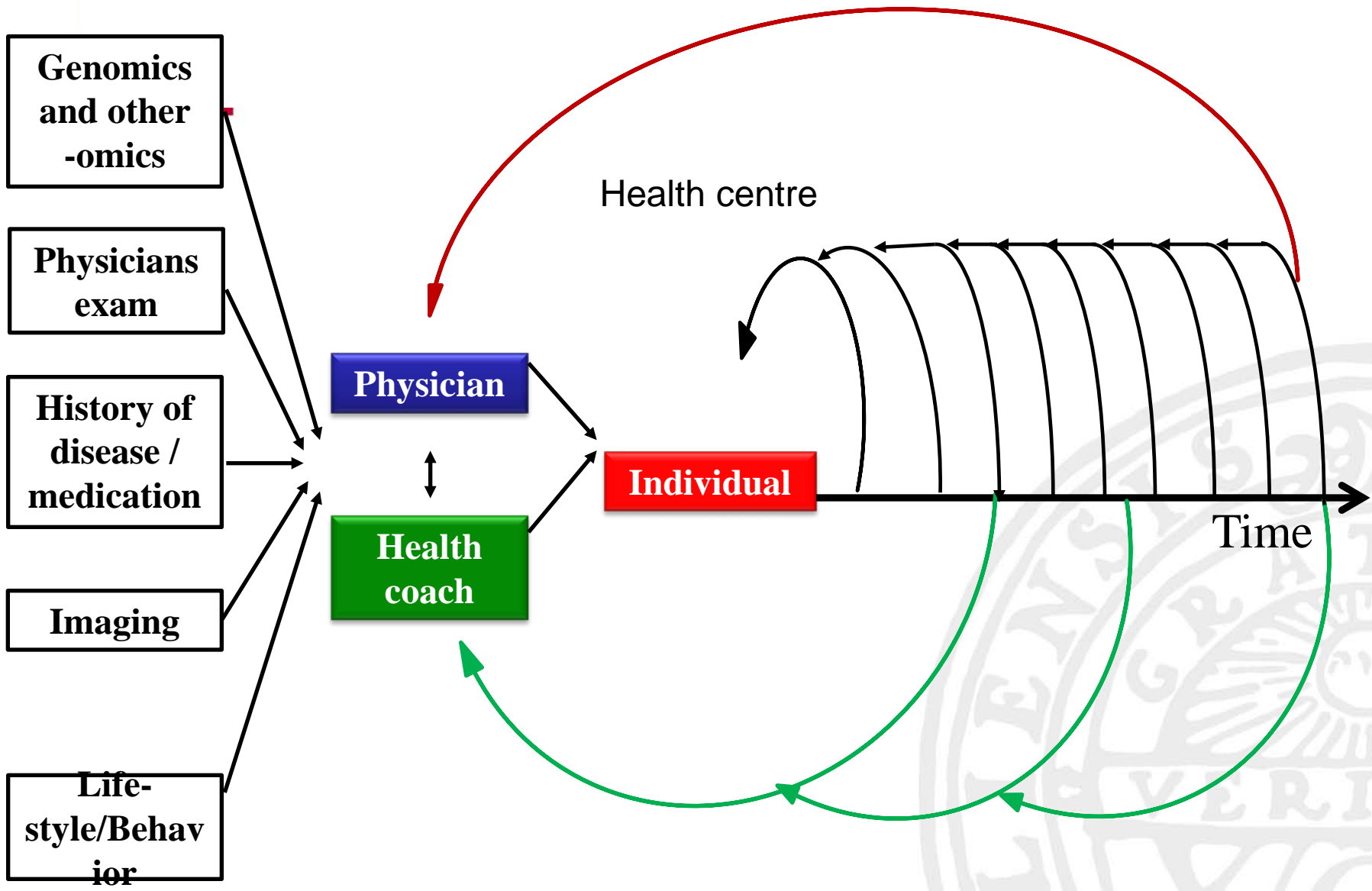


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Building "Health centers"

- A new concept for preserving health in the elderly
- Individualized health counselling
- Use of modern technologies
- Most important: Feed-back







Summary

- We now have the tools for the "Personalized Health" concept
- It will take another 10 years before we have the data needed
- Then we can build "Health centers" for individual health counselling and coaching for an improved health in the elderly population.



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