

FACULTY OF HEALTH SCIENCES
UNIVERSITY OF COPENHAGEN



Department of Public Health

University of Copenhagen



Facts about the Department

Public health research focuses on the incidence, distribution and causes of illness, and on the interplay between people, health and society.

The Department is one of twelve departments in the Faculty of Health Sciences at the University of Copenhagen. The Department is divided into five sections, a centre, a museum, and a secretariat.

The Department has a total of 185 employees, of which 130 are the academic staff. Also associated with the Department are approximately 200 external teachers, 450 General Practitioners (GPs) and more than 50 student assistants. The Department also comprises two national graduate schools.

The Department of Public Health is located at the CSS (Centre for Health and Society) in the former Copenhagen Municipal Hospital, while the museum is located in the Copenhagen district of Frederiksstad.

Sections:

- Environmental Health
- Social Medicine
- General Practice
- Health Services Research
- Biostatistics

Other units:

- Centre for Epidemiology and Screening
- Medical Museion
- Secretariat
- The Danish Graduate School in Public Health (GRASPH), the Graduate School in Biostatistics, a core facility in Biostatistics, and an in vitro core facility.

Research

The Department of Public Health undertakes basic research into the causes of illness and the functioning and development of the health service, as well as more application-oriented research focusing on the prevention of disease. The Department also places considerable emphasis on the methodological and theoretical development within its core disciplines.

The Department's research is multidisciplinary and utilises research methods ranging from molecular biology, experimental models and epidemiology to social science and humanities.

The Department has an extensive network of scientific collaborators, including clinical and biomedical researchers from the Faculty of Health Sciences, hospitals and general practice and other university departments and research institutions in Denmark and abroad.

Courses

The department contributes to a number of health science teaching programmes, the major ones being BSc and MSc in Medicine and in Public Health. The Department also offers a Master of Public Health (MPH) and many PhD courses.

The Department offers courses in Statistics, Epidemiology, Demography, Qualitative Research Methods, Medical Psychology, Medical Sociology, Theory of Science, Structure of the Health Service, Prevention of Illness and Promotion of Health, and Environmental and Occupational Health, and in the clinical subjects General Practice/Family Medicine, Clinical Social Medicine and Clinical Occupational Medicine.



Research sections

Environmental Health

This Section conducts research into the influence of environmental factors on public health, utilising research methods which range from experimental models to register-based epidemiology.

The research focuses on the interaction between genetic and environmental factors, and on vulnerable groups such as the foetus, children and the elderly.

The principal emphasis is on the development and validation of methods for:

- Molecular and functional measurement of exposure, susceptibility and biological effects
- Experimental in vitro and in vivo model systems

The methods are primarily utilised in analyses of:

- Health effects on children and pregnant women of exposure to chemical agents
- Health effects of particles produced by atmospheric pollution and nanotechnology
- Medical and environmental psychology
- Alternatives to animal experimentation

Social Medicine

This Section conducts research into the relationship between social living conditions, psychosocial factors and human health. Research is also undertaken into the scientific basis of disease prevention, both in the case of specific illnesses and disorders, and in general health.

Social medicine deals with the social causes and consequences of ill health. The research seeks to understand the mechanisms behind these relations, and ways in which they may be influenced via disease prevention and rehabilitation.

The research utilises epidemiological methods and data drawn from international comparative surveys, biodatabases and medical registers. The Section's research focuses on the following themes:

- Adolescent health
- Gerontology
- Social epidemiology and health inequalities
- Prevention of illness and rehabilitation
- Intervention studies
- Health in a lifecourse perspective

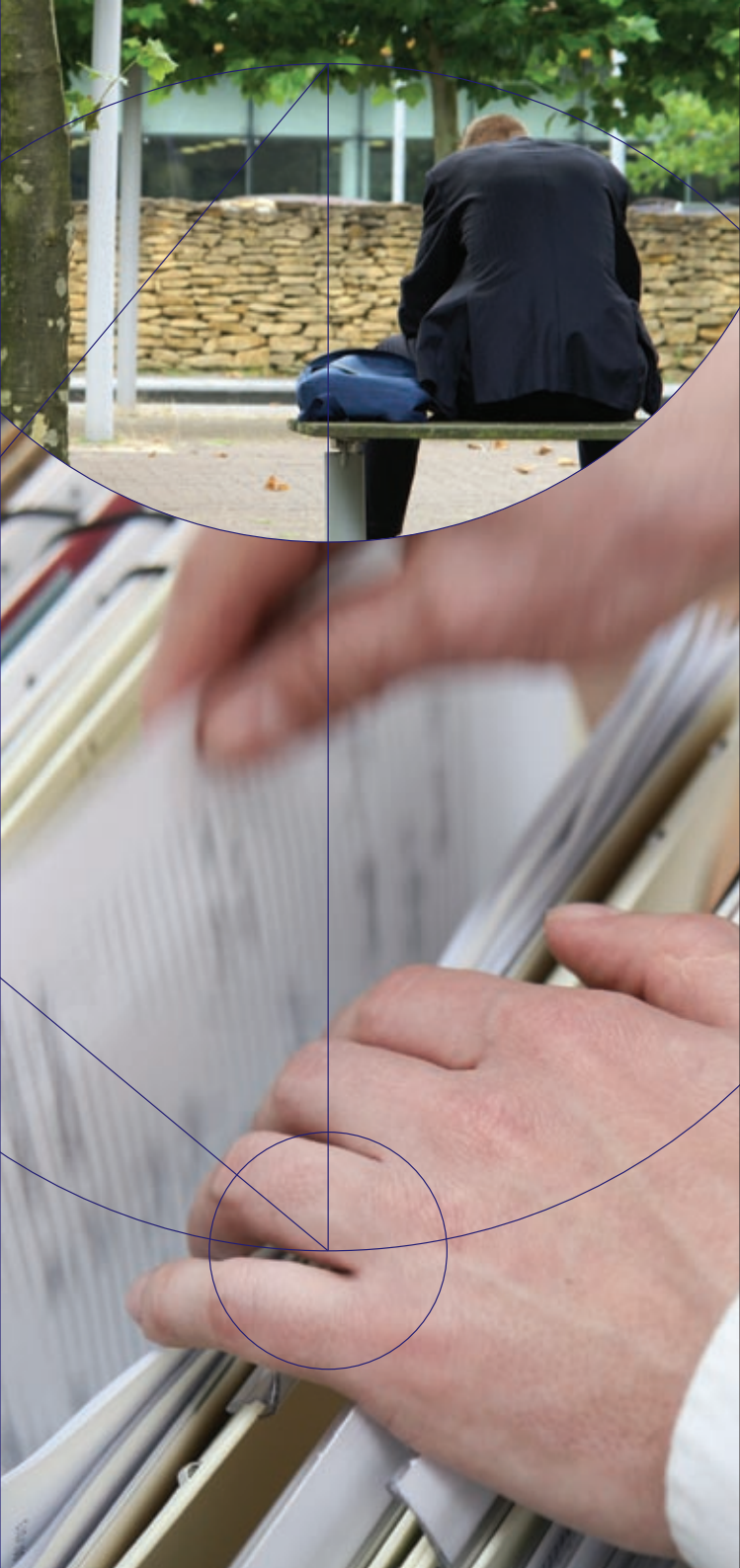
Health Services Research

The research of this department focuses on the structure, functioning and results of the health service.

The research provides significant contributions to understanding the development of health policy, the processes of technological and organisational change in the health service, and the experience and involvement of the health service's users.

The research utilises various theoretical and methodological approaches, including both qualitative and quantitative techniques. In the coming years the section will give priority to the following themes:

- Science and technology studies
- Health policy analyses of inequality in healthcare
- Function and change in the health service
- Epistemology and ethics



General Practice

The research field of General Practice is grounded in the everyday clinical practice of GPs who are the primary care contact for patients consulting for a vast number of reasons.

The Section cooperates closely with the Unit of Women and Gender Research in Medicine, the Research Unit for General Practice and the University's general practice clinic (APU Bartholinsgade), all of which are located in the same building at CSS.

The Section's most important research themes are:

- Children and adolescents
- General practice organization
- Chronic illnesses
- Disease prevention, screening, and sexual and reproductive health

Biostatistics

The Section carries out biostatistical research and method development, and provides research advice to the Faculty's PhD students and researchers in experimental and clinical medicine, public health and odontology.

The Section's biostatistical research encompasses event history analysis, complex measurements in experimental medicine and epidemiology, and interobserver variation. The statistical collaboration covers all areas of medical science, and ranges from brief consultations to joint projects lasting several years. The most important themes in the Section's methodological research are:

- Biostatistical bioinformatics
- Statistical methods in event history analysis and analysis of complex data structures in epidemiology

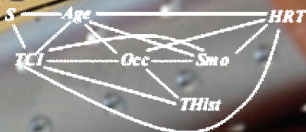


FIG 14. Moral graph for Figure 13.



FIG 16. Moral graph for Figure 15.

$$\frac{\partial^2 \log p(x_1 | x_2, x_C)}{\partial x_1 \partial x_2} = \frac{\partial^2 \log p(x_1, x_2, x_C)}{\partial x_1 \partial x_2}$$



- Dynamic mathematical models in biology, functional data and image analysis
- Statistical computing
- Statistical methods for the validation and analysis of questionnaires
- Assessment of clinical tests

Epidemiology and Screening Section

The background for the establishment of the Epidemiology and Screening Section is the great potential importance of screening in public health, and the special demands that screening places on epidemiological analysis.

The purpose of the Section is to create a unified knowledge base for the assessment of screening possibilities. The work focuses on research into the significance of screening in relation to particular illnesses. The most important current research themes are:

Breast cancer

- Who benefits from screening?
- The risk of over-diagnosis
- Risk factors in relation to obtaining different screening results

Cancer of the uterus

- Optimization of screening and treatment
- Combining vaccination and screening

Medical Museion

As a university museum, Medical Museion combines research and teaching with the role as the national museum of medicine and health, including the documentation of the medical heritage and health science communication through exhibitions and the web-based media.

Medical Museion focuses on basic research in the fields of the history of the health sciences, medical science and technology studies, medical museology, and medicine and the humanities. Current research includes:

- The contemporary history of biomedicine
- Medical museology
- Studies of visualization practices in the health sciences
- Studies of user-driven innovation in medical technology



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www.phdpubhealth.dk

www.museion.ku.dk

www.corporeality.net/museion

www.museionblog.dk



www.sund.ku.dk