Practical class 1

Social Medicine - definition and scope

Conspectus topics (1,2,3)

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Academic Year 2025/2026

Department of “Social Medicine and Public Health”

download the presentation from https://tinyurl.com/social-med-class-01

Welcome to the course!

About me

- Chief Assistant Professor
- Medical doctor (practicing physician)
- PhD in Public Health
- Master of Public Health (MPH)
- Master of Economics (MEcon)
- Epidemiology resident
- University educator

This course combines clinical thinking, epidemiology, and social medicine, with a strong focus on how theory applies to real-world health systems.

How the course works

Practical classes

- 15 classes × 2 academic hours
- Attendance is **mandatory** (**signature-based**)
- Active participation is expected

You can choose how we work in class:

- **Classical format**: I teach, you listen, ask questions, and take notes
- **Interactive format**:
  - 15 minutes of reading
  - Group tasks
  - Critical debate (“battle” format)
  - Final synthesis of key points

How the course works

Lectures

- 15 lectures × 2 academic hours
- Attendance is **mandatory** (**signature-based**)
- Prof. Stefanov does not check attendance (but I do)
- About **half of the exam material** is covered **only in lectures** → take notes

Exams, support & resources

Exams

- Two topics from the conspectus (random combination)
- **Written essay** (about 15-30 minutes to write)
- **Oral exam**: presentation and discussion of the essay
- The **oral part is the main component** of the final grade. Poor essay can be graded with excellent oral performance. Excellent essay can be failed if oral performance is poor.

Exams, support & resources

Office hours

- Thursday, 13:00–14:00 (appointment needed in advance, mail to: kostadinr.kostadinov@mu-plovdiv.bg)

You are welcome to discuss:

- Course content
- Assignments
- Exam preparation
- Any related academic questions

Exams, support & resources

Additional resources

- Personal website: https://kostadinoff.github.io (study guide, social medicine materials)
- AI platform: https://tidyurl.xyz/akkl (interactive learning materials, exercises, quizzes)
- Department SharePoint repository: https://tidyurl.xyz/toGI (slides, readings, supporting materials)

I strongly encourage you to use these resources throughout the semester.

Conspectus

download the conspectus (bilingual) from https://tidyurl.xyz/iRck

Course syllabus

download the syllabus (bilingual) from https://tidyurl.xyz/fZoC

Social medicine - Definition

Core Definition

Social medicine represents a distinct branch of medical science devoted to the study of **public health** and the **factors that shape it across populations**.

Rather than focusing on the individual patient or pathophysiological processes within a single organism, social medicine directs its attention to **communities**, examining how health and disease manifest, spread, and evolve within groups of people over time.

Core Definition

Social medicine is an **integrative discipline** that seeks to understand illness not merely as a biological phenomenon but as a **social process** intimately connected to the conditions under which people live, work, and organize their collective existence.

Social Medicine vs. Clinical Practice

Clinical Medicine:

- Individual patient symptoms and signs;
- Diagnosis and treatment of specific diseases;
- Prognosis and management of individual health conditions;

Public Health:

- Population health status and trends;
- Public health interventions and their effectiveness;
- Health policy and system organization;

This population-centered perspective distinguishes social medicine from clinical specialties, yet the philosophy underlying social medicine has **profound implications for everyday medical practice**.

Social Medicine vs. Clinical Practice

Clinical Medicine:

- Birth, marriage, employment
- Illness, hospitalization, disability
- Death

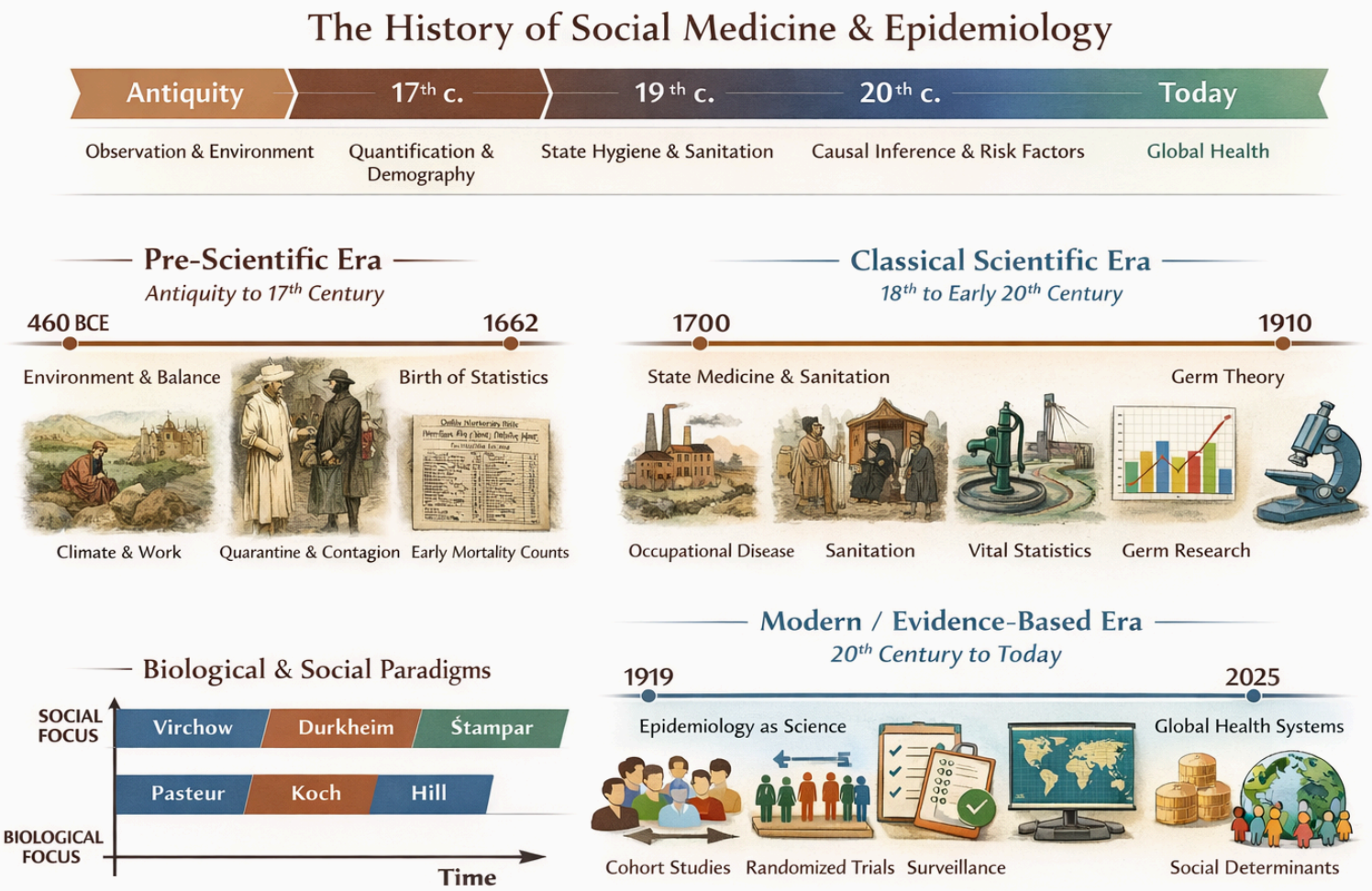
Public Health:

- Birth rates, marriage rates, employment rates
- Incidence, prevalence, disability rates, quality of life
- Death rates, life expectancy, population structure

How did we arrive at this understanding of health as a social phenomenon?

Historical Development

Historical Development



Ancient Foundations

- Recognition that health is influenced by social and environmental conditions extends to **antiquity**:
- **Hippocrates** and followers in ancient Greece proposed that climate, water quality, and lifestyle were important determinants of health and disease.
- However, the systematic study of health as a **social phenomenon** and the articulation of social medicine as a distinct field did not emerge until much later.

Eighteenth and Nineteenth Centuries

Foundations of modern social medicine laid during period of:

- Industrialization
- Urbanization
- Political upheaval

Rapid urban growth created new patterns of poverty, overcrowding, and disease, prompting physicians and reformers to consider **social causes** of ill health.

- **Johann Peter Frank (1745–1821)**
  - Considered "father" of social medicine
  - Articulated principle of **state responsibility** for population health
  - Framed public health as implementation of sound health laws

Nineteenth Century Pioneers

- **Jules Guérin** (France) – First used term “social medicine”

Believed field should encompass social pathology, etiology, and therapy of diseases

- **Rudolf Virchow** (Germany) – Key figure in modern social medicine

“If medicine is to fulfill its great task, it must intervene in the political and social life of society”

- **Bernardino Ramazzini** (1633–1714) – “Father of occupational medicine”

De Morbis Artificum Diatriba (1700) described occupational diseases

Twentieth Century Development

- **1849 – John Snow** applied field-based epidemiological approach

Demonstrated cholera transmission through contaminated water → Foundation of **applied epidemiology**

- **1920 – Alfred Grotjahn** established first department of social medicine in Berlin

Social medicine expanded to include study of diseases in relation to **occupational conditions** in specific populations

Development in Bulgaria

- **1879** – Dr. Dimitar Mollov proposed first health law
  - Founded Bulgarian Red Cross (1883)
  - First president of Bulgarian Medical Association (1901)
- **1917** – Introduction of Hygiene and Social Medicine into medical curriculum (the first department of Health Organization established at Medical Faculty in Sofia)
- **Professor Todor Zahariev**
  - Founder of Department of Social Medicine in Plovdiv
  - Former rector and the first director of National Institute for Social Hygiene and Public Health

Scope and Objectives

Three pillars of public health

Physical

Patterns of growth, maturation, functional capacity across lifespan

Morbidity

Burden of disease assessed through incidence, prevalence, disability, quality of life

Demographic Status

Vital statistics: birth rates, death rates, life expectancy, population structure

Objectives of Social Medicine

Study population health and its determinants

- Identify patterns of disease and disability
- Analyze trends over time
- Investigate social, environmental, biological, and behavioral factors
- Address health inequalities

Develop and implement health policy

- Provide evidence base for policy decisions
- Participate in formulation of health legislation
- Design long-term strategies for health improvement

Objectives of Social Medicine

Health management

- Organization, administration, and evaluation of healthcare services
- Healthcare financing and workforce planning
- Quality assurance and service integration

Health education and promotion

- Enhance awareness regarding health
- Encourage adoption of behaviors that reduce risk
- Create supportive environments and policies

Economic analysis of healthcare

- Cost-effectiveness of interventions
- Optimal resource allocation

Methods of Social Medicine

Sociological Methods

Essential for exploring **opinions, behaviors, and motivations** of individuals and social groups in relation to health.

Tools include:

- **Surveys** – gather information from large populations through standardized questionnaires
- **Interviews** – in-depth exploration of individual experiences
- **Observational studies** – direct observation of health-related behaviors
- **Document analysis** – systematic examination of medical records, policy documents, media reports

Particularly valuable for understanding **social context** of health and giving voice to patients, caregivers, and communities.

Epidemiological Methods

Study of **distribution and determinants** of health-related states and events in populations.

Central to social medicine as disease burden has shifted toward chronic noncommunicable conditions.

Key applications:

- Describe patterns of disease occurrence
- Measure strength of associations between exposures and outcomes
- Test hypotheses about causation
- Evaluate effectiveness of interventions
- Inform evidence-based practice and policy

Statistical Methods

Provide quantitative framework for:

- Describing health status and trends
- Testing hypotheses
- Estimating associations and effects
- Assessing uncertainty through confidence intervals

Applications:

- Descriptive statistics for summarizing health data
- Inferential statistics for drawing conclusions from samples
- Regression models for examining relationships
- Survival analysis for time-to-event data

Economic Methods

Used to study **financial dimensions** of public health and healthcare delivery.

Health economics addresses:

- How healthcare resources should be allocated
- What interventions represent good value for money
- How health systems should be financed (efficiency and equity)

Economic evaluation techniques:

- Cost-effectiveness analysis
- Cost-benefit analysis
- Cost-utility analysis

Historical Methods

Facilitate study of **evolution of social medical knowledge and healthcare systems**.

Allow researchers to:

- Learn from past experiences
- Draw upon positive traditions
- Pursue improved public health and system performance

By examining how health challenges were understood and addressed in different historical periods, historical analysis provides **valuable context** for contemporary debates and decisions.

Reminds us that today's health systems are products of long processes of social, political, and scientific change.

Experimental Methods

Include both **natural** and **artificial** organizational experiments:

Natural organizational experiments	**Artificial organizational experiments**
Observation and evaluation in real-world settings	Deliberately designed interventions
Identifying critical points where problems arise	Outcomes compared with existing approaches

Essential for testing new ideas and providing evidence about what works in practice.

Mathematical Modeling

Increasingly important tool in social medicine, particularly for studying factors influencing health phenomena.

Applications:

- Represent complex systems in simplified form
- Make predictions about effects of interventions
- Explore scenarios difficult to study empirically

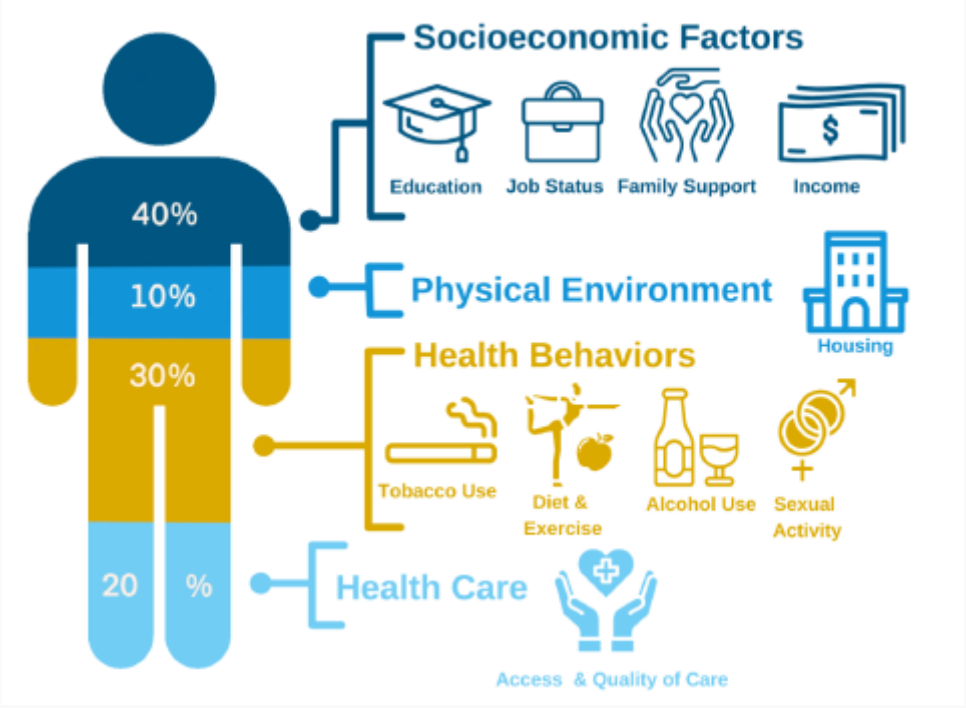
Machine learning and deep neural networks

- Analyze large, complex datasets
- Identify patterns not apparent through traditional methods
- Support sophisticated prediction and decision support

How do social factors influence the occurrence, course, and outcomes of disease?

Social Factors of Health and Disease

Social Factors of Health and Disease



Classification Framework

Social factors affecting health can be conceptualized through an integrated framework recognizing **five distinct yet interconnected life spheres**:

① Individual characteristics

② Family and household

③ Professional and occupational

④ Public environment

⑤ Healthcare system

Structural vs. Intermediary Determinants

Structural determinants – socioeconomic and political contexts that generate unequal distribution of power, resources, and opportunities

Intermediary determinants – living and working conditions most directly related to people's everyday realities

Structural determinants create social stratification → intermediary determinants translate positions into differential health exposures and outcomes.

Individual Characteristics

Function as **mediating factors** between external social determinants and individual health outcomes.

Sociodemographic attributes

- Age, gender
- Education level
- Marital status
- Residential location

Health-related factors

- Health consciousness
- Health literacy
- Behavioral patterns
- Adaptation capacity

Family and Household Environment

Functions

- Cultural transmission
- Moral frameworks
- Health education
- Personality development

Health Impact

- Material resources
- Social support
- Health socialization
- Stress buffering

Professional and Occupational Environment

Affects health through multiple pathways:

Occupational hazards – chemical, physical, biological exposures; ergonomic risks

Work organization – working hours, shift patterns, job control, demands

Employment-related stress – job insecurity, work-life balance, workplace relationships

Economic resources – income, benefits, financial stability

Public Environment

Neighborhood Conditions

Housing quality

Infrastructure

Safety

Social Cohesion

Social networks

Trust

Collective efficacy

Environmental Exposures

Air quality

Green spaces

Noise

Healthcare System

Affects health through:

Access to services – geographic, financial, cultural barriers; availability of providers

Quality of care – evidence-based practice, safety, effectiveness, patient-centeredness

Patient-provider relationships – communication, trust, shared decision-making

Mechanisms of Influence

Social factors influence health through **multiple interacting mechanisms**:

Material pathways – economic resources → nutrition, housing, healthcare access

Psychosocial pathways – stress, social support, sense of control

Behavioral pathways – health behaviors shaped by social contexts

Healthcare access pathways – differential access and quality

Biological embedding – social experiences become biologically embodied

Social Dimensions of Disease

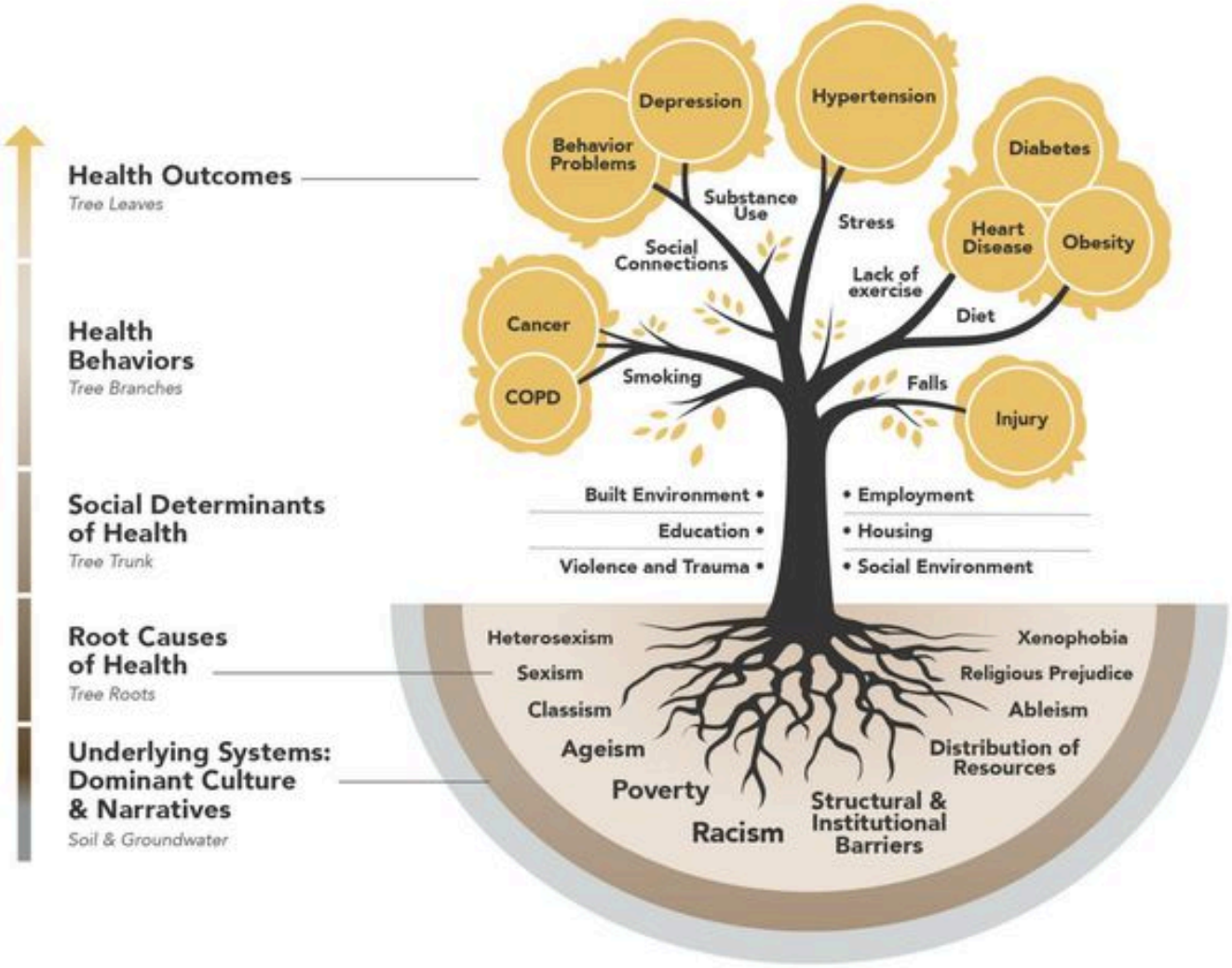
Four Interconnected Domains

- **Social etiology** – how social conditions contribute to disease occurrence
- **Social prophylaxis (prevention)** – social interventions to protect health
- **Social therapy** – mobilization of social resources to improve disease outcomes
- **Social rehabilitation** – support for reintegration into community life following illness or disability

These domains recognize that **health outcomes emerge from complex interactions** between individual characteristics, social conditions, and structural determinants of wellbeing.

Social Etiology

Social Factors of Health and Disease



Social Etiology

Social etiology investigates social factors within the complex **web of causes** that lead to disease occurrence.

① **Predisposing factors** – create conditions that increase vulnerability (age, gender, work environment, education)

② **Contributing factors** – facilitate disease manifestation (health behaviors, healthcare utilization)

③ **Trigger factors** – directly associated with disease onset (toxic agents, trauma, infection)

④ **Perpetuating factors** – maintain or worsen established disease (inadequate treatment, lack of support)

Social Prevention

Social Prevention

Social prevention encompasses organized application of measures to **prevent or mitigate adverse impact** of social factors on human health.

Three complementary levels:

Primary prevention – preserve health of those currently well, prevent disease occurrence (health education, urban planning, public hygiene)

Secondary prevention – early disease detection and prompt intervention (screening programmes, preventive examinations)

Tertiary prevention – limit disability, support optimal functioning (assistive technologies, workplace accommodations)

Social Therapy

Social Therapy

Eliminating Negative Factors

Removing from harmful environments, modifying stressful work, addressing family dysfunction

Strengthening Positive Elements

Fostering social support, facilitating participation, enabling community resources

Social Rehabilitation

Social Rehabilitation

Social rehabilitation facilitates return to active participation in family, occupational, and social life following illness or injury.

Interdisciplinary team Coordinated by treating physician, includes specialists, therapists, social workers, psychologists

Vocational rehabilitation Resume work with accommodations or vocational retraining

Individual level Direct services, assessment, goal-setting, flexible interventions

Societal level Accessible spaces, workplace policies, anti-discrimination protections

Thank you for your attention!

Social medicine recognizes that health is fundamentally social – from causation to prevention, treatment, and rehabilitation