Practical Class 12

Medico-Social Issues of Maternal and Child Health Care and Adolescence. Family Health Care. Family Planning and Prophylaxis of Congenital Diseases.

Conspectus topics (35,36,48,49)

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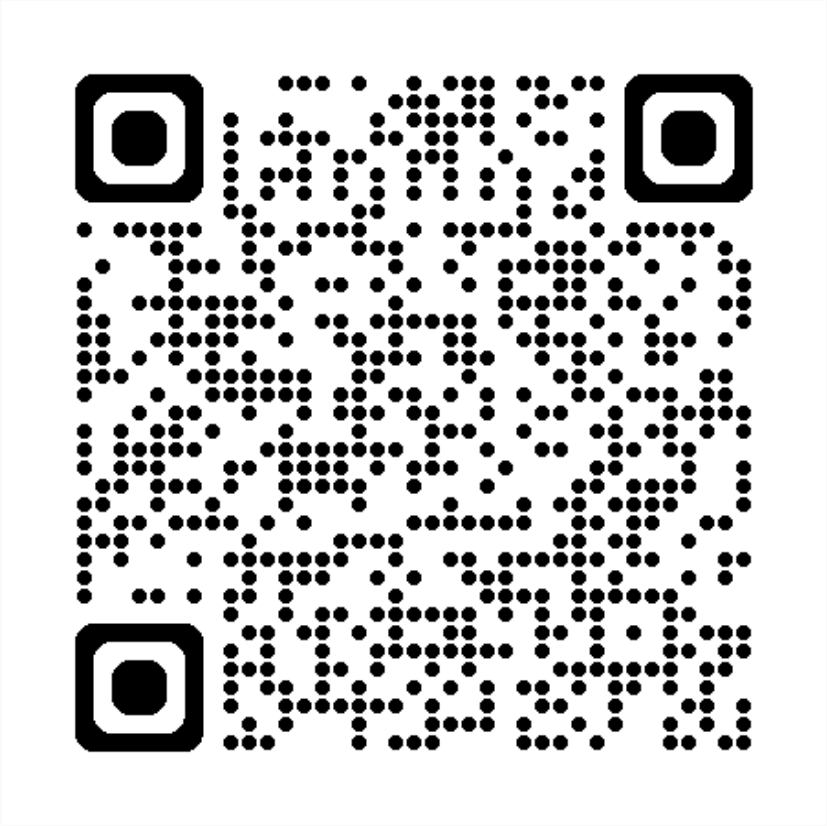
download the presentation from https://tinyurl.com/social-med-class-12

15-minutes reading assignment



https://kostadinoff.github.io/learning.html

Group tasks

https://kostadinoff.github.io/tasks.html

Outline

1. Abortion
2. Infertility
3. Family Planning and Congenital Disease Prophylaxis
4. Single Motherhood | Unwanted Children
5. Children with Chronic Diseases Adopted Children
6. Family Health Care
7. Pediatric Medication Safety
8. Sexual Education
9. Adolescence
10. Acceleration
11. Substance Use in Adolescence
12. Prevention — Ages 0–18

Abortion

Abortion as a Public Health Issue (48)

- Globally, tens of millions of pregnancies are unintended annually; a substantial proportion end in abortion — frequently under inadequate medical supervision where legislation is restrictive.
- **In Bulgaria**, abortion has historically been employed as a primary method of fertility regulation rather than a secondary measure:
  - Abortion rates significantly exceed those of most other European nations
  - Reflects deficiencies in reproductive health knowledge, contraceptive access, and health culture
- The goal of reproductive health policy is to transition populations toward highly effective modern contraception and eliminate abortions performed outside established medical standards.

Medical Consequences of Abortion (48)

- Surgical abortion involves uterine instrumentation that may cause:
  - Endometrial damage and intrauterine adhesions
  - Cervical trauma
  - Ascending infection leading to **tubal damage**
  - These complications constitute a leading cause of **secondary infertility**:
- Abortion during a first pregnancy → sterility in approximately **21–22%** of cases
- Beyond direct harm, high elective abortion rates signal low **health culture** and insufficient socioeconomic development to support informed reproductive decision-making.
- Post-abortion contraceptive counseling is a mandatory clinical responsibility — the period immediately after abortion represents a critical window for transitioning to effective modern contraception and interrupting the cycle of repeat abortions.

Types of Abortion (48)

In public health and clinical practice, abortions are commonly classified as:

- **Spontaneous abortion (miscarriage)**: unintentional pregnancy loss due to fetal, maternal, or environmental causes.
- **Induced (voluntary/elective) abortion**: deliberate termination requested by the pregnant woman within legal and medical limits.
- **Therapeutic termination of pregnancy (TToP)**: medically indicated termination because of serious maternal health risk or severe fetal anomaly.
- **Illegal (criminal/unsafe) abortion**: termination performed outside legal regulations or medical standards, associated with substantially higher morbidity and mortality.

Infertility

Infertility — Scope and Definitions (48)

- Infertility affects approximately **1 in 6 individuals worldwide**, generating profound psychosocial and economic burdens.
- In Bulgaria: approximately **10–15% of families** remain childless after two years of regular, unprotected intercourse.

Type	Definition and Key Issues
Primary infertility	Inability to conceive regardless of prior sexual practices; congenital anomalies, STIs, bilateral evaluation required
Secondary infertility	Inability to conceive after a previous pregnancy; growing faster globally due to tubal damage, surgical sequelae, advancing maternal age

Infertility — Scope and Definitions (48)

- **Male factor infertility** contributes to approximately **40–50%** of all infertile couples — bilateral evaluation of both partners is mandatory from the outset.
- Causes include spermatogenesis disorders, varicocele, endocrine dysfunction, and occupational or lifestyle factors (heat exposure, anabolic steroids, smoking).

Psychosocial and Economic Burden of Infertility (48)

The psychological impact of infertility is substantial:

- Emotional instability, anxiety, severe depression
- Marital discord and social isolation
- Stigmatization of childlessness in many cultural contexts

Diagnostic and therapeutic approach requires integration of:

- Gynaecology, immunology, genetics, and psychology
- A highly tactful, encouraging clinical posture toward both partners

Economic barriers to assisted reproductive technologies (e.g., in vitro fertilization) remain prohibitive for many families, often resulting in **catastrophic health expenditure**.

Family Planning and Congenital Disease Prophylaxis

Physician's Role in Family Planning (36)

Family planning is a **human right** that encompasses all measures enabling individuals and couples to **freely and responsibly** determine the number, spacing, and timing of their children — and to access the information and means to do so.

Core clinical responsibilities:

- **Contraceptive counseling**: method selection tailored to health status, reproductive goals, cultural background, and lifestyle; revision of method after life events (childbirth, abortion, chronic disease diagnosis)
- **Preconception counseling**: optimizing maternal health before conception — folate supplementation, chronic disease control, teratogen avoidance, weight normalisation

Physician's Role in Family Planning (36)

- Assessment of **genetic risk factors** in the personal and family history, with timely referral to clinical genetics
- Promotion of adequately **spaced pregnancies** to reduce low birth weight and perinatal mortality
- Early identification and referral of couples at risk for infertility

Family planning is among the most cost-effective health interventions — preventing unintended pregnancies reduces abortion rates, maternal mortality, and infant morbidity simultaneously.

Prophylaxis of Congenital Diseases (36)

Congenital diseases arise from chromosomal aberrations, single-gene mutations, multifactorial inheritance, or teratogenic exposures during embryofetal development.

Level	Interventions
Primary	Preconception genetic counseling; periconceptional folate (neural tube defects); rubella and varicella vaccination; avoidance of teratogens (alcohol, retinoic acid, valproate, ionising radiation); optimal management of maternal diabetes and thyroid disease
Secondary	Prenatal screening and diagnostic testing to detect anomalies early and enable informed decision-making or in-utero therapy
Tertiary	Early postnatal treatment and rehabilitation to minimize the functional consequences of confirmed conditions

Prenatal Screening (36)

Prenatal screening identifies fetuses at elevated risk for chromosomal anomalies, structural defects, and inherited diseases. **First trimester (10–13+6 weeks):**

- Nuchal translucency (NT) ultrasound
- Combined test: PAPP-A + free β-hCG + NT → risk stratification for trisomy 21, 18, 13

Second trimester (15–20 weeks):

- **Quadruple test**: AFP, hCG, unconjugated estriol, inhibin A
- Detailed anomaly ultrasound (structural survey at 18–22 weeks)

Non-invasive prenatal testing (NIPT):

- Cell-free fetal DNA in maternal plasma — detection rates >99% for trisomy 21 with very low false-positive rates; applicable from 10 weeks

Invasive diagnostics — chorionic villus sampling (CVS, 11–14 weeks) or amniocentesis (15–20 weeks): reserved for confirmatory karyotyping and molecular diagnostics when screening indicates elevated risk.

Postnatal (Neonatal) Screening (36)

Neonatal screening detects treatable conditions **before clinical symptoms appear**, enabling early intervention that prevents severe disability or death.

Bulgarian national neonatal screening programme — heel-prick blood spot:

- **Phenylketonuria (PKU)**: early dietary phenylalanine restriction prevents intellectual disability
- **Congenital hypothyroidism**: most common preventable cause of intellectual disability; treated with levothyroxine
- **Congenital adrenal hyperplasia (CAH)**: prevents life-threatening salt-wasting crises
- **Cystic fibrosis**: early treatment substantially improves pulmonary prognosis

Universal programmes now also include:

- Neonatal **hearing screening** — early audiological intervention protects speech and language development
- **Pulse oximetry** for critical congenital heart disease before hospital discharge

Single Motherhood | Unwanted Children

Single Motherhood — Definition and Vulnerabilities (48)

Single mothers: women who give birth outside wedlock with unestablished paternity, divorced or widowed mothers, and unmarried adoptive mothers.

Medico-social profile:

- Elevated perinatal mortality — younger average maternal age, reduced prenatal care, heightened psychological stress
- **90%** report financial difficulties; **>50%** live in inadequate housing
- Large majority receive material support from their own parents; many reside in parental households
- **>2/3** report experiencing societal hostility, prejudice, and discrimination — directed at themselves **and** at their children within educational and social institutions

Single Motherhood — Definition and Vulnerabilities (48)

Policy responses must integrate targeted economic assistance, flexible employment, and public education to reduce stigmatization.

Physician's role: proactive outreach to single mothers ensures timely initiation of antenatal care, continuity of child health surveillance, and liaison with social services — bridging medical and social support systems.

Unwanted Children and Abandoned Infants (48)

The phenomenon of unwanted children intersects with single motherhood, extreme poverty, and adolescent pregnancy.

Unwanted child syndrome — recognized clinical entity arising from chronic malnutrition, psychological torment, and physical abuse:

- Severe physical and mental underdevelopment
- Psychological instability, withdrawal, inferiority complex
- Later manifestations: aggressive behavior, criminality, severe physical health deficits

Required interventions:

- Trauma-informed psychological care
- Robust foster care systems
- Strict mandatory reporting laws for suspected child abuse or neglect

Children with Chronic Diseases Adopted Children

Children with Chronic Diseases and Disabilities (48)

- Modern health policy emphasizes **integrated education** in mainstream settings wherever possible; special schools reserved for cases where mainstream inclusion proves inadequate.
- **Centers for Comprehensive Service for Children with Disabilities and Chronic Illnesses** provide:
  - Early diagnosis and prolonged treatment
  - Medical and psychosocial rehabilitation
  - Parental training for home-based care
  - Specialized palliative care for terminal conditions

Ethical tension in genetic screening: prenatal diagnostics allow early detection of severe anomalies but also open the possibility of selective abortion based on biological characteristics — raising concerns about devaluation of life based on “quality” and indirect support for a culture of exclusion.

Adopted Children — Medical and Psychological Challenges (48)

- Adoption establishes a permanent legal parent-child relationship governed by strict legal frameworks (age differentials, sibling co-placement protocols).
- **Common health issues** reflecting histories of institutional care or early neglect:
  - Poor dental hygiene, malnutrition, growth stunting
  - Missed immunizations — vulnerability to infectious diseases
  - Attachment disorders, anxiety, depression, behavioral anomalies
  - Institutional rearing normalizes substance use and limits health and sexual education → elevated risk for alcohol/drug addiction, STIs, unintended pregnancy

Ethical complexity: the adopted child's right to know biological origins — this right becomes **absolute** when genetic matching is required for life-saving procedures such as organ transplantation.

Family Health Care

The Concept and Definition of the Family (35)

The family is the **fundamental micro-social unit** of society: a dynamic, self-organizing system where biological reproduction, socialization, and health-related behavior are continuously formed.

Key distinction in public health analysis:

- **Family** = kinship-based social institution (marriage, blood, adoption)
- **Household** = economic unit sharing residence and resources, which may include multiple families or unrelated persons

For family medicine, this distinction is practical: risk, care responsibilities, and health behaviors are often distributed differently in the family and in the household.

Family Morphology and Structural Diversity (35)

Structural type	Main features and health implications
Nuclear family	Parents + unmarried children; common in urban settings; can be efficient but vulnerable when support is limited
Extended (joint) family	Multi-generational co-residence; stronger childcare/economic buffering but possible intergenerational conflict
Patriarchal / Matriarchal	Authority concentrated in one parent; role rigidity may increase stress and reduce adaptability
Egalitarian family	Shared decision-making and role flexibility; usually better psychosocial climate and resilience

Physiological and Social Functions of the Family (35)

The family performs interdependent functions essential for both individual and societal wellbeing:

- **Reproductive/biological**: population continuity and sustained child care after birth
- **Socialization/educational**: transmission of values, norms, and health culture
- **Economic**: resource pooling, material security, and care for dependent members
- **Psycho-emotional**: intimacy, attachment, stress buffering, and identity formation
- **Recreational**: companionship and restoration of mental equilibrium

Family Dynamics and Life Cycle (35)

Families evolve through predictable stages, each with distinct health needs:

Stage	Typical medico-social focus
Formation	Union to first child: reproductive counseling, STI prevention, preconception risk control
Expansion	Childbearing/rearing: immunization, developmental surveillance, parental stress and financial load
Contraction	Children leaving home: role renegotiation, chronic disease prevention, mental health support
Dissolution	Widowhood and aging: bereavement care, social isolation prevention, functional support

Interdependence of Family and Health (35)

The family-health relationship is **bidirectional**:

- **Direct pathways**: hereditary disorders, STI transmission between partners, household spread of communicable diseases
- **Indirect pathways**: shared diet, physical activity, substance use, and treatment adherence patterns
- **Psychosocial pathway**: supportive climate protects mental health; chronic conflict increases psychosomatic and psychiatric morbidity

Illness also reshapes family equilibrium: chronic and terminal conditions generate caregiver burden, emotional distress, role redistribution, and financial strain.

Family Medicine and the Physician's Integrative Role (35)

Family medicine extends beyond individual pathology to the **family unit** as the operational context of prevention and treatment.

Core physician competencies:

- Comprehensive family health assessment (demography, housing, resources, risks, psychosocial climate)
- Early identification of high-risk families and targeted prevention plans
- Coordination of medical, psychological, and social services for vulnerable members
- Family planning, preconception counseling, and genetic risk orientation
- Support for role redistribution during chronic illness to prevent caregiver exhaustion

Goal: use family resources to improve outcomes while reducing preventable medical-social harm.

Problem Families — Scope and Classification (35)

A **problem family** is defined as one whose structure, dynamics, or circumstances generate elevated health and psychosocial risks for its members — particularly for children.

Problem Families — Scope and Classification (35)

Main categories encountered in primary care:

Family type	Key risk features
Single-parent	Financial hardship, parental burnout, reduced preventive care attendance, elevated perinatal risk
Cohabiting / concubine	Legal ambiguity: insurance gaps, restricted medical decision-making for partner's children
Post-divorce	Child exposure to parental conflict → anxiety, depression, academic failure, behavioral disorders
Family with chronic patient	Long-term caregiver burden compromising health of all family members
Family with terminal patient	Anticipatory grief, caregiver exhaustion, children's bereavement needs

Physician's Role — Single Parents, Cohabiting, and Concubine Families (35)

Single-parent families:

- Heightened surveillance of child growth, development, and immunization status — perinatal risks are elevated and preventive attendance is often reduced
- Active psychological support and referral to social and economic assistance services
- Monitoring for **parental burnout** — sole caregivers carry the full load of work, childcare, and household management without relief

Cohabiting and concubine relationships:

- Legal non-recognition creates barriers: insurance coverage gaps, exclusion from medical decision-making for a partner's children
- Physician as **health advocate**: clarifying legal rights, facilitating documentation, ensuring care continuity
- Awareness of elevated domestic instability rates — increased risk for **intimate partner violence** and child exposure to conflict; the GP should routinely assess safety

Divorced Families and Families with Ill Members (35)

Divorced families:

- Children exposed to sustained parental conflict → elevated risk for anxiety, depression, substance use, and academic failure
- Physician must navigate **dual-consent situations** — clear communication protocols with both parents regarding the child's care
- Referral for child and family psychological counseling when interparental conflict is ongoing; awareness of parental alienation as a child protection concern

Families with chronically ill members:

- **Caregiver burden** affects the physical and mental health of non-ill family members — especially spouses and older children
- GP's role: regular screening of caregivers for burnout, depression, and secondary somatic conditions; coordination of home care, rehabilitation, and social support

Divorced Families and Families with Ill Members (35)

Families with terminal patients:

- Palliative care coordination: pain and symptom management, advance care planning, goals-of-care conversations
- **Anticipatory grief** counseling for all family members — including age-appropriate communication with children
- Collaboration with palliative care teams, psychologists, and social workers; bereavement follow-up after the patient's death

Pediatric Medication Safety

Medical Treatment of Children Without Physician Consultation (48)

- Access to professional care is not universal — financial constraints, geographic isolation, and limited health literacy frequently lead parents to treat children independently for fever, minor wounds, and gastrointestinal conditions.
- **Anticipatory guidance by medical specialists must include:**
  - Safe usage, appropriate selection, and precise weight- and age-based dosing of over-the-counter pediatric medications
  - Recognition of warning signs requiring urgent consultation
- **Telemedicine and electronic prescriptions** have proven highly effective in bridging this gap — verifying dosing appropriateness without physical attendance.
- Dosing errors represent one of the **most common sources of severe pediatric adverse drug events**.

Sexual Education

Comprehensive Sexual Education (48)

- The declining age of first sexual contact is closely associated with:
  - Surge in teenage pregnancies and high abortion rates
  - Spread of sexually transmitted infections
  - Psychological trauma of premature intimate relationships

Approach	Evidence
Abstinence-only education	Proven **entirely ineffective** in delaying sexual initiation; marginalizes youth; perpetuates harmful gender stereotypes
Evidence-based “medial” approach	Integrates biological/medical facts with psychological skill-building, values clarification, human rights, and gender equality

- Effective sexual education equips adolescents with communication and negotiation skills to demand consent, utilize modern contraception, prevent disease transmission, and establish responsible reproductive behaviors.

Adolescence

Adolescence as a Developmental Period (49)

Adolescence bridges childhood and adulthood, combining:

- Rapid **biological maturation**
- Gradual establishment of adult social roles, vocational identities, and behavioral independence
- Heavy shift in socialization from parental figures to **peer groups**

Morbidity and mortality profile differs sharply from childhood:

- Infectious diseases dominate younger children's pathology
- Adolescent threats are predominantly **behavioral** — risk-taking behaviors that cluster together
- Leading causes of adolescent mortality: **unintentional injuries** (predominantly motor vehicle accidents), **homicide**, **suicide**

Acceleration

The Phenomenon of Acceleration (49)

Acceleration — the secular trend toward accelerated physical growth and premature biological maturation compared to previous generations.

Driving factors:

- Improved nutritional availability
- Widespread childhood obesity
- Reduced infectious disease burden
- Psychosocial stressors

Physical benefits: increased final adult stature

Medical and social complications: arise from the **asynchrony** between biological and psychosocial development — the central problem of contemporary adolescent health.

Social Infantilism and Medical Consequences (49)

The developmental mismatch produced by acceleration is termed **social infantilism**:

Adolescents possess the biological capacities of adults while remaining at cognitive and emotional stages characteristic of childhood.

Medical consequences:

- "Rejuvenation" of chronic diseases — essential hypertension, type 2 diabetes mellitus, and metabolic syndrome increasingly diagnosed in adolescents
- Early sexual maturation combined with immature judgment → premature sexual activity without protective behaviors → STIs, unwanted pregnancies, abortions
- Early-maturing youth gain access to older peer groups promoting substance use and smoking

Substance Use in Adolescence

Alcohol — Patterns and Consequences (49)

Alcohol is frequently the **gateway substance** preceding marijuana and other illicit drug use.

- **In Bulgaria (adolescents 15–19 years, WHO 2024):**
  - **50.2%** are current alcohol users
  - **20.2%** report heavy episodic drinking (≥60 g pure alcohol on at least one occasion in the past 30 days)
- **Consequences of binge drinking:**
  - Fatal motor vehicle accidents
  - Drownings
  - Violent altercations

  While long-term trends show slight declines in overall use, **heavy episodic drinking** (binge drinking) remains alarmingly prevalent across European adolescent populations.

Drug Abuse — Evolving Landscape (49)

Substance / Trend	Key Points
Traditional cigarette smoking	Historic declines — but threatened by vaping devices and nicotine pouches attracting youth experimentation
E-cigarettes (Bulgaria)	23.3% of adolescents aged 13–15 — highest in the WHO European Region
Marijuana	Most prevalent illicit substance; strongly correlated with delinquency, school dropout, sexual risk-taking
Synthetic opioids (fentanyl)	Contamination of drug supply dramatically elevates fatal overdose risk **even among infrequent users**

The Social Stress Model of Substance Use (49)

- The etiology of adolescent substance abuse is best understood through **multifactorial frameworks**.
- The **social stress model** posits:
  - High stress + weak social bonds + deviant peer exposure = high risk
  - Protective factors: strong family bonds, school engagement, community support, individual competencies

Adolescents lacking conventional bonding to family and school systems are significantly more susceptible to the influence of deviant peer subgroups and health-compromising behaviors.

Prevention — Ages 0–18

Architecture of Prevention in Childhood and Adolescence (49)

Effective disease prevention requires a **multilayered architecture**:

- **Universal interventions** for all children
- **Targeted approaches** for high-risk populations
- Simultaneous operation across **primary and secondary** preventive levels

Primary prevention — avert disease onset entirely **Secondary prevention** — early detection of asymptomatic disease or emerging risk factors to halt progression

The framework must also address **social determinants of health** — healthcare delivery alone is insufficient without educational support, family strengthening, and policy-level interventions.

Primary Prevention — Key Interventions (49)

Immunization — the most successful application of primary prevention:

- Protection against measles, poliomyelitis, diphtheria, tetanus, pertussis, hepatitis B, **human papillomavirus**

Health education and lifestyle promotion:

- Optimal nutrition and regular physical activity
- Avoidance of tobacco, alcohol, and illicit substances
- Sexual and reproductive health education: accurate information on contraception and disease prevention

Delivered through **schools and primary care providers** acting collaboratively — neither sector is sufficient alone.

Secondary Prevention — Surveillance Framework (49)

Systematic health surveillance from infancy through age 18 targets different conditions at different developmental stages:

Age group	Surveillance priorities
Infancy and early childhood	Physical examination, anthropometric measurement, developmental milestones, growth faltering
School age	Visual acuity, musculoskeletal alignment, pubertal development assessment
Adolescence	Spinal deformities (scoliosis peaks during growth spurts), metabolic screening

Social Determinants and Prevention Architecture (49)

Preventing the most common diseases before age 18 requires addressing the **broader social determinants**:

- **Educational support** — school engagement reduces substance use, promotes health literacy
- **Family strengthening programs** — parental bonding protects against risk-taking behavior clusters
- **Policy-level interventions** — restricting youth access to tobacco and alcohol; product regulation (flavored e-cigarettes)
- **Environmental modifications** — built environments enabling physical activity; food environment policies

Cardiovascular disease and insulin resistance originate in childhood. The window for effective prevention is open during adolescence — and closes.

Thank you for your attention!