GLPH 171

Module 01: Determinants of Health and Disease

Section 01: Introduction to Health, Disease, and Wellness

Health: "Health is a state of complete physical, mental, and social well-being and *not merely the absence of disease or infirmity*." – WHO, 1948 [most common definition]

- Functional Approach to Definition:
  - Ex. What does our health status allow us to do or not to do
  - Ex. **Health:** "Health is the capacity of people to adapt to, respond to, or control life's challenges and changes." – Frankish et al., 1996
- Can be understood at the individual or population level

Wellness: State of feeling well (not ill or sick); not the same as "healthy"

Well-Being: Broad concept encompassing other areas of our lived experience

- Ex. work stress level, sense of financial security, satisfaction with family life, housing, learning, environment, leisure time available, social participation etc.

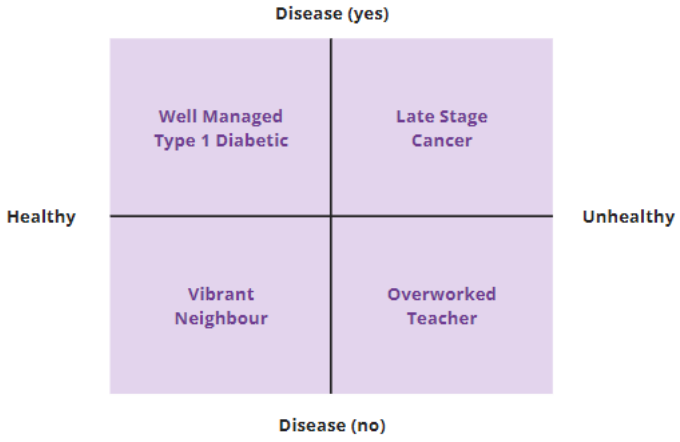
Disease: Biological or physical malady affecting the body

Illness: Perception of dysfunction by the afflicted individual

Sickness: Social acknowledgment of impairment or affliction

These three ≠ unidirectional disease

- Functional Approach to Definition:
  - Disease without Illness – Hypertension (person doesn't feel ill, but could get a heart attack or stroke; probably won't seek medical care /comply with therapy)
  - Illness without Disease – Hypochondriac (person feels ill, but doctors can't find anything despite extensive medical testing)
  - Illness without Sickness – Headache (person feels ill, but employer requires a doctor's note to excuse the absence)



Factors Causing Disease:

Germs:

- Koch (Ignores social context and potential genetic origin of many diseases)
  - Those with disease have germs, those without disease don't have germs
  - Can isolate/culture germs from those with disease
  - If germs are introduced to a healthy host → cause disease
  - Can re-isolate germs from newly-disease host

- Lister (Surgical mortality fell from 45% to 15% after his intervention)
    - Pollen-like dust → contaminate surgical wounds → may cause sepsis (infection)
    - Antiseptic conditions (ex. application of carbolic acid) → should logically prevent wound infections
- Pasteur (First brought up Germ Theory of Disease)
    - Discovered principals of microbial fermentation and sterilization
    - First described heat treatment methods for milk and wine ("pasteurization")

Genetics:

- Linked to biological advances
- Responsibility for disease = between genetics and environment
- Focus on individual, not society
- Emphasize hereditary vulnerability

Lifestyle:

- Behaviourally-driven
- Emphasize individual behaviour change as route to good health

Multifactorial Disease Causation:

- Ex. Smoking, alcohol or fatty food consumption

Multifactorial Disease Causation:

- Ex. epigenetics
    - Specific gene raises risk for disease
    - But isn't completely deterministic
    - Requires some sort of environmental trigger
    - TD;LR: "Necessary but not sufficient"

Section 02: Introduction to Determinants of Health

Populations: Groups of individuals with a shared characteristic

- Can be geographically or politically defined, but don't have to
- Ex. Indigenous Women, Children living with disabilities enrolled in the TDSB

Population Health: The health outcomes of a group of individuals, including the distribution of such outcomes within the group

- Public Health Agency of Canada Definition: "Approach to health aiming to improve health of entire population and reduce health inequities among population groups. This approach recognizes that health is a capacity / resources, not a state. […] being able to pursue one's goals, to acquire skills and education, to grow"
- Field Includes: Patterns of Health Determinants + Health Outcomes & the Policies + Interventions linking those two

Epidemiology: Study of *distribution* and *determinants* of disease in populations

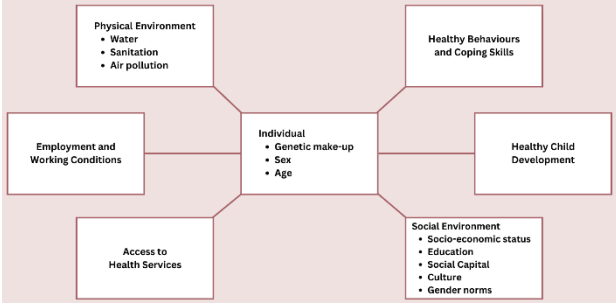
- Fundamental discipline of population and public health
- Provides vital info needed to develop, implement, and evaluate preventative disease approaches and improve population's quality of life
- Fundamental Assumptions: (x2)

1. Disease doesn't distribute randomly in populations
    a. Distribution = in relation to factors determining health for the individuals of that population
2. Factors determining health status can be identified by studying the population's health outcome distribution.

Distribution: How specific health outcomes are dispersed or patterned across a population

- Focus of descriptive epidemiology
- Essential to develop hypotheses about etiology (origin) of diseases / other health problems
- Essential to plan health services

Determinants: "Range of personal, social, economic and environmental factors which determine the health status of individuals or populations" – WHO



- Focus of analytical epidemiology
- Broad, interconnected factors
    - Anything influencing the state of health
- Helps identify how to address health conditions in different settings

Social Determinants of Health: "Conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life."

- Social and societal conditions + how can they be altered by informed action
- Shaped by distribution of money, power, and resources (at global, national and local levels)
    - Influences by policy choices

Physical Determinants of Health: Factors in physical environment that affect health risk and outcomes
Ex. Air quality + pollution, Water quality + safety, Soil contamination, Occupational hazards + risks, Motor vehicle usage + safety, housing

Social + Physical Determinants of Health Examples:

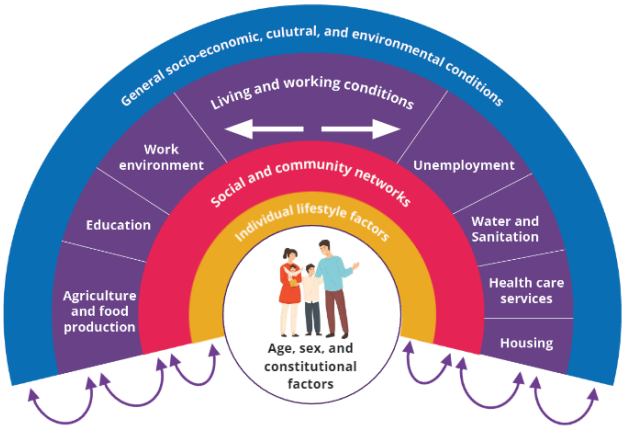
- **Psychosocial Factors**
    - Ex. knowledge, attitudes, beliefs, and ideas about health + illness
- **Biological Factors**
    - Ex. Sickle Cell Anemia
- **Environmental Factors**
    - Ex. Chernobyl – breakdown of nuclear facility in the USSR (1986)
    - Ex. Violence
    - Ex. Genocide
- **Health Policy Effects**
    - Ex. Access to healthcare
- **Individual Behaviours**
    - Ex. Smoking

List of Key Determinants of Health:

- Income + Social Status
- Employment + Working Conditions
- Education + Literacy
- Childhood Experiences
- Physical Environment
- Social Supports + Coping Skills
- Healthy Behaviours

- Access to Health Services
- Biology and Genetic Endowment
- Gender
- Culture
- Race / Racism

Rainbow Model of Health Determinants (Dahlgren and Whitehead model):



- Bottom = Most proximal, direct contribution to susceptibility to specific diseases
- Top = Broader, distal factors; direct and indirect ways
- Note: *Individual Lifestyle Factors* aren't always associated with an individuals freedom to choose, and can be influenced by larger factors at family, community or even broader levels

Proximal Causes (Downstream): Closer to an individual

- **Material Circumstances**
  - Income
  - Living and working conditions
  - Food availability
  - Environmental toxins
- **Behavioural Factors**
  - Physical activity
  - Smoking
  - Alcohol Use
  - Dietary practices
  - Sexual behaviour
  - Use of health care
- **Psychosocial Factors**
  - Education level
  - Social participation and integration (or exclusion)
  - Social support, resources, available in social networks

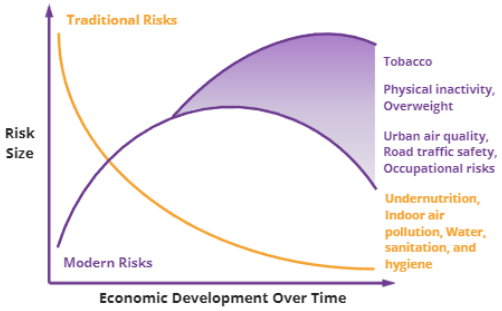
Underlying Causes (Midstream): Aspects of built environment and social context (between the other two extremes); medium range, underlying causes

- **Built Environment**
  - Land use and city planning
  - Transportation systems
  - Services and facilities (e.g., shops, parks, libraries, etc.)
- **Social Context**
  - Community policies and investments
  - Enforcement of ordinances
  - Civic participation
  - Quality of education

Root Causes (Upstream): Underpin a whole number of health outcomes at the population level; appeal distal to individuals themselves

- Broader factors in our natural environment, macro-environment, and population level inequalities

- **Natural Environment**
  - Climate
  - Water and food supply
- **Macro Issues**
  - Historical conditions
  - Demography
  - Governance
  - Economic and political policies
  - Conflicts/war
- **Inequalities**
  - Distribution of wealth
  - Distribution of employment and education opportunities
  - Distribution of political influence



Risk Factors (x5): Health determinants that have been linked by evidence to specific health outcomes

- Can make statement about level of associated risk (ex. increased, decreased)
- Some are associated with higher risks of mortality than others (ex. High blood pressure - 10.85, smoking – 7.69, air pollution – 6.67, high blood sugar – 6.5 and obesity – 5.02)
    - Annual number of deaths by million worldwide (2019)

Risk Factor Categories:

- **Intrinsic:** Non-modifiable and biological characteristics
    - **o** Ex. age, sex, genetic makeup
- **Disease-Related:** Existing diseases
    - **o** Ex. diabetes, cardiovascular disease
- **Behavioural:** Personal behaviours/ Lifestyle choices
    - **o** Ex. tobacco smoking or alcohol use
- **Physical (Environment)**
    - **o** Ex. Exposure to contaminants/air pollution, lack of access to services
- **Social (Environment):** Interpersonal relationships and community networks
    - **o** Ex. Lack of parental support available

Most Common Risk Factors:

- Under/Over nutrition
- Other dietary risks (ex. nutrient deficiencies)
- High fasting plasma glucose
- High or low body mass index
- Unsafe sex (unprotected sexual intercourse)
- Tobacco use
- Alcohol use
- Lack of water and appropriate sanitation
- Exposure to air pollution or other environmental contaminants
- Experiencing situations of trauma or stress

Risk Transition: As populations experience economic growth and infrastructure improvements, major risks to health shift from “traditional” risks to “modern” risks (trajectories vary country to country)

Section 03: Health Inequities

Key Health Status Indicators: Specific ways to measure health status

- Important Because (x3):
    - Determining cause of illness, disability, death
    - Carrying out disease surveillance
    - Making comparisons about health within + across countries
- Must use consistent set of health indicators when measuring population health status → can be used for comparisons across geographic areas, to compare different populations
    - Can be measured in many ways:
        - Vital Statistics – Accumulated record of births and deaths within population

- Mortality – death (easier to measure, usually starting point for researchers)
- How much morbidity (illness) is attributed to specific causes

Commonly Used Health Status Indicators:

- **Life Expectancy at Birth (Key)**
  - Avg number of yrs, newborn baby is expected to live if current mortality trends remain for newborn's entire life
  - Narrow view: doesn't account for quality of life
  - Comparable statistic
- **Neonatal Mortality Rate**
  - Deaths of infants under 28 days in given year
  - Per 1000 live births the same year
- **Infant Mortality Rate**
  - Death of infants under 1 year old
  - Per 1000 live births each year
- **Under-5 Mortality Rate (Key)**
  - Probability newborn infant will die before reaching age of 5
  - Expressed as: Number / 1000 live births each year
  - Popular health indicator – indicative of child health concerns
  - Comparable statistic
- **Maternal Mortality Ratio**
  - Number of women dying due to pregnancy + childbirth complications
  - Per 100,000 live births each year

Health Disparities/Inequities: Type of difference closely linked with social or economic disadvantage

- "Differences in health status or distribution of health resources between different population groups, arising from the social conditions in which people are born, grow, live, work and age." – WHO
- Social and Physical Determinants are responsible for health inequities
  - Public health works on reducing health determinants / inequities to make it easier to be healthy regardless of health hazards
  - Unfair and unavoidable differences in health status seen within and between countries
- **ECONOMIC DISADVANTAGE:** Less well-off individuals → less social + political power → worse health*, poorer services + less fairness & protection* for financing health
- **GEOGRAPHIC LOCATION:** Higher rates of *growth stunting* (0-5 yrs.) among rural children compared to urban children; contraceptive use is typically lower in rural areas than urban areas

Module 02: Environmental Determinants of Health

Section 01: Applying a Critical Lens to Health Research

Critical Scholar: "Person who challenges aspects of existing structures that others accept without question"

Critical Analysis Questions:

- **Health Definition:**
  - What definition is being used?
    - Ex. physical health only
  - Broad or narrow definition?
    - Ex. blood pressure readings
  - Cultural background?
- **Health Data:**
  - Health indicators used?
    - Broad vs. Narrow
  - Mortality = low bar for health
  - Based on assumption that vital stats are recorded everywhere (not always true → flawed understanding)
- **Are there other ways to understand this?**
- **Whose knowledge is this?**

- **How do we know this to be true?**
- **How do I judge the quality of the evidence in support of this knowledge?**
    - Known, reputable source?
    - Evaluation of evidence? How? By whom?
    - How up-to-date is the evidence
    - Are the findings generalizable?
    - Bias? If so, how and how much? What does this mean for your interpretation/use of it?

Health Development: Level of development within a healthcare system in a country

Quantitative Research: Process of collecting and analyzing data expressed mainly as numbers

Qualitative Research: Process of collecting and analysing data expressed mainly as words or images

Quantitative Research	Qualitative Research
• Close-Ended Questions	• Open-Ended Questions
• Can Test Hypothesis	• Explore Ideas In-Depth
• Sources: o Vital Statistics o Surveys o Administrative Health Records	• Sources: o Interviews o Focus Groups o Community-Based Participatory Studies

Critical Appraisal: Process of carefully and systematically assessing outcome of scientific research (evidence), judging the trustworthiness, value, and relevance in a particular context

- There are structured approaches

Section 02: Introduction to the Environmental Determinants (Physical Determinants)

Environmental Determinants: Physical environment; includes: geography, natural environment, built environment, food systems, macro-environmental factors

- Environmental Health: "Comprises those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social and psychosocial factors in the environment" – WHO
- *Proximal Level Examples:* Housing Environment, Air, Soil, Water (in immediate environment)
- *Distal Level Examples:* Neighbourhood, Schools, Other Settings Interacting at Community Level
- *Broader Distal Level Examples:* Changing Climate, Existence of Natural Disaster
- NOTE: Higher risk for children

Overview:

- Geography – Global Location, Country, Region within a Country, Urban/Rural Location
- Natural Environment – Air, Water, Soil, Trees, Green Space (Biotic + Abiotic Factors)
- Built Environment – Housing, Community Structures, Roadways/Transportation Structures
- Food Systems – Sources, Distribution, Levels of Food Security/Insecurity (ex. Food Desert)
    - **Food Desert:** Area with limited access to affordable and nutritious foo (Intentional neighbourhood structure tactic used by businesses)
- Macro-Environmental (Political, Economic, National Factors) – Governance Structures, Climate Change, War, Conflict Zones, Natural Disasters

Premature Death: Death occurring prior to average age of death in particular population

Section 03: Air Pollution

Air Pollutants: Ultra fine airborne pollutants, often due to smoke and fumes emitted by human activities

- Can result in significant health effects, and linked to Under-5 Mortality Rate (children = at risk)
    - Populations in low/middle-income countries = most
        - 88% of outdoor air pollution deaths
        - 99% of indoor air pollution deaths
- Refugees and migrant families = increased risk (for outdoor and indoor air pollutants)

Outdoor Air Pollution: Includes environmental pollutants + industrial waste; worse in lower-income *urban* communities (inc exposure to industrial site, smoldering dump etc.); focus of most research

- WHO Standards = 10mcg/m^3
    - 2 Billion kids live in areas exceeding these levels
    - 300 Million = Extremely toxic levels (> 60mcg/m^3)

Indoor Air Pollution: Includes solid biomass (animals or plants) fuels used for heating and cooking; worse in lower-income *rural* communities (inc exposure to unventilated homes + smoke-producing stove)

- Severely impacts over 1 billion children

Outdoor Air Pollutants:

- **Particulate Matter**
    - PM_{10} (less than 10 microns in diameter) → block and inflame nasal & bronchial passages
    - $PM_{2.5}$ (less than 2.5 microns in diameter) → more dangerous
    - Small Size → Easily Enter + Irritate Children's Lungs → Cross Blood-Brain Barrier → Affects Cognitive Development/ Cross Placenta (Affects Fetal Development)
- **Other Urban Air Pollutants**
    - Ozone (O_3)
    - Nitrogen Oxides (NO_x)
    - Sulfur Dioxide (SO_2)
    - Carbon Monoxide (CO)
    - Ammonia (NH_3)
    - Lead (Pb)
    - Polycyclic Aromatic Hydrocarbons (PAHs)
    - Volatile Organic Compounds (VOC)

Indoor Air Pollutants Health Risks:

- Animal dung → not clean fuel source → women + children = vulnerable to increased exposure
    - *o* Issues in Birth – causes miscarriages, early delivery, low birth weight
    - *o* Child Mortality – responsible for up to 10% of Under-5 Mortality
    - *o* Issues in Brain Development – of healthy children
- Incomplete combustion → breathable particles, gases, chemicals
- Smoke → conjunctivitis, upper respiratory irritation, acute respiratory infections
- CO → acute poisoning
- Smoke exposure → Long-term effects (ex. cardiovascular + pulmonary disease, cancer etc.)

Aggravating and Intersecting Factors:

- Lack of Access to Healthcare – inc risk for adverse health effects (esp for children from low SES)
- Climate Change – air pollution → greenhouse gas production → threaten economic livelihoods

Section 04: Access to Safe Drinking Water

Lack of Clean Water:

- **Causes:**
    - Pollution, contamination and toxic exposure
    - Inadequate sanitation + waste disposal
    - Poor hygiene practices
        - Spread infectious disease
- **Consequences**
    - Diarrheal Illnesses

        - Gastroenteritis (intestinal infection)
        - Cholera
    - Vector-borne diseases
        - Malaria
        - Dengue (viral disease)
        - Schistosomiasis (due to parasitic worms)

Water-Related Infections:

- **Water-borne**
    - Water ingestion
    - Ex. Cholera
- **Water-washed**
    - Poor personal hygiene (due to inadequate clean H2O)
    - Ex. Hepatitis A
- **Water-based**
    - Aquatic intermediate host
    - Ex. Schistosomiasis, Guinea worm
- **Water-related insect vectors**
    - Transmitted by insects that depend on H2O to produce
    - Ex. Malaria / dengue from mosquitos

First Nation Communities: First Nation Communities are under Drinking Water Advisory

- Internationally 1.1 billion people are affected, with East Asia & Pacific being the most affected
- In 2006, government launched a plan of action to address concerns in First Nation communities
- But still many First Nation communities don't have clean, safe drinking water
    - Ex. Kitigan Zibi Anishinabeg; drinking water advisory since 1999 due to lots of Uranium

<u>Section 05: Built Environment (Housing)</u>

Health Impacting, Housing-Based Factor Categories:

- **Internal Housing Conditions**
    - Biological, Chemical and Physical Hazards
    - ex. size and organization of space → accidents (Physical Hazard)
- **Area Characteristics**
    - Social benefits & Location
    - ex. friendships & neighbours
- **Housing Tenure**
    - Psychological benefits
        - ex. control & meaning
    - Financial Dimensions
        - Owning/renting, affordability

Factors:

- **Building Materials**
    - Chemicals can lead to negative health outcomes
- **Pollutants**
    - Outdoor air pollutants
- **Mold/Bacteria**
    - Humidity →Mold/Bacteria → Resp Ailments
- **Fumes**
    - CO fumes from attached garages → confusion, vomiting, death etc.
- **Cleaning Products**
    - Release VOCs → irritate eyes, nose and throat → difficulty breathing
- **Fireplaces**
    - Combustion gases → trigger Resp Illness
- **Irritants**
    - Animal hair + Dander → Asthma attacks + allergic reaction
- **Gases**

    - Radon seeping through foundation + cracks in home → lung cancer
- **Cigarettes**
    - 4000+ chemicals → lung cancer + resp illness
    - 1^o, 2^o, 3^o
- **Solvents**
    - Chemical fumes from paints + solvents → Release VOCs

Residential Segregation: Spatial separation of two or more social groups (ex. racial, SES) within a specified geographic area

Health Outcomes (Association Studies):

- **Low Birth Weight**
    - Higher = 5, None = 1
- **Preterm Birth**
    - Higher = 2, Lower = 1, None = 2
- **Fetal Growth Restriction**
    - Higher = 1, Lower =1, None = 1
- **Cancer**
    - Higher = 2, Lower = 1
- **SRH**
    - Higher = 2, None = 2
- **IDU**
    - Higher = 1, None = 1
- **Smoking**
    - Higher = 2, Lower = 1
- **Homicide**
    - Higher = 3

Homelessness: Precarious housing & homelessness is deep and persistent in every part of Canada

- Canada has no unified, national housing plan
- Canadian federal housing investments continue to erode
- Children are more vulnerable due to their behaviors (ex. playing on floor, putting things in mouth) and because they spend more time at home. Lack of maturity in body → Severer impact

Unsheltered Homelessness: Individuals that lived on the street or in a homeless shelter, parks, makeshift shelter, abandoned building etc.

Hidden Homelessness: Individuals that had nowhere else to live and temporarily lived with family, friends, etc.

Core Housing Needs & Housing Tenure (14.5% = 2+ Issues):

- **Lack of Affordability (76.1%)**
    - More than 30% of income on housing
- **Lack of Adequacy (4.5%)**
    - Overcrowding conditions
    - No full bathroom, require significant repair
- **Lack of Suitability (4.3%)**

Neighbourhood Effects on Health

- **Physical Features**
    - ex. Air, Water, Grocery Stores
- **Availability of Healthy Environments**
    - ex. Decent + Secure Housing, Safe Areas
- **Services Provided**
    - ex. Public + Private: Education, Health, Transport
- **Socio-Cultural Features**
    - ex. Political, crime, history, norms, support network
- **Reputation of an Area**
    - Affects investment, self-esteem, who moves in

<u>*Section 06: Macro-Environment Factors*</u>

Macro-Environment Factors: Country's governance structures, war/conflict, natural disasters etc.

Governance: Determine levels, types and availability of taxation, benefits, services, freedoms.

- Free democracy increases life expectancy, and decreases infant + maternal mortality

War: State of armed conflict between different nations/states/groups within a nation/state

- Negatively affects Physical & Emotional Health (Lack of security)
- Trauma (from anything) → immediate, medium-term, long-term health impacts
    - ex. PTSD, inc risk for: heart disease, sleep issues, weight gain, memory impairment etc.

Disasters: Occurrences causing damage, ecological disruption, loss of life etc. (Needs external help)

Complex Humanitarian Emergency (CHE): Extensive violence, loss of life, widespread damage (Need large-scale, multi-faceted humanitarian assistance); Example: Climate Change

- *Factors Affecting CHE Management:* Population Migration, Corruption, Supply Chain Disruption, State/National Level Institutions Collapsing, Law + Order Breakdown
- *Climate Change Impacts:* Inc temp, extreme weather, seal levels, CO2 levels → affect food, air, water, disease, drought → affect global health (ex. less economic resources for health systems)

Strategies to Minimize Environmental Health Threats (ex. Natural Disasters):

- **Outdoor Air Pollution**
    - ex. Cleaner Transport Options
- **Indoor Air Pollution**
    - ex. Less Chemicals in House Products
- **Water Supply & Hygiene**
    - ex. Appropriate H2O Systems, Promote proper hand-washing
- **Sanitation**
    - ex. Low-cost Sanitation Systems, Lifestyle Mods
- **Housing**
    - ex. Appropriate, Climate-suited Construction, Avoid Harmful ChemicalS
- **Climate Change**
    - ex. Clean Energy Sources, Reduce Overconsumption

Module 03: Social Determinants of Health

Section 01: Introduction to Social Determinants of Health (SDOH)

Social Determinants of Health: Associated with social environment, SES (At proximal + distal level)

- ex. Social: Relationships, Supports, Norms, Policies, Connection, Inclusion, Features

- Political + Economic Systems (ex. Early Childhood Dev, Education, Job Insecurity, Work Conditions, Coping Skills, Healthcare Access)

Lifestyle Factors: Changeable ways of life & habits with serious impact on human health
- ex. Behaviors, Actions, Lifestyle Choices etc.
- SDOH have immense influence on such choice (ex. normalized smoking → more likely to do it)

Health Advice from a Lifestyle Perspective:
- Don't smoke, Balanced Diet, Physically Active, Make Time to Relax → Manage Stress, Alcohol in Moderation, Cover up in Sun, Safe Sex, Cancer Screening, Safe on Road, Learn First Aid ABCs

Section 02: Cultural Influences

Culture: Shared set of beliefs, ideas, values, behaviours; Form basis of grp's identity
- Transmitted across generations (vertical) and through cohorts (horizontal)
- Responds to external stimuli + changes

Culture (Alternative definition): Ideology linked to behaviour
- Similar **Ideology:** What we do, and why we do it
- Similar **Cosmology:** How the world works

Active Cognition: Culture is often due to indirect learning → maybe don't realize actions/beliefs are influenced by culture)
- Active Cognition & Ethnicity's relationship with culture is important to consider

Culturally-Influenced Health-Impacting Factors:
- Nutrition & Eating Practices
- Gender Roles & Activities
- Use of Health Services
- Perceptions of Illnesses
- Tobacco / Alcohol Use
- Social + Sexual Relationships & Practices
- Hygiene Practices
- Marriage Rites
- Funeral Practices

Cultural Impacts on Health:
- **Negative**
  - Food Preferences (ex. undercooked meat/fish, unpasteurized milk)
  - Settlement Patterns (increase risk for infectious disease)
  - Historical Racism/ Structural Violence bw/ grps (Affects Security + Access to Services/Resources)
- **Positive**
  - ex. Sardinian Inverse Transhumance (adaptive grazing patterns avoiding peak mosquito concentration → Reduced Malaria Rates)
  - ex. Viet (House Propped on Stilts → Above Mosquito Flight Ceiling → Malaria Reduced)

Section 03: Social Connectedness and Socioeconomic Status (SES)

Social Connectedness: Feelings of inclusion + Support Felt bw/ppl in relationships & communities
- Strong social connectedness is associated with better physical and mental health outcomes
  - Healthier lifestyle behaviors, less decline in health

Socioeconomic Status (SES): Individual/group's pos within hierarchical social structure

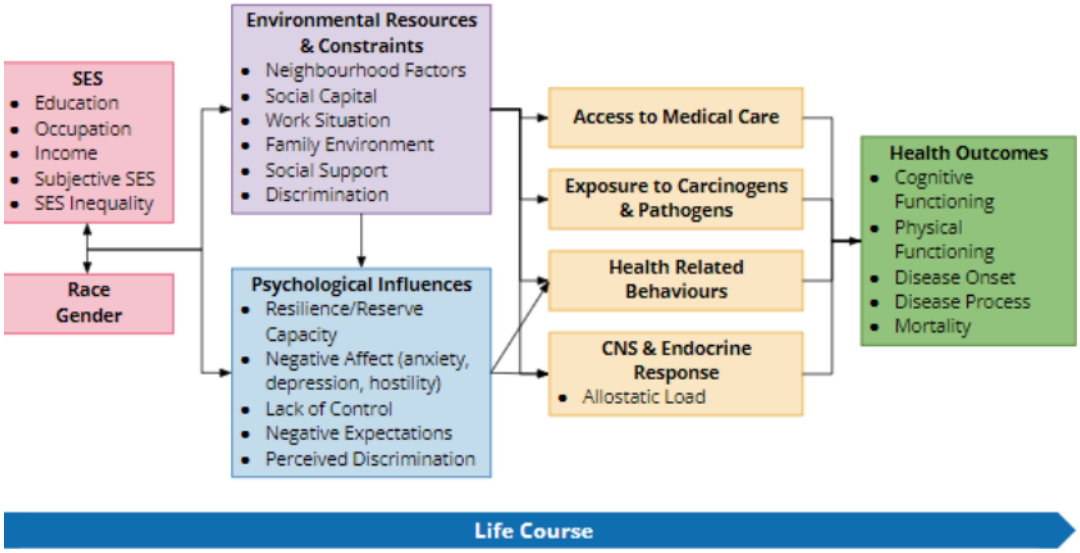
- Contextual and relative
- Measured differently depending on age
    - ex. Children → Parental Education/ Occupation; Household Income/Conditions
- Directly associated with individual identity (ex. gender, race)

Socioeconomic Position: Social + Economic Factors Influencing pos held by individuals/grps in society

Measuring SES:

- **Area-Level Indicators**
    - ex. % of population w/ high school diploma, avg. family income of area
- **Individual Indicators**
    - ex. Education lvl, annual income, occupation

SES Effects on Health Outcomes:



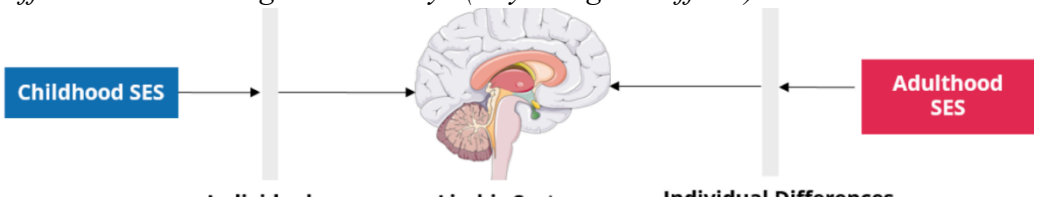
SES Influence Explanation (occur simultaneously):

- **Critical Period Explanation**
    - Early life influences (sensitive brain dev periods) influence later life outcomes
- **Pathway Explanation**
    - Early experiences set ppl on diff health trajectories (chain of events)
- **Cumulative Explanation**
    - Day-to-Day adversities (small too) can build to cause adverse health outcomes

The Pair of ACEs: Adverse Childhood Experiences & Adverse Community Environments

- Having both → More likely to face negative health outcomes and/or premature death
- **Adverse Childhood Experiences:** Experiences
    - ex. Experience violence, abuse, neglect; Witness violence in home/community; Family member attempts / dies by suicide
- **Adverse Community Environments:** Situational
    - ex. Unavailable social supports, unassured safety

Affected Neurobiological Pathways (Physiological Effects):



Allostatic Load: "Wear and Tear on Body"
Allostasis: Adaptation in face of stress

Section 04: Income, Education and Employment

Ontario Material Deprivation Index: Used to build understand of deprivation/hardship level

Intergeneration Effects: How a parent's education affects children's health

Education Attainment: Related Opportunities + Experiences; Potential for Employment, Wealth

- Associated with Health Literacy and Health Behaviours (ex. vaccines)

Health Literacy: Ability to find, understand and use info/services to inform health-related decisions + actions (for self and others)

Occupation: Captures many aspects of life such as class, labour exposure, stress level, etc.

- Weaknesses in use as a Social Indictor: Gender patterns, Variations bw/societies and individuals in occupations, Doesn't capture unemployed/retired/students

Whitehall Study 1 and 2: Enrolled thousands of civil servants of different varieties in Whitehall England

- Followed them for many years
- Studied health outcomes & time + cause of death
- **"Status Syndrome"** effect: Strong association between civil servant grade level and mortality rate

Module 04: Race, Migration, and Health

Section 01: Privilege & Identity

Wheel of Privilege

Illustrated how Power and Privilege Intersect with Social Identities

Marginalized (on outer part) May Have Access to Less Social Power

Privileges: Sexual Orientation, SES, Geographic Location, Gender Identity, Physical Ability/Appearance, Handedness, Language, Nation of Origin (and Families) etc.

Marfan Syndrome: Genetic Condition Affecting CT (more common among tall, lean people)

- Direct association with identity and specific health outcomes (some are pathway based tho)

Lifestyle Factors:

- Smoker or Non-Smoker, Substance Use Practices
- Current Body Mass Index
- Exercise, Diet, Sleep Behaviours
- Stress Management Practices
- Participation in Healthy Leisure or Social Activities
- Active Involvement in Your Community

Oppression: Mix of institutional power and prejudice that manifests and creates disadvantages for specific groups

- **Societal/Cultural**
  - Collective Idea about What is "Right"
- **Institutional**
  - Legal System, Education System, Public Policy, Hiring Practices, Media Images
- **Interpersonal**
  - Actions, Behaviours, Language
- **Individual**
  - Feelings, Beliefs, Values

Section 02: Race & Racism

Race: Social construct and conceptual categorization based on physical characteristics of people in groups (ex. Skin colour, Hair colour + texture, Facial + Bodily Features);

- Greater variability within racial categories than across them (Not Biological Differences bw grps)
- Changing conceptions of racial identity over time and location (racial categories = contextually based)

Racism Effects:

- Unfair disadvantages & advantages
- Saps Strength of Whole Society by Wasting Human Resources

Racism Levels

- Personally-mediated/interpersonal
- Racism
- Internalized Racism
- Institutional/Systemic Racism

Racial Prejudice: Differential Assumptions about Abilities, Motives, Intentions of Others

Racial Discrimination: Differential Actions towards others

Personally-mediated/Interpersonal Racism: Racial prejudice & Racial Discrimination between one and another *(intentional, or unintentional, doing things and not doing specific things)*

- ex. Lack of Respect, Suspicion, Devaluation, Dehumanization, Name Calling/Bullying

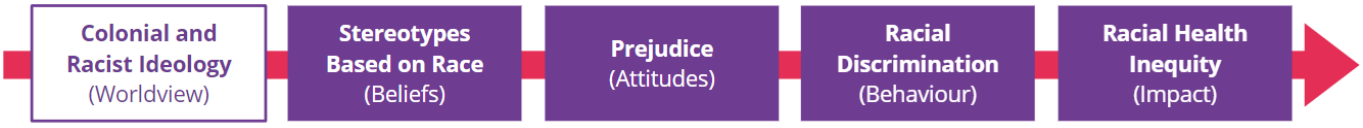
Internalized Racism: Members of stigmatised racial group accept messages of intrinsic values + talents
- ex. Accepting range of aspirations, self-expression (skin bleach), Self-devaluation (racial slurs)
- Reflects System of Privilege & Societal Value, Erodes Individual Sense of Value, Undermines Collective Action

Institutionalized / Systematic Racism: Fixed into organizational or societal structures
- Rules, Regulations, Laws, Norms
- Many domains: Education, Housing, Healthcare
- Interacts with other oppression systems to influence resources distribution
- Includes: Historical Institutional insults, Exclusion + Inaction, Unearned advantage/disadvantage
- ex. Racial Segregation, Education, City Sanitation Policies, Justice System (profiling); Policy, Work, Religion, Administrative Hurdles
    - Easier for White man with felony to get job than Black man with clean record

White Supremacy: Assumes whiteness is the right way to organize human life (superiority)

Section 03: Racism & Health

Pathway to Racial Health Inequity (embedded in and reinforced by oppressive power relations):



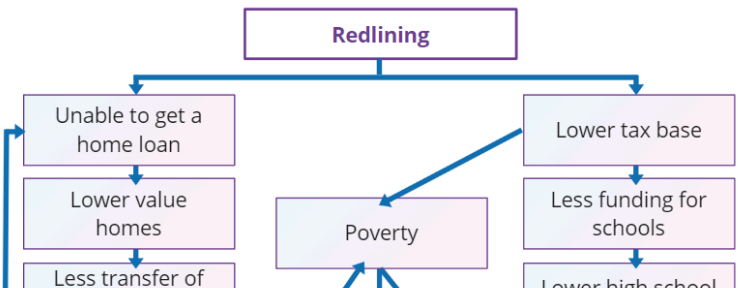
Stereotypes: Negative, Exaggerated Beliefs, fixed images or distorted ideas

Prejudice: Way of Thinking Based on Stereotypes

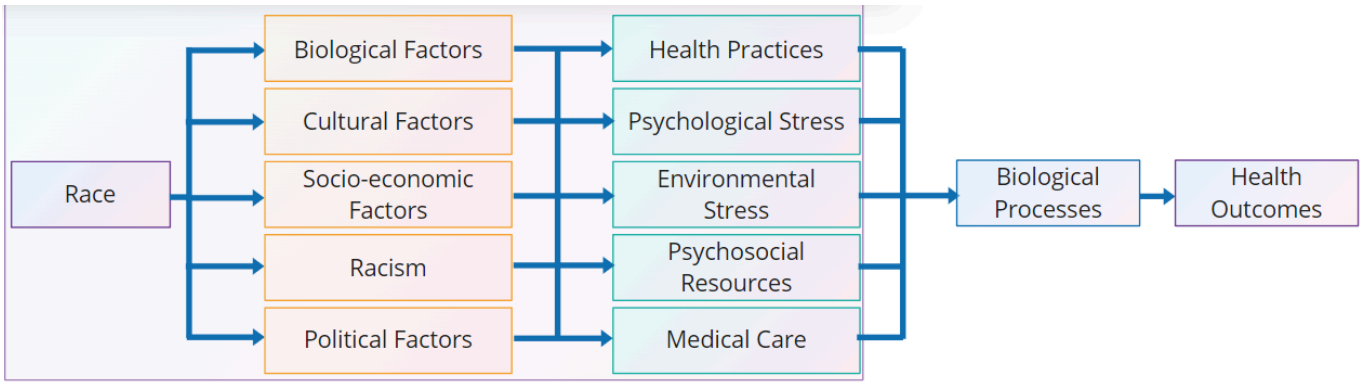
Racial Segregation: Physical separation of Races by Enforced Residence in Different Areas
- Causes income segregation due to different access of quality education + employment, exposure to environmental toxins, access to healthcare, and concentration of poverty + wealth

Health Outcomes (Association Studies):
- **Low Birth Weight**
    - Higher = 5, None = 1
- **Preterm Birth**
    - Higher = 2, Lower = 1, None = 2
- **Fetal Growth Restriction**
    - Higher = 1, Lower =1, None = 1
- **Cancer**
    - Higher = 2, Lower = 1
- **SRH**
    - Higher = 2, None = 2
- **IDU**
    - Higher = 1, None = 1
- **Smoking**
    - Higher = 2, Lower = 1
- **Homicide**
    - Higher = 3

Racial Disparity Factors:
- Socio-economic factors
- Underrepresentation in Medical Professions
- Limited Communication in Health Context
- Inaccess to Culturally Sensitive Care
- Discrimination in Clinical-Decision Making and Related Health Outcomes



Redlining: Practice of Discriminating in Loan Approvals / Insurance Applications



Racialization: Sociology Concept, Process by which racial/ethnic identities are assigned to grps of ppl

- Can be based on skin colour, origin, religion, language etc.
- Can lead to marginalization or exclusion

Health Disparities:

- Less use of Preventative Health Care (ex. Mammograms)
- Lower use of Mental Health Services
- Less Appropriate Care of Diabetes and Cardiovascular Disease
- Causes Stress → Poor Health
- Similar Effect as SES
- Causes: Accelerated aging, High Alcohol Consumption, Low Birth Weight etc.
- Very Preterm Birth (VTP)

Section 04: Anti-Racist & Decolonial Actions

Racism Deconstruction: Anti-Racist & Decolonial Actions

- Anti-Racism is grounded in leadership and accountability
    - Actions for Change: Individual Transformation, Organizational Change, Community Change, Movement-Building, Anti-Discrimination Legislation & Racial Equity policies (Health, Social, Legal, Economic, Political)
    - Impacts: Provides tools to ppl to understand how racism distorts interactions, Questions Settlers Privilege, Equips White People to Act Against Structural Racism

Racial Equity: Opportunities and Outcomes for Health + Well-Being aren't Assigned Based on Race

Section 05: Migration & Health

Migrant: Broad Term; Individual leaving home and moving to another place (region, country etc.)

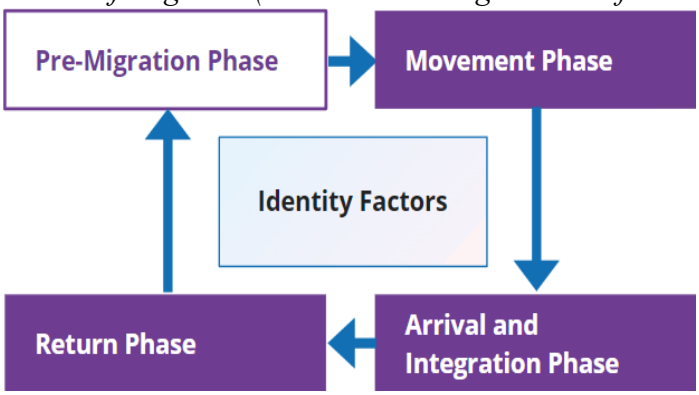
Immigrant: Settled permanently in another country

Refugee: Fled their own country due to risks of Human Rights Violations and Persecution (Safety Risk)

Asylum Seeker: Left their country Seeking Protection from Persecution and Human Rights Violations

- Hasn't been \Legally Recognized as a Refugee
- Waiting on Asylum Claim

Health of Migrants (International Organization for Migration):



Pre-Migration Factors: Events, Trauma, Linguistic + Geographic Proximity to Destination

Movement Factors: Travel Conditions, Mode, Duration; Single vs. Mass Movement

Arrival Factors: Separation from Family, Discrimination, Legal Status, Exploitation

Return Factors: State of Home Country (Services, Connections, Health Profile); Duration

Healthy Immigrant Effect: Immigrants Arrive in Better Health than Canadian-Born Individuals. Overtime, Both Sides Health Equalized.

Module 05: Colonization and Health – Impact on Indigenous Communities

Section 01: Introduction to Indigenous Peoples and Communities

Indigenous Peoples: Inhabited a Country/Region Before Later Settlers + Immigrants Arrived

- ~ 5000-6000 diff Indigenous grps in 70 countries (300-350 million people, 5% global population)
- Canadian Groupings: First Nations (58.4%), Treaty Indians, Non-Treaty Indians, Inuit, Métis
    - **Inuit (3.9%):** Artic-based
    - **Métis (35.1%):** Collective of Cultures/Ethnic Identities; Mixed: European & Indigenous

The Indian Act (1876, revised 1951): Created paternalistic wardship system, reserves, Treaty System

- **Treaty System**: Between Indigenous Grps + Canadian Gov (Crown) → Basis of Alliance

Section 02: Colonization

Colonization: Process of establishing a colony or group of settles in a new land or territory

- Regardless of previous inhibitors
- Settlers are Partially or Fully Subject to and Accountable to Mother Country of Origin
- Acquire Full/ Partial Political Control, Occupy with Settlers, Exploit Economically
- Negatively Impacts Social, Spiritual, Physical and Mental Health

Medicine's Importance in Colonization:

- Altruistic Desire to Spread Benefits of Western Medicine
- Sense that Western Medicine is Needed Elsewhere
- Desire to Keep Colonial Settlements Healthy
- Desire to Keep Local Workforce Healthy

Residential School System (1880-1996): Run by Christian Church, Partnered with Canadian Gov

- Aims: Remove & Isolate Children from Homes, Families, Traditions, Cultures → Assimilate; Convery to Christianity (~ 150,000 kids)
- Effects: Death (Unmarked), Lost Language + Culture, Abuse, Neglect, Forced to Stay
    - And other unique ones per indigenous group

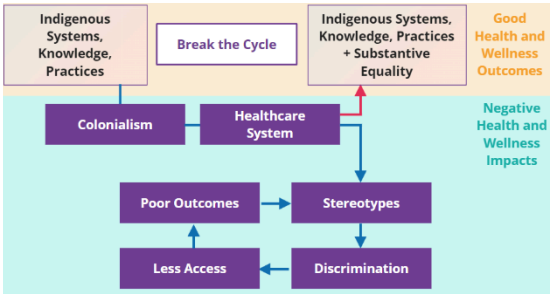
Health Concerns:

- Changes to Traditional Lifestyle + Diet → Increases CVD, Obesity, Diabetes Risk
- Poverty & Poor Living Conditions → Inc TB, Injuries etc. risk
- Trauma, Social Exclusion, Injustice → Inc Family Violence, Suicide, Substance Abuse Risk

Inequities:

- **On-Reserve Housing**
    - Inadequate, Overcrowded
- **Median Income**
    - On-Reserve + Inuit = Female have higher income, otherwise is male
- **Healthcare Discrimination**
    - Bad conditions, Must Dress Up Differently, Better Treatment for White Partner

Breaking the Cycle



Section 03: DOH for Indigenous Peoples

Key Determinants (Vary Across Groups):

- **General (Listed Below are Intermediate)**
    - *o* Financial Insecurity, Housing Condition, Water Safety, Food Insecurity, Discrimination
- **Specific to Indigenous (Listed are Distal)**
    - *o* Loss of Language, Culture, Heritage
    - *o* Connection to Land, Self-Determination, Levels of Access to Services
- **Self-Determination (Key One): Choose Freely (Individual or Collective) Without External Push**
    - *o* Taken Away
    - *o* Further Reduced by Discrimination and Oppression
- **Group-Dependant**
    - *o* Remote Communities (Limited Education, Housing, Food Opportunity)
    - *o* Reserve Communities (Lower quality / Limited Public Services; Has Formal Governance)
    - *o* Urban Communities (Only Certain Cultural/Language Supports; More Opportunities)
- **Substance Use**
- **Suicide**
    - *o* Higher in Women & Indigenous
- **Experienced Violence**

Section 04: Taking Action for Indigenous Health Equity

Reconciliation: Ongoing Process between Indigenous and Non-Indigenous (Crown in Canada) to get a Mutually Respectful Framework to Live Together → Holistically Healthy, Sustainable, Strong Indigenous

- TCAP, UNDRIP, OCAP, Tri-Council Policy Statement (Research + Healthcare) etc.

Truth and Reconciliation Commission Report (TRC): 94 Calls to Action to Reconcile from Genocide

- Included: Child Welfare, Convent of Reconciliation, Settlement Agreements, Professional Development & Training, Church Apologies, Museums and Archives, Information about Missing Children, Commemoration, Media, Sports, Business, Health, Education, Legal System, Justice

Origins of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP): Human Rights Instrument Guiding Setting and Comparing Standards for Survival, Dignity, and Well-Being

- 2007
- Focus on: Self-Sustainability in line with their Needs and Desires
- Respectfully engage with Elders and Communities (Follow specific protocols)

OCAP Principals: Ownership, Control, Access, Possession of information collected about or with Indigenous Communities as Sanctioned by First Nations Information Governance Committee

Module 06: Sex, Gender and Sexuality

Section 01: Introduction to Sex and Gender as Determinants of Health

Sex: Biological attributes, Physical + Physiological Features; Binary (Women & Men)

Gender: Social Construct; Identities, Roles, Behaviours, Expressions of gender diverse people

- Influences how you view yourself and others, behaviours + interactions, distribution of power + resources

Gender Binary: Categorize gender into masculine + feminine by cultural beliefs, societal norms, or both

Gender Identity: Profound + Personal Feelings of being male, female, neither or both (early childhood)

- May or may not match sex; Different from sexual preference/orientation
- Exists on a continuum and can change over time

Gender Expression: How individuals express and present gender through conduct, behaviour, actions, style, clothing choice & how the choices are understood by others according to gender norms + tradition

Gender Roles: Behavioural norms typically applied to males and females in society influencing everyday actions, expectations and experiences

Gender Roles Influence on Health:

- **Health & Well-Being**
  - Trans/Non-Binary have more unmet health needs than general population
- **Social Institutions**
  - ex. Family, Culture, Media, Education, Law, Political + Religious Institutions
  - Shape: Gender expectations, experiences, roles, relationships

    - Maintain: Social + Cultural standards, values & representations of gender expression
    - Don't fit standard → Increases strain or stress
- **Attitudes & Behaviours**
    - Affected in: relationships, parenting, schooling, work, health practices (ex. seeking care)
    - Creates: economic + cultural pressures → affect health
- **Different Exposures**
    - Gendered work roles (ex. primary caregiver for women), division of paid/unpaid labour, occupations → different exposures & vulnerabilities (ex. can't get an education) → Different Health outcomes, needs, behaviours (ex. increased stress)

Gender Relations: How people interact with / are treated by others based on ascribed gender

- Often there are negative effects if someone doesn't fit into others expectations → discrimination

Institutionalized Gender: Ways social institutions frame gender experiences, roles, relationships

- Institutions: Media, Education, Religious and Political Establishments

Gender Across Cultures

- **First Nations (Canada)**
    - Two-Spirit (Gender, Sexuality, Cultural, Spiritual, Leaders)
- **Hijra (Bangladesh)**
    - **o** Transgender individuals in India (third gender)
- **Kathoey (Thailand)**
    - **o** Transgender Women/ Traditionally Female Presenting Gay Men (separate sex)

Section 02: Transgender & Non-Binary Persons

Transgender (Trans/TG): Gender identity is different from social expectations for physical sex

- Transgender Health (physical, mental, sexual health needs); also applies to non-binary:
    - Low Self-Esteem
    - 60% are Clinically Depressed
    - 32% Attempted Suicide
        - Associated with: Depression, Low Self-Esteem & History of forced sex, drug/alcohol treatment, gender-based discrimination
    - Under-prepared and Inadequately Trained Healthcare Professionals

Non-Binary: Doesn't identify within traditional gender binary (man/women)

- Canada is 1st country to provide census on trans + non-binary ppl (2021)

Section 03: Sexuality as a Determinant of Health

Sexuality (Sexual Orientation): Defined as one's own sexual feelings, thoughts, attractions and behaviours towards others

- Includes the idea that you can find others physically, sexually, and/or emotionally attractive

2SLGBTQIA+: Two-Spirit (2S), Lesbian (L), Gay (G), Bisexual (B), Transgender (T), Queer (Q), Intersex (I), Asexual (A).

- Includes sexually and gender identities
- Inc Risk: Sadness, Anxiety, Substance Misuse, Homelessness, Self-Harm, and Suicidal Thoughts
    - Especially for young people (may deal with victimization and bullying at school)

Mental Stressors for 2SLGBTQIA+ individuals

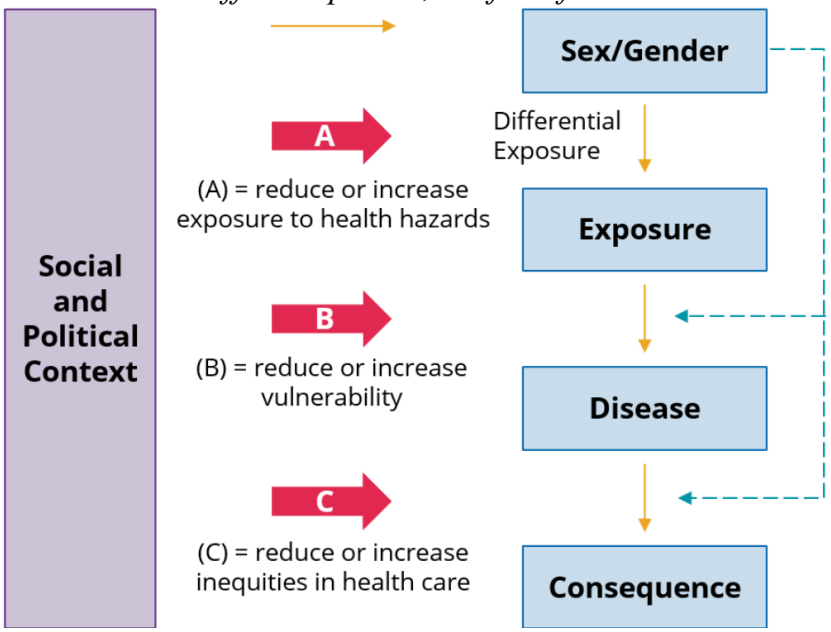
- Feel diff from others
- Worried about coming out, then being rejected/isolated
- Feel pressure to deny/change sexuality or gender expression
- Being Bullied (Verbally / Physically)
- Feel unsupported or misunderstood

Additional Challenges 2SLGBTQIA+ community faces:

- **Increased vulnerability**
  - Stigmatization + Discrimination → Inc risk of: Anxiety, Depression, Emotional Suffering
- **Discrimination**
  - Harassment, prejudice, violence
  - At school, work, varying social situations
- **Societal Pressure**
  - Feel coerced into aligning with societal norms
    - ex. Conventional ideas of being female/male
  - People who don't meet these may experience:
    - Physical abuse, intimidation, ridicule

<u>Section 04: Enhanced Vulnerabilities by Sex, Gender and Sexuality</u>

Sex + Gender Affect Exposure, Profile of Disease + Disease Consequences:



Differences in Health Outcomes by Sex, Gender and Sexuality have many other associated explanations including Biological (Hormones), Social & Structural Factors (Discrimination)

Sex and Gender Related Determinants:

- **Nutrition**
  - Girls are Fed Less Nutritious Foods Than Boys → Negative Long-Term Effects
- **Gender-Based Violence/Sexual Abuse**
  - Less likely for men
- **Sex-Selective Abortion / Infanticide**
  - Explains 1.2 Mil Missing
- **Female Genital Mutation (FGM)**
  - Affects Many Women
  - Many Complications (ex. shock, infections, long-term urinary retention, infertility, obstructed labour, negative mental health)
- **General Health Conditions**
  - Negatively, disproportionately affect women compared to men
    - (ex. Alzheimer, Iron Deficiency)
  - Sex (Biologically) Based Differences
    - ex. Hypertension decreases in women as income increases (no trend for men)
- **Intersecting Identity**
  - Immigrant SES drop → Affect Men More (Cuz Gender Roles)

- Higher Depression Rate:
  Low-Income Women, Mid-High Income Men

Gender-Based Health Challenges:

- Mental Health
- Expected Gender Norms of Behaviour (ex. Men are more likely to experience car-related death)
- Gender-Based Violence (GBV) & Sexual Abuse
  - Risk Factors: Low SES, Young Male Partner, Gender Inequality, Paternalistic Culture
  - Physical Violence is more common in Men, Sexual is more common in Women
  - Men are more likely to be attacked by a Stranger, Women = Husband/Male Partner

Violence Against Women

- Unpaid/Underpaid Care Work
- Direct Physical, Psychological, Sexualized Violence & Abuse
- Social Sexism (ex. Narrow Gender Stereotypes)
- Discriminatory Laws + Lack of Political Participation & Inclusion
- Healthcare System Services Don't Cover Needs of Women (Lowest Rates of Appropriate Care)

Section 05: Addressing Future Challenges Related to Sex, Gender, Sexuality and Health

Analysis to Advance Health Equity:

- **Gender Mainstreaming**
  - Public Health Process
  - Work Toward Systematic & Consistent Considerations
    - Consider: Sex, Gender, Sexuality
  - During: Development, Implementation and Evaluation of Studies, Policies & Programs make to Advance Health Equity
- **Sex & Gender-Based Analysis**
  - Analyze how Sex and Gender are Shaped by Environment + Experiences
  - Influences on Individual's Health & Well-Being
  - **Sex:** Rooted in Biology
  - **Gender:** Rooted in Social Roles

Strategies to Address Health Challenges Related to Sex, Gender & Sexuality:

- Improve health status of all gender identities → Reduce disparities across all sex/gender identities
- Improve + Normalize Diversity for Sex, Gender, Sexuality
- Enhance education for all sex/gender identities
- Encourage communities + populations to value health & well-being of all sex/gender identities
  - Heavier focus on discriminated groups facing health inequities

Canada's Steps:

- **Canadian Census Modification**
  - 2021 – Updated sexual + gender classifications
- **Human Rights Act and Criminal Code Modifications**
  - 2017 – Protect from gender-identity / expression based discrimination & hate crimes

GLPH 271

Module 01: A Comprehensive Perspective

Section 01: Health Defined

Health: "Health is a state of complete physical, mental, and social well-being and *not merely the absence of disease or infirmity*." – WHO, 1948 [most common definition]

- WHO (1948): World Health Organization → Achieve Global Health Under United Nations
  - Inc Global Access to Medicine, Epidemic Surveillance, Prevention and Control, Large-Scale Health Promotion, Policy Campaigns, Provide Tech Support To Countries, etc.
  - 7,000 + ppl from 150+ Countries work for WHO – Physicians, Scientists, Epidemiologists, Health Statisticians, Economists, Public Health & Emergency Relief Specialists etc.
  - Constitution: Enjoyment of Highest Attainable Standard of Physical & Mental Health = Fundamental Right w/o Discrimination (Race, Religion, Political Belief, SES)
  - **April & 1948:** Foundation Date, World Health Day
  - **December 10th, 1948:** Universal Declaration of Human Rights – UN General Assembly
  - **1950s:** WHO Promotes Primary Healthcare Programs (ex. Global Smallpox Vaccination)
  - **1960s:** Eradicate Malaria (Focus on Mosquito); WHO = Major Authority, Supplier of Experimental Pharmaceuticals Globally
  - **1970s:** Expanded Program on Immunization (Avail for Children Globally)
    - Europe = Free of Malaria
    - Declaration of Alma-Ara: 1st Int. Declaration of Importance of Primary Healthcare
  - **1980s:** Smallpox is Eradicated; Starts to Take Action Towards HIV/AIDS Care & Prevent
    - Start Smoking or Health Program (Share Hazards of Smoking)
  - **1990s:** Eliminate Leprosy Goal; Intro Hepatitis B Vaccine for Infant Immunizations

        - Declare Tuberculosis as Global Emergency, Launch Control Stats
    - **2000s:** Millennium Dev. Goals Creation; Mental Health Added to Global Policy Agenda
        - Canada → Inc Info on Social Determinants for Indigenous (ex. Self Determination)
    - **2010s:** Global Targets → Prevent & Control Non-Transmissible Disease (ex. Cancer)
        - **2015:** Sustainable Development Goals Creation
    - **2020s:** December 31, 2019 → First Awareness of COVID-19
        - March 11, 2020 → COVID-19 = Characterized as Pandemic
            - Marginalized Communities is Disproportionately Affected

Health-Promoting Conditions (Social): Necessary for Everyone to Experience Health Comprehensively

- **Availability of Health Services:** Timely, Affordable Access to Family Doctor, Emergency Services, Specialists, Necessary Tech (ex. Diagnostic Tools, Vaccines, Pharmaceuticals etc.);
- **Adequate Housing:** Safe, Secure Home & Community; Live in Peace & Dignity
- **Safe Working Conditions:** Thorough & Comprehensive Workplace Training → Understand of Reasonable Protection Against Occupational Hazards & Comfortable + Supportive Work Env.
- **Nutritious Foods:** Affordable Variety w/Macro & Micro Nutrients → Support Growth, Maintain Sufficient E-Levels, Feel Good

Holistic Health: Many Cultures Include Spiritual Health (WHO Does Not Though)

- For Some: This includes Emotional, Social and Cultural Status of Community

Public Health: Government Contributions & Resources + Societal Contributions

- Government Contributions & Resources: Proper Health Programs, Services & Policies
- Societal Contributions: Organized Effort of Society to Use Resources & Follow Health Guidelines
- Public Health: Health Maintenance, Injury & Illness Prevention
- Aim: Keep Populational Healthy
- Components: Health Promotion, Population Health Assessment, Disease & Injury Prevention, Health Protection, Health & Disease Surveillance
- Pillars: Prevention (ex. Food Inspection), Protection (ex. Vaccine), Promotion (ex. Work OHSA)

Global Health: An Area for Study, Research, and Practice That Places a Priority on Improving Health and Achieving Equity in Health for All People Worldwide

- Emphasis: Transnational Health Issues, Determinants, and Solutions
- Many Disciplines – Within and Beyond Health Science; Promote Interdisciplinary Collaboration
- Population-Based Prevention & Individual-Level Clinical Care
- Incorporates Principles of Public Health to Tackle Health Inequities at Home & Internationally

Four Factors of Global Health:

1. Data and Evidence: Decision Making is Based on Data and Evidence
    a. ex. Vital Stats, Surveillance, Outbreak Investigations & Lab Science
2. Population Focused: Not Individuals

3. Social Justice: Goal of Social Justice & Equity
4. Emphasis on Prevention: Rather than Curative Care

Marginalized Communities: Minority Grp/ Lower-Income (Low SES) → Disproportionately Affected

- Existing Health Disparities due to Social & Economic Factors
- Stress from Low Income, Racism & Discrimination
- Inequitable Access to Healthcare & Social Services (ex. Can't Work From Home)
- More Crowded Living (ex. Inter-Generational Households)
- Includes: Indigenous → Declaration on the Rights of Indigenous Peoples = Established a Universal Framework of Standard to Ensure Declaration of Human Rights (Including Healthcare)
- "Motherhood" and Childhood Need Special Care and Assistance
    - Pronouns & Gender-Inclusive Language: ≠ All Primary Caregivers = Women & ≠ All Individuals w/Uteruses = Female

Indigenous Medicine Wheel: Four Directions - Physical, Emotional, Mental and Spiritual Health; Wheel's Center – Learning, Beauty, and Harmony; Circular Shape – Interconnectivity of One's Being

- **Indigenous People:** First Nations, Inuit & Metis (as of 2020)
- **Indigenous Communities:** 615 "Bands" or "First Nations" = Small Indigenous Municipalities
    - **Indian Act (1876):** Institutionalization of Assimilation
        - Defined Who is "Indian", Without Any Consultation
            - Excluded Individuals Indigenous Communities Considered as Member (ex. Women & Children Marrying Settlers, Breaking Tribes into "Bands")
        - Imposed Western Electoral System → Didn't Recognize Traditional Chiefs
            - Present: Parallel System w/ Traditional Chief & Elected Governing Body Co-existing (Sometimes w/ Conflict)
        - Goal: Christianize & Disconnect From Former Ways of Life → Force into Permanent Agricultural Settlement → "Civilize"
        - Caused: Loss of Spiritual & Medicinal Healers & Practices → Feelings of Confusion, Resistance, Lack of Trust → Hesitant to Take Meds / Treatment → Turn Down Help → Health = Negatively Impacted
        - Barriers: Remote Healthcare Access, Unsafe Living & Working Condition, Lack of Social Support

Anishinaabe Wheel: Turns Clockwise

- *East (Yellow):* Spiritual Dimension (ex. Smudging, Singing, Dancing, Belief in Creator)
    - Animal – Eagle, Healing Medicine – Tobacco, Season – Spring
- *South (Red):* Emotional Dimension (ex. Positive Self-Image, Self-Esteem, Self-Love, Positive Surrounding Environment)
    - Animal – Coyote, Healing Medicine – Cedar, Season – Summer
- *West (Black):* Physical Dimension (ex. Reg Exercise, Balance Daily Diet, Adequate Sleep)
    - Animal – Bear, Healing Medicine – Sage, Season – Autumn
- *North (Red):* Mental Dimension (ex. Quality Fam Time, Learn from Elders, Oral Stories)
    - Animal – Deer, Healing Medicine – Sweet Grass, Season – Winter

Two-Eyed Seeing Approach to Healthcare: Framework from Mi'kmaq First Nations

- Can Address Colonization & Marginalization Impacts, Reducing Negative Health Outcomes
- Combines Strength of Indigenous and Western Knowledge, Neither is Better Alone
    - **Western Approach:** Data Driven, Influenced by Conventional Scientific Approaches
    - **Indigenous Approach:** Value Love, Honesty, Humility, and Respect → Build Trust, Relationships, Safe Spaces

Health-Promoting Conditions (Social): In Indigenous Communities

- *ex. Opakapaka Cree Nation (OCN):* Declaration to Start Process of Creating Law (July, 2020) → Jurisdiction over Child & Family Services (Instead of Manitoba Gov); Raise Pride Flag Too
- *ex. Mohawks of the Bay of Quinte:* Community Health Program – Promote Health (Education Pt.) & Provide Services to all Community Members (Regardless of Status or On vs. Off Reserve)
    - Include: Weight, BP Blood Sugar Checks, Immunizations, Prenatal Classes, Diabetic Stuff
    - Staff: Nurses, Medical Transport Coordinator, Community Health Reps, Chiropodist, Lactation Consultant etc.
    - Contributes to: Canada Prenatal Nutrition Program – First Nations & Inuit Component

Section 02: Social Determinants of Health

Resiliency: "The extent to which an individual or group can realize aspirations and satisfy needs, and to change or cope with the environment. Health is a resource for everyday life, not the objective of living; it is a positive concept, emphasizing social and personal resources, as well as physical capacities." – WHO

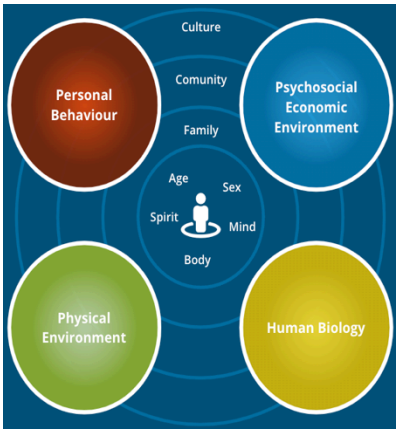
Components of Resiliency:

- **Social Resources:** Support Networks, Social Environments
- **Personal Resources:** Personal Health Practices & Coping Skills
- **Physical Resources:** Physical Health & Ability

Protective Factor: "Characteristic at Biological, Psychological, Family or Community (Including Peers & Culture) Level Associated with Lower Likelihood of Problem Outcomes or Reduces Negative Impact of Risk Factor on Problem Outcomes."

- Common Ones: Academic Achievement, Intellectual Development, High Self-Esteem, Emotional Self-Regulation, Good Coping Skills, Problem-Solving Skills
    - Engagement & Connection in 2+ Contexts: School, With Peers, In Athletics, Employment, Religion, and/or Culture
    - Family Provides: Structure, Limits, Rules, Monitoring, Predictability
    - Presence of Mentors & Support for Dev of Skills & Interests

Social Determinants of Health (SDoH): Condition in Which People are Born, Grow, Live, Work & Age



- **Personal Behaviour:** Lifestyle, Relationships
- **Psychosocial Economic Env:** Unemployment, Education, Healthcare Services, Work Environment
- **Physical Env:** Housing, Agriculture & Food Production, Water & Sanitation, Living & Working Conditions
- **Human Biology:** Genetic Predispositions
- Diff Depiction Cuz of: Person's Culture, Situation Context, Time
- **Canadian Determinants:** Gender, Disability, Housing, Early Life, Income & it's Distribution, Education, Race, Employment & Working Conditions, Social Exclusion, Food Insecurity, Social Safety Net, Health Service, Unemployment & Job Security, Indigenous Status (Mikkonen & Raphael, 2009)
- Focus on SDoH → Insight on Health Inequities & Help Inform Health Interventions
- Downstream Prevention(Treat Health Issue)⇔ Health Issue ⇔Upstream Prevention (Treat Cause)

Illness Causing Factors: Interplay bw/External (ex. Env) & Internal Factors (ex. Genetics) & SDoH

- **Your Life (50%):** Income, Early Childhood Dev, Disability, Education, Social Exclusion, Social Safety Net, Gender, Employment/Working Conditions, Race, Indigenous Status, Safe & Nutritious Food, Housing/Homelessness, Community Belonging
- **Your Healthcare (25%):** Access to Basic Health Care, Health Care System (Avail w/Effective Treatment w/o Financial Burden), Wait Times, Access to Supplementary Medical (ex. Dental, Prescriptions)
- **Your Biology (15%):** Genetics, Family History of Disease
- **Your Environment (10%):** Air Quality, Access to Clean Water, Civic Infrastructure, Access to Sustainable and Healthy Food, Neighbourhood Safety

Health vs. Wealth: Poorest 20% = Worse Health, Mental Health & Life Expectancy than Richest 20%

Factors to Reduce the Gap: *(Hans Rosling, Gapminder)*

- Time, Trade, Peace, Green Technology

Section 03: Health Inequities

Health Equity: Absence of Avoidable or Remediable Health Differences Among Grps of Ppl

Health Inequality: Differences in Health Experiences or Outcomes bw/ Diff Populations

Health Inequity: Unfair & Avoidable Systematic Disadvantage

Advocate: One that Pleads the Cause of Another (Specifically Before a Tribunal or Judicial Court); Defends or Maintains a Cause or Proposal; Support or Promotes Interests of Another

- ex.Tommy Douglas– Father of Socialized Medicine(Start of Current Canadian Healthcare System)
- ex. Suffragette Movement – Change w/in Society to Allow & Accept Women's Rights
- ex. Dr. Marin Luther King Jr. – Civil Rights Movement for African Americans → Equal Rights
- ex. Dr. Cindy Blackstock (Gitksan First Nation Member) – 25 yrs. In Child Protection & Indigenous Children's Rights Social Work, Helped Dev. UN Declaration on Rights of the Child
- ex. Geena Rocera – Transgender Supermodel, Spoke @ UN, White House etc.; Founder of Gender Proud (Media Prod Company → Advance Rights of All Transgender Individuals)
- ex. Autumn Peltier (Wiikwemjkoong First Nation) – Chief Water Commissioner by Anishinabek Nation @ 14 yrs; Spoke @ UN Forum @ 15 yrs. → Clean Water for Indigenous Communities
- Note: Sometimes → Inadvertent or Deliberate Expense & Oppression of Other Grps

Health Advocacy Responsibilities:

- **Identify SDH's:** Identify SDH of Populations They Serve. Identify& Address SDH → Achieve Health Equity
- **Health Promotion:** Promote Health of Individual Patients, Communities & Populations
- **Patient Needs:** Respond to Individual Health Need/Issues as Pt. of Patient Care
- **Community Needs:** Respond to Health Needs of Communities They Ser

Levels of Health Advocacy: Regardless of What You Advocate For, It Can Effect on Any of The 3 Levels

- **Global / Humanitarian:** Act to Change Effects by Work w/ Communities or Policy Change; ex. Issue: Nuclear War + Waste
- **Community:** Recognize & Act Upon Defined Need in Community Where you Live (es. Assist Community Organization Mediating Health Inequities or Changing Civic Policy); Front Line Workers (Can Have Global Implications)
- **Individual:** Making Difference for Someone in Need (ex. Visiting Lonely Person, Making Call to Get Resources, Helping Someone Cross Street)
    - Observe & Actively Listen → Find Small Things to Advocate

Module 02: Measuring and Assessing Health

Section 01: Epidemiology & Global Health: Making Informed Decision

Epidemiology: Study of Distribution & Determinants of Health-Related States or Events (ex. Disease), and Application of This Study to Control Diseases & Other Health Issues

- In Global Health: Helps Professionals Make Informed Decisions
    - ex. How to Best Use Resources to Prevent Disease & Promote Health
- Sample Questions: What is the Impact of Opioid Crisis on Mortality in Canada? What Interventions Effectively Reduce Mortality? Should the Gov Spend Inc $ to Facilitate Access to Naloxone Kits or to Supervised Consumption Sites to Reduce Opioid-Related Deaths?

Colonization: Context Minority Grp Data (must consider data types used & discussed)

- ex. Indian Registry → Identify Indigenous (Canada); Non-Registered ≠ Inform Policy
    - To Achieve Data Sovereignty (full right & power w/o interference), 2 Conditions:
        - **Data Decolonization:** Data is Collected via Colonia Framework w/5 Categories ("five D's": Disparity, Depravation, Disadvantage, Dysfunction & Difference)
            - Help Classify Indigenous → Problematic → Rationalize Dispossession & Marginalization of Specific Communities → False Sense of Dependency
                - ex. Inc Disease Rate → Unsafe → Gov Needs External Help

- **Indigenous Data Governance:** Post-Data Collection, Decide Who Should Have Governance & Use the Data
    - Many Cases in Canada: OCAP (ownership, control, access, and possession)
    - Inc Access → Make Decisions with Why, How, and By Whom Info is Collected, Used or Shared (within Protocols & Mandates)

Section 02: Incidence and Prevalence

Prevalence (per 100,000 ppl): # of Existing Cases / Total Population; # of At-Risk ppl In Interested Pop

- *Case:* All Individuals w/Disease at Specified Time, Regardless of When They Occurred
  Point Prevenance: # of Cases @ Specific Time / Total Population (pop) @ tht Time; Rarely Used
- **Period Prevalence:** # of Cases @ Time Period/ Avg. Pop During Time Period

Incidence (per 100,000 ppl): How Quick New Cases Arise in Pop of Defined Period; Risk Measure

- Only Considers: New Cases Within "at-risk" Population, Within Time Period
- Higher Incidence = Higher Risk of Dev. The Disease
- **Cumulative Incidence:** # of New Cases of Disease Over Time Period/ Total Population at Risk
    - # of People Disease Free @ Basline
- **Incidence Density Rate/ Person-Time IR:** # of ppl who dev. Disease/ # of Person-Years at Risk
    - Focus on Length of Time People were at risk; Calc ≠ Tested
    - # of Person-Years at Risk = (# of people at risk * # of years at risk)
    - # of Person-Years Free of Disease
- At-Risk Populations ≠ Constant:
    - Inc at-Risk Factors: Births, Immigrations
    - Dec at-Risk Factors: High Incidence & Death Rate from Other Causes, Emigration

Both ≠ Describe How or Why ppl Stop Having the Disease (Cured, Die of Disease, Die of Other Cause), or How Many ppl Died from Disease

CHARACTERISTIC	INCIDENCE	PREVALENCE
ONSET OF DISEASE IN THE POPULATION	• proportion of population developing new cases of disease	• proportion of population with disease
UNITS	• cumulative incidence: cases/ population at-risk • incidence rate: cases/person-time	• cases/total population (cases include all current active cases, no matter when they occurred)
TIME OF DISEASE DIAGNOSIS	• newly diagnosed	• current surviving cases, whether diagnosed recently or at any time in the past
DENOMINATOR	• cumulative incidence: number of persons free of disease at baseline • incidence rate: number of person-years (or person-months) free of the disease of interest	• number of at-risk persons present in the population of interest

Section 03: Measuring Mortality

Crude Mortality Rates (per 100,000 ppl): # of Deaths in Period*100 000/ Population at Period Midpt.

- Per 100,000 People, Time Period = Usually 1 Year
- **All-Cause Mortality Rate:** Considers Death for Any Reason in Population
- **Cause-Specific Mortality Rate:** Measures Deaths in Populations from Specific Disease

Specific Mortality Rate: # of Death Over Time (in Subgroup) * 100,000/ Subgrp Pop @ Period Midpt.

Standardizing Mortality Rates: Used to Compare Mortality in 2 Populations w/ Diff Characteristics

- Characteristics (ex. age, sex, gender composition) → Influence Mortality; Most Common is Age
- Crude & Specific Mortality R8 ≠ Consider Mortality Factors → Misleading → Limited Analysis

Developing Countries: Limitations w/Relatable Measurements (Morbidity & Mortality)

- *Factors:* System, Where, How People Live → Hard for Vital Event Registration
    - **Vital Event Registration:** Track Country's Gov Records & Stats on Vital Events (ex. # of Birth, death, marriages, divorces, fetal deaths) → Permanent Record, Continuous Basis → Quantify Prevalence, Distribution, Mortality Causes = Identify Health Inequities

Verbal Autopsy: Standardized Questionnaire for those around deceased → Understand Death Cause

Section 04: Relative Risk and Odds Ratio

Purpose: Calculating Underlying Cause of Disease or Disease Occurrence

Relative Risk (RR): $\frac{a/(a+b)}{c/(c+d)}$; How Many Times More Likely is a Grp of Ppl to be Ill Than Another Grp

- a = primary group (E+) with disease (D+), b = primary group (E+) without disease (D-)
  - **Primary Group (E+):** Group Exposed to Risk
- c = comparative group (E-) with disease (D+), d = comparative group (E-) without disease (D-)
  - **Comparative Group (E-):** Group Not Exposed to Risk
- **Risk:** Cumulative Incidence of being Exposed to Illness → Need Incidence to Calc RR
- **Groups:** Demographic Factors (ex. age, sex), Exposure to Suspected Risk (ex. live w/dog or not)
- **2x2 Table:** Use to do RR Calc

Interpret RR: Interpret Diff Things from E+ Based on RR

- RR = 1 → Disease Risk is Equal for Both Groups
- RR>1 → E+ Lower Risk of Disease; RR<1 → E+ Higher Risk of Disease
- Still Need Significance Tests (Is Difference due to Chance?)

Odds Ratio: $\frac{a*d}{b*c}$; Used When Incidence of Entire Pop is Unavail

- Used w/ Rare Outcomes or At-Risk Pop ≠ Quantified
- Use same 2x2 Table to Calc Odds Ratio
- Same Variables from RR

RR = a/(a+b) / c/(c+d)	Disease present (D+)	Disease not present (D-)	Total
Exposed to risk, primary group (E+)	a	b	a + b
Not exposed, comparative group (E-)	c	d	c + d

Section 05: Measures of Burden

GBD: Global Burden of Disease; Most Accepted is DALY (used by WHO)

DALY: Disability Adjusted Life Years; = YLD (Years Lived with Disability) + YLL (Years of Lost Life)

- YLD: Prevalence * Disability Weighting Factors; Single Measure for Disability & Mortality
  - Prevalence: (People w/Condition / 100,000) * Total Population (ex. $\frac{5000}{100,000}$ * 1,200,000)
  - Number of Yrs. w/ Condition
  - Weighting Factor: 0 = Perf Health, 1 = Death; Degree that Disease Negative Impacts Life
    - ex. Blindness = 0.59, Alzheimer's/Dementia = 0.66, Multiple Sclerosis = 0.41, Chronic Insomnia = 0.10, Congestive Heart Failure = 0.20
  - Graph = Compare w/Other Disabilities (Diff Colour), x-axis = Age, y-axis = Avg. years lived
- YLL: # of Deaths * (Life Expectancy – Avg. Age of Death); Indicator of Premature Mortality
  - Defining characteristics:
    - Takes Age of Death into Account (Subtract Life Expectancy by Avg. Death Age)
    - Illnesses in Early Mortality = More Weight, cuz Dying Young → Bigger Impact (On Individual & Society)

- Graph = Compare w/Other Causes & Number of Actual Deaths for that Cause

Criticisms of DALY:

- **Evaluates Health w/Ableist Lens:** Weighting Disability → Able-Bodies ppl = More Valued than ppl w/Disabilities
- **Age is Unaccounted:** Age → Related to Person's Ability to Contribute to Society
  - There is a 2nd Weighting Scheme → Adjust DALY for age (Middle-Age = Highest Weight)

Support for DALY:

- **Best Current Option:** Prioritizing Interventions Based on ppl's Potential to Contribute to Society is our Current Best Option

Section 06: Oral Histories and Record Keeping

Record Keeping: Western Communities Emphasize Written Word; Indigenous Communities use & Rely on Transmission of Oral Histories, Traditions, Storytelling etc.

- Oral History: Specific to Time-Period/Specific Event (Historically Accurate)
- Storytelling: Creative & Imaginative Liberty → Emphasize Teaching / Lesson
- Some Indigenous Communities → Select Orators (Public Speaker, Select Based on Clan System)
  - Tell Other's Stories and can Add Their Experience to Story → Inc Protective Info & Effect

Accuracy of Oral Record Keeping: Complex & Sophisticated Record Keeping by Indigenous

- Western: Oral Record Keeping = Less Accurate, ≠ True; Lots of Research on Effective & Accurate
- Indigenous use Performative Practices (ex. Dancing & Drumming)

Blending Oral & Written Record Keeping: Written Word → Document Events, Oral → Transmit Info

- ex. Indigenous used Knowledge, Previous Experience & Records from SARS to Prepare & their Experience w/Smallpox to Fight (Oral History → Danger of Disease, Written Stories & Epidemiology)
  - More Likely to Impose Strict Lockdowns & Measures to Control Spread On & Off Reserves

Module 03: Global Burden of Disease

Section 01: Global Burden of Disease

Global Burden of Disease (GBD): Measure of Total Health loss from Hundreds of Disease & Injuries

- Provides Insight into Health Status of Different Populations Throughout World
- Can Break Down via Location, Disease, Age, Sex, Race etc.
- Can Compare Using the GBD Compare Tool - Institute for Health Metrics and Evaluation (IHME)

Categories of GBD:

- **Group 1: Communicable Diseases**
  - Maternal, Neonatal, Perinatal & Nutritional Conditions (ex. HIV, Malaria)
  - Mostly in Low-Income Populations
    - Lack of Health & Preventive Care
    - 20% Global Death Rate
    - 50% in Low Socio-Demographic Index (SDI) Regions
    - 5% in High SDI Regions

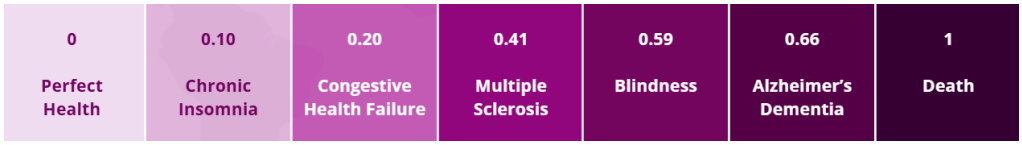
- **Group 2: Non-Communicable Diseases**
  - NCDs: Coronary Artery Disease, Cancer, Mental Illness
  - Majority of Deaths
  - ~74% Deaths Globally
    - 41% in low SDI
    - 88% in high SDI
- **Group 3: Injuries**
  - Car Crashes, Suicide, War Injuries
  - 10% Deaths Globally
  - 12% Male Deaths (2019)
  - 6% Female Deaths (2019)

Socio-Demographic Index (SDI): Account for Income per Person, Educational Attainment, Fertility R8

- Somewhat Correlate to Morality Rate, Top has more Non-Communicable Deaths & Older Ppl

Disability Adjusted Life Years (DALY): Years Lived with Disability (YLD) + Years of Life Lost (YLL)

- **YLD:** Weighting Factor * Number of Years Person has Condition Affecting Quality of Life (QOL)
  - Weighting Factor (0-1): 0 = Perfect Health, 1 = Death
  - Ex.



- **YLL:** (# of Deaths) x (Life Expectancy – Age of Death)
- **Group 2 DALY% Inc, Group 1 DALY% Dec, Group 3 DALY% still 3rd, All = Dec DALY**

Section 02: Communicable Diseases

Communicable Diseases (Group 1): Spread from a Person/Animal/Environment to a Person

- Typically via Airborne Droplets/Bodily Fluids w/ a Virus, Bacterium or Parasite
- Include Nutritional Maternal & Neonatal Conditions

Human Immunodeficiency Virus (HIV): 33 Million Deaths to Date, 690 000 Deaths in 2019

- *Mechanism of Action:* Infects White Blood Cells (Helper T-Cells) → Destroy → AIDS
- *Transmission:* Spread via Bodily Fluids (ex. Semen, Vaginal Fluids, Blood, & Breast Milk)
- *Treatment:* Treated w/Antiretroviral Therapy (ART) (Drugs → Inhibit Stages of Virus Life Cycle)
- *Prevention:* Single Condom Use, Testing & Counselling, Harm Reduction for Drug Users, ART during Breastfeeding & Pregnancy (Eliminate Mother-to-Child Spread)
- *Causes:* Lack of Regular Testing, Limited ART Access in Rural, Stigma (esp w/Pregnant Women)
- Domestic Violence, Stigma, Discrimination, Injection Drug Use → Inc Risk for Indigenous
  - Stigma of Methadone Treatments, Service: Canadian Aboriginal Aids Network
- Inc in Developing Countries, Dec in Developed Countries, Leading Cause of Death in Africa

Tuberculosis (TB): ¼ Infected, Only 5-15% of Infected Dev Active TB Infection

- *Mechanism of Action:* Usually Attack Lungs, Can Affect Lymph Node, Kidney, Urine Tract, Bone
- *Transmission:* Primarily Airborne; Cough/Sneeze → Droplet Nuclei = Released; Inhale = Infected
- *Treatment:* Active TB Treat w/Antibiotics (6-9 mos.)
- *Prevention:* LTB Cured w/Antibiotics (3-4 mos.); Adherence Issues → Antibiotic Resistance
- *Causes (India):* Malnutrition & Tobacco, Lack of Early Detective & Drug Adherence Emphasis
- Overcrowd, Poor Ventilation Homes, Lack of Food Security → Indigenous = Inc TB R8 (40x inc)
  - Inuit TB Task Force: Enhance TB Care & Prevention Programs/Capacity; Reduce Poverty (Improve SoDH & Create Social Equity); Empower & Mobilize Communities, Develop & Implement Inuit Specific Solutions; Ensure Accountability
- Dec in Developing & Developed Countries, 50%+ is in Southeast Asia (4.77%) & Western Pacific

Malaria (*Plasmodium*): More Prevalent & Less Deadly than HIV; 229 Mil Cases, 409 000 Death (2019)

- *Mechanism of Action:* Dormant in Liver → Enters Bloodstream → Infects RBC → RBC Burst
    - Proof they Impair Immune Cells → Susceptible to Various Infections
    - Symptoms: Headache, Abdominal Pain, Chills, Shaking Fever Sweats, Seizures, Anemia, Jaundice, Heart Failure, Kidney Failure, Coma, Death
- *Transmission:* via Mosquito Bites, Being Near Another ≠ Transmitted
- *Treatment:* Cure w/Anti-Malarial Drugs
- *Prevention:* Insecticide-Treated Mosquito Nets & Indoor Sprays
- *Causes (Africa):* Ideal Climate for Mosquito (Long Warm, Intense Rainy Season); Low Immunity
    - Not Used: Difficult to Use, Low-Quality, Believe Only Necessary for Rainy Season
- Small in Developed Countries, Dec in Developing Countries, DALY is high as 17% (ex. Gambia)

Nutritional Conditions: Protein Energy malnutrition, I/Fe/Vitamin A Deficiency; 2% of DALYs

- *Iron Deficiency:* Most Common Nutritional Disorder → Impaired Development, Decreased Work Productivity → Impact Entire Economy; Rarely Fatal, Malaria & Intestinal Worms Contribute
- *Protein Energy Malnutrition (PEM):* Severe Calorie/Protein Deficiency; Large Impact on Kids
    - Less Common but More Severe than Iron Deficiency → 6 million deaths/annually

Maternal Conditions: Health of Women during Pregnancy, Labour, Breastfeeding

- ex. Hemorrhage (Heavy Bleeding Post-Birth), Sepsis (Womb)/Infection, Hypertensive Disorder (Inc Blood Pressure), Abortion Miscarriage, Indirect Deaths, Late Deaths, HIV Aggravated Deaths
- ex. Obstructed Labour & Uterine Rupture, Ectopic Pregnancy (Growth Outside Uterus)
- *Impact on Children:* 70% of Absolute Poverty is Women, More Women Spend Earnings on Family, Maternal Death = Rooted in Women's Powerlessness and Unequal Access
    - **o** Absolute Poverty: Cannot Meet Basic Needs
- *Economic Reasons:* Poor Care / Nutrition of Mom → Dec Stability @ Home, Poor Child Health/Death, Low Birth Weight; Motherless Kids → Less Likely to Educated, Inc Chance to Die
- *Social Injustice:* Women's Trust in Healthcare → Inc Preventative Care for Wole Family
    - **o** Maternal Health Intervention = Most Cost Effective & Strengthen Entire System
    - **o** Empower Women → Equal Power & Resources Access → Positive Change

Neonatal Health: First 28 Days of Life, 40% of Child Death in this Period

- *Main Causes:* Infections - Sepsis (36%), Pre-Term (28%), Birth Trauma (23%)
- *Interventions:* Prenatal Visits, Skilled Birth Attendants, Emergency & Postnatal Care

Section 03: Non-Communicable Diseases

Non-Communicable Diseases: Cannot Spread from Person to Another, Highest (64% of DALYs) Burden

Cardiovascular Disease (CVD): Number 1 Cause of Death Globally; Category (WHO)

- *Cause:* People Live Longer & Lifestyle Changes (Inc CVD Risk Factors)
- *Physician/Researcher Definition:* CVD = Ischemic Heart Disease (Heart Attack)
- *Includes:* Congenital Health Disease (Malformation of Heart Structure Exist @ Birth); Rheumatic Heart Disease (Damage to Heart Muscle & Valves due to Rheumatic Fever from Strep Bacteria)
    - *Blood Vessel Diseases:* Coronary (Heart Muscle) Heart Disease; Cerebrovascular Heart Disease (Brain); Peripheral Arterial Disease (Arms & Legs)

- *Risk Factors:* High Blood Pressure & Cholesterol, Diabetes, Tobacco Use, Unhealthy Diet, Physical Inactivity, Obesity
- *Interventions:* Access to Medication ($); Education (Stronger Public Policy/ Awareness) & Accessibility (Geographic Location, $, Lack of Programming) to Inc Healthy Lifestyle

Cancer: Cells Divide Uncontrollably, Can Spread; Most Common – Lung, Breast, Colorectal, Prostate, Skin & Stomach; Expensive to set up Research Lab (50k-500k)

- Global Burden of Disease Cancer Collaboration (2017): Cancer 2nd in Global Death, YLL, DALY
- *High SDI:* 51% of Cancer Cases, 30% of Cancer Deaths, 24% of Cancer DALYs; 1/7 Chance
    - Most Cancer DALYs = From YLL (97%)< and not YLD (3%)
- Globally, 1/3 chance for Men & ¼ chance for Women; Low SDI is ½ chance (both sex)
- *Prevention:* 40% of Global Cases are Preventable w/ Education to Avoid Common Risk Factors
    - *Tobacco:* Raise Tax, 100% Smoke Free Indoors & Public Space, Health Warning
    - *Obesity:* National Diet & Physical Activity Guideline, Public Awareness Campaign
    - *Alcohol:* Raise Public Awareness (esp w/Young Ppl), Develop/Implement National Policy
    - *Infections:* HPV & Hepatitis C Responsible for 15%; Need Universal Immunization
    - *Carcinogens:* Stop Use of Asbestos, Ensure Safe Drinking Water, Identify Exposure
    - *Radiation:* Provide Info About Natural & Manmade Ionizing Radiation & Effect, Regular Safety Training, UV Risk Awareness + UV Protection Actions
- Indigenous have Higher Cancer Rate w/ Lower Survival Rate (Distrust, Racism, Later Diagnosis)

Mental Illness: Stigma, 10% of Global Burden, 30% of Non-Fatal Disease

- 1/5 Children & Adolescents have a Disorder, 50% of Mental Health Disorders Start Before 14
- *Depression:* 264 Million people, Leading Disability Cause
- *Suicide:* 800 000 Deaths, 1 Death /Second, 2nd Leading Cause of Death (age 15-29)
- *Severe Mental Disorders:* 1/9 Affected by Moderate/Severe, Die 10-20 Years Earlier
- *Mental Health Workers:* 2/100 000 in Low-Income, 70/100 000 in High Income
- *Policies:* Under Half of 139 Countries have Mental Health Policies Align w/ Human Right Policy

Section 04: Injuries

Injuries: Death or Disability due to Direct or Indirect Result of Physical Force, Immersion or Exposure

- Includes Accidental, Interpersonal, Self-Inflicted Forces, War, Conflict, Violence, Natural Disaster
- *Top Causes (2019):* Falls, Road Injury, Self-Harm, Interpersonal Violence (Middle Age = Most)

Suicide: 800 000 Deaths Annually, 2018, Canada - #1 Cause (10-14 yrs.) & #2 Cause (15-34)

- Prevalent in LCGTQ2s+, Refugees & Migrants, Indigenous People (Isolation & Discrimination)
- 79% in Low & Middle Income Countries (Closely Tied to Non-Communicable Diseases)
- 3x Higher in First Nation (2x Higher in Reserve vs. Not), 2x Higher in Metis, 9x Higher in Inuit

Intergenerational Trauma: Trauma Experienced by One Gen is Passed Down to Other Gens

- ex. Residential Schools = Cultural Genocide Against Indigenous by Canadian Government
- *Sociocultural Model:* Parenting Styles & Exposure to Env Factors Impact Dev
    - Directly Influenced by Home Env; Indigenous = Subject to Abuse, Neglect High Stress
    - Grown Children Lack Skills & Knowledge to Support their own Kids
- *Psychological Model:* Harsh Conditions in Early Dev → Brain Dev & Self-Regulation Affected
- *Physiological Model:* XS Stress → Abnormal Level of Cortisol, Dopamine & Serotonin → Affect Brain Dev → XS Stress Activity and/or Learning Disabilities
    - *Epigenetics:* Maternal Stress Influence In-utero Dev → Alter Gene Fxn (Pre-Conception)

Resiliency Factor: Characteristics @ Bio, Psycho, Family or Community Associated with Dec Chance
- High Community Knowledge of Indigenous Language
- Secure Indigenous Titles to Traditional Lands
- Self-Governance, Control Essential Services (ex. Healthcare, Education, Police, Fire)
- School Attendance & Sustainable Employment
- Easy Access to Social Support & Tailored Mental Health Services

Stigma Reduction:
- *Language:* Committed Suicide = Criminal Act; ∴ Use "Took Their Own Life/Died by Suicide"
- *Respect:* Respect Decision to Discuss/Not Discuss Experience (≠ Impact Support Lvl Received)
- *Advocate:* Cannot Navigate Alone, We Can All Use our Voices to Tackle Stigma & Prejudice

Suicide Prevention:
- *Policy:* Strict Policy to Reduce Harmful Use of Alcohol & Other Substances
- *Media:* Responsible Reporting (Don't Sensationalize Suicide), Share Safe Msg on Socials
- *Access:* Reducing + Limiting Access to Means of Suicide (ex. Firearm) can Lower Suicide R8
- *Stigma:* Reduce Stigma and Misinformation → Otherwise At-Risk Ppl Feel There's No Way Out
- *Follow-Up:* With Those that Attempted / Thought About Suicide → Prevent

Section 05: Millenium Development Goals (MDG) and Sustainable Development Goals (By WHO)

Millenium Developmental Goals (MDG): @ Millenium Summit of UN (2000) 189 UN Member States & 23 International Orgs, Adopted 8 MDG, Goal to Achieve by 2015
- *Goal 1:* Eradicate Extreme Poverty and Hunger (1/2 Proportion of Ppl w/Daily Income Less than $1.25, Full & Productive Employment for All, ½ Individuals Suffering from Hunger)
- *Goal 2:* Achieve Universal Primary Education (Boys & Girls)
- *Goal 3:* Promote Gender Equality & Empower Women (Eliminate Gender Disparity in Education)
- *Goal 4:* Reduce Child (Under-5) Mortality Rate by 2/3)
- *Goal 5:* Improve Maternal Health (Reduce Material Mortality Ratio by 75%, Achieve Universal Access to Reproductive Health)

- *Goal 6:* Combat HIV/AIDS, Malaria, and Other Diseases (Halt & Start Reverse Spread of HIV/AIDS, Global Access to Treatment by HIV/AIDS, Cease & Start Reversal of Incidence of Malaria & Other Major Diseases)
- *Goal 7:* Ensure Environmental Sustainability (Integrate into Every Nation's Policy & Program, Reverse Depletion of Env Resources; Red Biodiversity Loss; ½ Proportion Without Sustainable Clean & Safe Water Access & Basic Sanitation)
- *Goal 8:* Global Partnership for Development (Open, Predictable, Rule-Based, Non-Discriminatory Trading & Economic System; Address Special Needs of Least Developed Countries; Exhaustively w/Debt Problem of Developing Nations; Access to Affordable Essential Drugs in Developing World w/ Pharm Company; Avail New Tech Benefit – esp Info & Communication)
- 2015: Cut Poverty, More Primary Enrollment (Inc Girls), Cut Maternal & Child Mortality
    - Struggles: Gender Inequality, Poorest vs. Richest = Big Gap, Ruban vs. Urban = Big Gap, Conflict = Big Threat, Climate Change, Poverty Still Exists
    - SDH: Big Role (Gender Inequality – Inc Poverty - & Income Gap – 20% Poorest Household = 2x as Developmentally Stunted as Wealthiest 20% & 4x as Likely to Not Attend School, 5x as High Child Mortality Rates)

Sustainable Development Goals (SDGs): 17 (Don't Need to Memorize, Maybe Compare Broadly)

1. No Poverty (Half Under $1.25 / Day)
2. Zero Hunger
3. Good Health & Well Being
4. Quality Education (Inclusive)
5. Gender Equality
6. Clean Water & Sanitation
7. Affordable + Clean Energy
8. Decent Work & Economic Growth
9. Industry + Innovation + Infrastructure
10. Reduced Inequalities (Age, Sex, Disability, Race, Origin Ethnicity, Religion, Economic)
11. Sustainable Cities & Communities (60% of Population in Urban Communities)
12. Responsible Consumption & Production
13. Climate Action
14. Life Below Water (Protect Marine Resources & Habitats)
15. Life on Land (Preserve Biodiversity),
16. Peace + Justice + Strong Institutions (Reduce Crime, Violence, War, Illegal Arms & Drug Trade),
17. Inc Partnership

Module 04: Closing the Gap in Health (Global Advocacy)

Section 01: The Gap in Global Health and Social Determinants of Health

Closing the Gap Commission (WHO, 2005): Call to Action to Achieve Global Health Equity

- Improve Living Condition, Dec Inequality(Problem w/Power), Assess/Measure Problem+Solution
- Advocates Work With Scientists (Use Scientific Data as Evidence), but Some Differences Exist
    - ex. Order (Conclusion vs. Evidence First), Technical Jargon & Detail, Speed, Be Objective
- **Gap in Global Health:** Health Inequities bw/Wealthy & Impoverished Populations
    - *Life Expectancy:* Varies Depending on Country of Birth (53-85 in 2018).
    - *Social Determinants:* Affect the Gap (ex. Gender, Indigenous Status, Disability, Housing, Unemployment/Job Security, Early Life, Income & Income Distribution, Education, Race, Employment & Working Conditions, Social Exclusion, Food Insecurity, Social Safety Net)

Social Gradient: Individuals Living in Extreme Poverty have Worse Health Compared to Wealthy

- *Direct Impacts:* Can't Get Healthy Food or Clean/Safe Living Conditions, Labor Intense (Danger)
    - Dec Education → No Job/Access Health-Promo Info & Resource → Financially Insecure
    - Low Income = Inc Chance of Exposed to Harm of Climate Change (ex. Drought & Flood)
- *Indirect Impacts:* Stressors (Mental Burden of Financial Stress, Feeling Lack of Support)
    - No Cultural Sensitive Services Prevent POC From Get All Benefits (esp w/Diverse Place)

Poverty Trap: Ppl are Trapped in Poverty Unless External Force Intervenes w/Lots of $$$ and Resources

- ex. Low-Paying Job → Works More → Inc Chance to Get Sick / Less Time to Improve Skills

Gross Domestic Product (GDP): Annual Monetary Measure of All Goods & Services Produced (USD)

- **GDP Per Capita:** GDP/ Population → Compare Measure of Economy & Standard of Living

Section 02: Closing the Gap Report

Commission on Social Determinants of Health: Closing the Gap in a Generation: Health Equity through action on the SDH (A Report, 2008, Called on WHO & All Governments To Lead Action)

- *Goal 1:* Improve Daily Conditions (Universal Social Protection Policy Against Insecure Employment, Equal Development & Childhood for Both Genders)
    - *Areas to Address:* Equity from the Start; Healthy Places, Healthy People; Fair Employment & Healthy Work; Social Protection Throughout Life; Universal Health Care
- *Goal 2:* Address Inequalities in Power, Money, and Resources (Public & Private Sector)
- *Goal 3:* Measure & Understand the Problem + Assess the Impact of Action
    - *Areas to Address:* Inc Global Health Research w/ Effective Measurements (Health + SDH)

Section 03: Closing the Gap By Improving Living Conditions (Goal 1)

Housing & House Environment: 3 Main Dimensions of a Healthy Home (Key SDH)

- *Physical/Structure Element:* Should Meet Individual's Basic Survival Needs (Clean Water, Sanitation, Electricity, Plumbing, Heating, Proper Ventilation, Safe Infrastructure)
- *Social Meaning:* Affordability & Home Ownership (Sense of Belonging & Control)
    - *Domestic Environment:* Personal Sense of Safety + Stability, Lack of Overcrowding
- *Spatial Location:* Distance to School, Healthcare, Rec, Stores, Industrial Waste/Env Contaminants

Long-Term Drinking Water Advisories: 1+ Year, Water is Not Safe to Drink as Is

- 59 of Them in 41 Communities (Mostly Indigenous Reserves, Neskantaga First Nation = 25+ Yrs.

Early Childhood Development: First 6 Yrs., Instrumental Changes so Kids Can Reach Full Potential

- Healthy Progression of Linguistic, Cognitive and Psychosocial Development
- Poor Living Condition in Early Life (200 Million+) → Not Achieve Full Development Potential
- Upstream Approach (Protect + Promote Kids Well-Being) → Prevent Large Inequities

Employment & Working Conditions: Financial Security, Social Status, Personal Development, Social Relations, Self-Esteem, Protection from Physical and Psychosocial Illness

- *Working Conditions:* Bad → Poor Physical & Psychosocial Health + Stress (Inc 50% CHD Risk)
    - ex. Physically/Psycho Hard, No Autonomy, Inflexible Hour, Effort-Reward Imbalance
- *Job Security:* Unemployment → Financial Insecurity, Material Deprivation, Lack of Opportunity for Personal Development & Increased Stress (Neg Effect on Physical & Mental Health)

Healthy Cities, Healthy Communities: Cities – Better Access to Opportunity & Healthcare

- Challenges: Sedentary Lifestyle, Pollution, Crowded Living Conditions

Urbanization: Gradual Increase in Proportion of People Living in Urban Areas

- *Crowding:* Inc Population Density, Access Must Keep Up (Otherwise Competition for Resource)
    - Urban Gets More Investment, Rural Suffer from Underinvestment
    - Limited Space → House Cost Inc → Crowd @ Family Level (Multiple Gen in 1 Home)
- *Violences & Injuries:* QoL Diff → Conflict for Resources, Higher Crime R8 (Create Insecurity)
    - Women, Migrants & Refugees Bear Brunt of Lack of Security (Impact Livelihood, Health, Access to Basic Services); Economic & Social Impacts on Whole Population
- *Diseases:* Crowd → Inc Risk of Communicable Disease; Diet + Activity Change → Inc Obesity
    - Also Inc Injuries & Non-Communicable Disease in Urban-Poor
        - **Urban-Poor:** Do Small Jobs (ex. Farm), No Proper Income, Dec Access
    - City Design → Impact Walkability & Service Access (Active Transport, Fast Food)
- *Pollution & Climate Change:* More Affects Low SDI Country (Poor Health Infrastructure)
    - *Also Affects:* Small Islands, Mountain Regions, Polar Regions, Mega Cities (Air Quality)
    - Dec Air Quality → 1.4% of Deaths (2018); Climate Change → 250 000 Extra Death/ Year
- *Gentrification:* Low-Value Area → Influx of Affluent Resident + Business → High-Value Area
    - *Consequences:* Inc Rent + Property Value → Forced Displacement of Low-Income + Diff Race (or Can't Afford Daily Basics) → Loss of Community Identity & Social Bonds
- *Worse in Poorer Countries:* Lack of Policy to Control Pollutants, Social Security/Insurance to Afford Housing, Uncrowded Living, Universal Healthcare/Health Promotion Interventions

Social Protection Across Lifecourse (Policy Level Change): Only 29% of World Have Form of Social Security to Protect Against Emergencies (ex. Illness, Disability, Loss of Income or Work) = Inc Health

Universal HealthCare (Policy Level Change): For All Individuals, Regardless of Ability to Pay

- Increase Prevention and Early Screening, Cost-Efficient In Long-Term

Racial Inequities: 22.3% of Canadians are Visible Minority, Cannot Deliver Culturally Sensitive Care

- 14.2% Black Canadians Poor Health, 11.3% of White Canadians Poor Health
- First Nation Infant Mortality Rate is 2x as High
- Immigrant Men – Inc Risk for Work Related Injuries Need Medical Attn, First 5 Yrs in Canada

ABC Project: Children w/ Early Health & Education → Prevent Chronic Disease (Important)

Section 04: Closing the Gap By Addressing Inequities (Goal 2)

Optimal Healthcare Systems: Equitable, Doesn't Rely on Individual's Ability to Pay, Policies Needed

- *Local Action:* Across SHD
    - **Intersectoral Action for Health (ISA):** Aligning Health Policies Across Gov Departments to Promote Health Equity (Especially Industry/Market)
- *Primary Level of Care:* Emphasis & adequate Referral to Higher Levels
- *Equitable System:* Not Relying on Ability to Pay
    - Includes Finance, Education, Housing, Employment, Transportation & Health Gov Policy
- *Prevention, Health Promotion & Intervention:* Equally Valuable

Indigenous & Health Equity: Health Canada ≠ Enough Support to First Nation in Remote Community

- *Nursing Station:* Inadequate Staffing, Only 1/45 Nurses Fully Trained, 5/8 Stations Inspected

- *Medical Transportation:* Benefits (Covering Cost) is Only for those Registered, No Transparency (Reasons for Denial, Insufficient Documentation of Administration of Benefits)
- *Support, Allocation & Comparable Access:* No Specific & Measurable Criteria to Compare First Nation & Other Remote Communities in Terms of Access to Clinical & Client Care Services
    - *Initiatives to Increase:* Telehealth (Free + Translation), NOSM (Placement in First Nation
- *Truth & Reconciliation Commission (TRC) of Canada:* Recognize Indigenous Health Care Rights in International & National Law, Establish Dialogue to Establish & Eliminate Inequities
    - Acknowledge + Resp + Address their Distinct Health Needs
    - Give Sustainable Funding for Existing & New Aboriginal Healing Centers (Address Harm from Residential Schools)
    - Recognize Traditional Healing Practice as Medically Legitimate, Hire + Retain Indigenous Healthcare Professionals + Have Cultural Competency Training for All Staff

Market Responsibility: Prevent Economic Inequality, Resource Depletion, Environmental Pollution, Unhealthy Working Condition, Circulation of Dangerous Goods; Optimize 3 Aspects for Good Health

- *Social Goods Should be Governed by the Public Sector:* To Decrease Health Inequity + Costs
- *Legislation Promotes Gender Equality:* Discrimination is Illegal, Formal & Vocational Education for Girls, Guarantee Pay Equity, Increase Investment in Female Sexual & Reproductive Health
    - *South Asia:* Gender Bias is Socially Acceptable, Women are Undernourished
    - *North America:* LGBTIQ Youth Face Greater Risks to Health & Well-Being
- *Promote Political Empowerment:* Of Disadvantaged Ppl
    - *Top Down Approach:* State Guarantee Set of Rights for All & Fair Resource Distribution
        - Can Promote Bottom Up Approach - ex. Criminalize Female Genital Mutilation (FGM) → Empower Organizations by Women Escaping Family to Avoid Cutting
    - *Bottom Up Approach (Grassroots):* Founded by Self-Organization of Disadvantaged Grps

<u>Goal 3:</u> Measuring & Monitoring Health: Continuously Measure Health Problems & Solutions to Design Effective, Targeted Interventions; Must Understand Barriers & Enablers to Put Into Practice

- *Barriers:* Obstacles That Could Harm Feasibility of a Policy/Intervention
    - *ex.* Civil Unrest, Gov Policies/Agenda, Cultural Barriers
- *Enablers:* Factors/Resources that Could Increase Feasibility/Effectiveness of Policy/Intervention
    - *ex.* Willingness to Accept Policy/Participate, Gov Program that Make Extra Resource Avail

<u>Module 05: Health Promotion & Disease Prevention</u>

<u>Section 01: An Overview of Disease Prevention</u>

Disease Prevention: There Has Been a Shift Toward Prevention Instead of Treatment/Mitigation

- Increase in Non-Communicable Disease (70% of Global Deaths), This Burden is Preventable
- *Goal:* Reduce Incidence/Effects of Disease
- *Stages:* Can Apply Preventative Measures @ Any Stage of Disease (Prevent Further Progression)
    - NO DISEASE
    - *Stage 1 (Primordial Prevention):* Prevent Development of Risk Factors (Target Underlying Env. + Social Conditions), Policy Change & Health Promotion

- *Stage 2 (Primary Prevention):* Identify + Modify Risk Factors to Prevent Onset
- Disease Onset (Asymptomatic Disease)
- *Stage 3 (Secondary Prevention):* Early Detection + Treatment, Before Symptoms Appear
- Clinical Onsent (Clinical Course)
- *Stage 4 (Tertiary Prevention):* Treat Disease, Stop Progression & Control Consequence

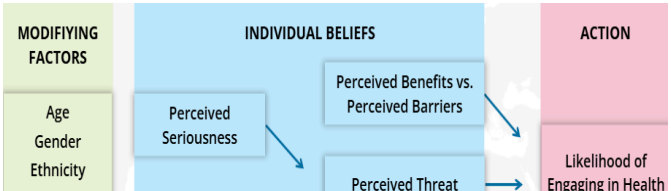
Section 02: Health Promotion (Primordial Prevention)

Health Promotion: Helps Individuals Inc Control Over Health (Promote Skill Dev & Healthy Habits)

- Identification Risk (Factors – Often SDH) & Intervene
  - *Environmental:* Occupation, Housing/Living Condition, School/Work Env.
  - *Social:* Education, Family, SES, War/Conflict, Culture, Race/Racism
  - *Other:* Internal/External Factors, (Un)healthy Behaviour, Avail Quality Health Services
- Reduce Average Risk Level w/Legislative or Public Policy Change (ex. Mandate Nutritional Fact)
  - *Behaviour Change* is Important; Most Easily Modifiable + In Our Control
    - Barriers for Change → Grp into Social Ecological Model (SEM), Discussed Before
  - *Ottawa Charter of Health Promotion* (International Conference of Health Promo, 1986)
    - Build Healthy Public Policy, Create Supportive Env, Strengthen Community Action, Dev Personal Skills, Reorient Health Services; Advocacy is Key w/Promo
- *Levels:*
  - Individual: 1:1 Interaction, Individualize Info, Adaptable, Costly + Labor Intensive
  - Peer/Group: Social Interaction Helps (ex. Prenatal Classes, Sports Activities)
  - Population: Legislation, Regulation, Policy (Change Env, Set Community Standard) + Social Marketing (Ads, Product Placement, Catchy Ad/Slogan)
- Need Indigenous Voice to Prevent Colonial Strat → Continued + Damaging Neocolonialism
  - **Neocolonialism:** Economic + Cultural → Influence Foreign Land
  - Researchers ≠ Indigenous → Problem; Effectiveness Measure w/Western Method → Bad
  - *Blend Western + Indigenous:* ex. BC Cancer Prince George Center for the North: Aboriginal Care Coordinator to Provide Perspective & Build Trust, Healing Garden w/Indigenous Plants + Smudging Pavillion for Ceremonial Purposes
  - Holistic + Community Approach, Collab + Work w/ Chief, Elder, Leader
  - *Protective Factor:* Self-Governed, Land Control, Cultural Activity Control
  - *Prevention Factor:* Community-Based Approach, Peer Support Grp, Gatekeeper Training (Recognize Persons at Suicide Risk and Provide Appropriate Assistance)
  - *Spirituality Factor:* Pow-Wow, Sweetgrass Ceremony, Sweat Lodge
  - *Suicide Prevention:* Focus on Community/Fam Connect + Empowerment, Culture Affinity, Healing is Spiritual; Western Programs May Inc Suicide R8s
  - High Smoking in First Nations, Dec = @ Odds w/ Traditional Practices
    - *Promote Tobacco-Wise:* Continue Traditional Use, Eliminate Commercial Use
    - *Sacred Smoke Program:* Led by Elders, Coping Mechanisms (ex. Drumming)

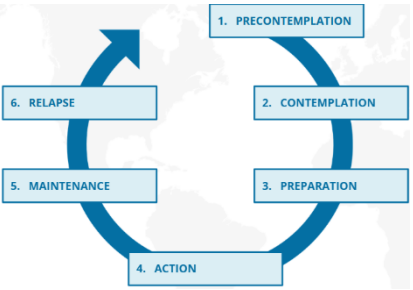
Behavioural Change: Guidance on How to Overcome Barriers to Health Behaviour Change (ex. SEM)

- *Health Belief Model (HBM):* Psychosocial, Predict + Explain Health Behaviour (1950s)
  - Individual Belief about Fact of Potential Health Problem can Impact + Explain Behaviour



- *Perceived Seriousness:* Medical + Social Consequences (ex. Life Threatening, Stigma, Drastic Dec QoL)
- *Perceived Susceptibility:* Subjective Perspective of Acquiring Disease (Factors: Family History, Genetics, Cultural View)
- *Self-Efficacy:* Confidence in Ability to Carry out Health Behavior Change
- *Cues to Action:* Specific Triggers (External + Internal) Prompt Decision Making to Engage in the Change

- *Transtheoretical Model (TTM):* Biopsychosocial,Outline Process of Intentional Behaviour Change



1. *Precontemplation:* Unaware of Need to Change/Consequence of Behaviour
2. *Contemplation:* "Getting Ready" Stage, Mix Feeling, Thinking + No Plan
3. *Preparation:* Motivation + Plan of Action, Some Steps Taken
4. *Action:* Actively Trying to Modify Lifestyle, Want to Succeed
5. *Maintenance:* Sustained Behaviour for 6+ Mos., Work to Prevent Relapse
6. *Relapse:* Abandon Idea of Change, Difficult to Maintain New Behaviour
    - Health Care Workers May Encourage Trying Again and Re-Enter #1

Health Promo Strats: Focus on Encouraging People to Improve Health in 1 of 2 Ways

- *Increase Frequency of Health Behaviours:* Implement Programs to Make Easier to Achieve
    - *ex.* OMama: Phone App Aid in Tracking Pregnant Info & Follow Evidence Recs
- *Eliminate Unhealthy Behaviours:* Empower Population to Identify + Reduce Behaviour Detrimental to a Healthy Lifestyle + Design Intervention to Alter Behaviours Sustainably

Section 03: Primary, Secondary and Tertiary Prevention

Primary: Prevent occurrence of Disease, No Disease Present, Susceptible Tho Cuz of Risk Factor

- Primordial (Focus on Young Ppl Avoid Risk Factor) vs. Primary (Manage, Modify or Eliminate)
- *Strategy:* Identify + Modify Risk Factor (ex. Quit Smoking
- HPV Related Cancer: Federally Funded Vaccines for Both Genders in Canadian Schools

Secondary: Stop Disease Progression, Cure/Prevent Complications + Death, Stop/Limit Spread

- *Disease Stage:* Subclinical/Early Clinical, Pathological Changes, No Signs/Symptoms
- *Strategy:* Early Detection + Treatment of Disease (ex. Regular Scheduled Mammograms)
- Screening for Cervical Cancer via Cell Phone From Nurse to Doc (Highly Curable)

Tertiary: Limit Disability, Prevent Relapse, Restore Function

- *Disease Stage:* Signs + Symptoms Present, Potential Complications & Disabilities
- *Strategy:* Treat & Rehabilitate Person w/Disease (ex. Early Rehabilitation & Management for Stroke to Optimize Recovery + Prevent Complications)
- Parkinson's (Affects More Men) Focus on Treat & Control Disease w/ Healthcare Professional

Section 04: Developing an Intervention

Health Intervention: Aim to Address Health Need/ Gap in a Specific Population

- *Criteria:* Target, Action, Means (Process & Methods)

- *Types:* Epidemiology & Surveillance, Outreach, Social Marketing, Screening, Health Teaching, Policy Development
- *Steps:* Development of the Intervention consists of 4 steps
    1. *Needs Assessment:* Identify & Assess Problem Level (Quantify Extent - Compare to Target State, Potential Root Causes – Pick One to Focus for Intervention, Barriers & Enablers)
        - *Community Input:* Ensures Accurate Info about Pressing Issue & Intervention, Higher Likelihood of Support & Engagement → Inc Chance of Success
    2. *Develop Solution:* Can be Built Upon Existing Intervention and/or Best Practices
    3. *Describe Action Plan:* Determine Details, Specific Changes/Aspects, Groups Benefiting, Who/When Executes, For How Long, Resources Needed & Avail, Feasibility
    4. *Assess Potential Impact:* Intended & Unintended Outcomes, How to Measure Success
    - (Theory) Extensive Planning ≠ Successful/Effective (In Practice)

Quaternary Prevention: Basis in Primum non nocere (First, Do No Harm) Principle of Med Ethics
- Identify Risk of Overmedication, Protect from New Med Invasion, Suggest Ethically Acceptable
- Prevent Unintentional Harm (ex. Opioid Crisis Caused by Overprescription for Chronic Pain)

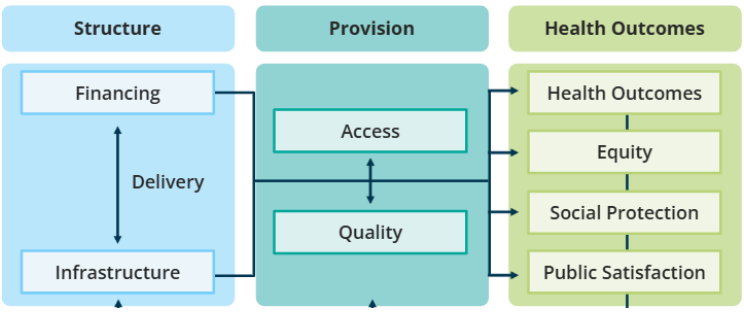
White Saviour Complex: White Person Acts to Help Non-White People in a Self-Serving Context
- Well-Intended Approach → Does Harm = Paternalistic & Patronizing Attitude → Build Helpless & Demeaning Image of Marginalized & Vulnerable Communities → Disempower Them
- Important to Listen to Community & Collaborate

Module 06: Healthcare Systems

Section 01: Universal Health Coverage and Healthcare

Universal Health Care (UHC) Provider: Country Must Meet Two Criteria

- *Passed Legislation:* Explicitly States Entire Population is Covered Under Specified Health Plan
- *Essential Service Coverage:* Service Coverage Index (0-100), Measures Essential Health Service Coverage Based on 4 Components: Reproductive, Maternal, Newborn, Child Health; Infectious Diseases; Non-Communicable Diseases; Service Capacity and Access
    - High Score = High Coverage, Canada (89.0) is Highest
- *Funding:* Four Key Methods (Can Rely on One, or a Combo of Methods
    - *Social Insurance:* Employers + Employees Pay Contributions, Legislated by Law (Cover Whole Population); Wealthier = Pay More Usually; Sometimes Gov Subsidize
    - *State Coverage:* Gov Pays via Tax
    - *Private Health Insurance:* Individuals Purchase, Some Countries = Nominal Cost
    - *Employer Based Insurance:* Employer or Joint w/Employee Pay(Gov May Subsidize)
    - *Four Models:* Beveridge, Bismarck, National Health Insurance, Out-Of-Pocket
- *Access:* Little to No Individual Cost, Proximity, Comprehensive (Med, Dent, Eye, Mental, Pharm)
- *Quality:* Resources (Med Tech/Drug), Timely, Client-Centered, Evidence-Based Service + Policy, Educated + Efficient Workers
- *Requirements:* To Claim UHC is Reached
    - *Healthcare System:* High Quality & Efficient Meet Priority Health Needs
    - *Finances:* Support, Prevent Hardship for Medical Care
    - *Access:* Effective Technology & Meds to Diagnose and Treat Med Conditions
    - *Health Workers:* Sufficient Capacity of Well-Trained & Motivated to Meet Patient Need
- *Simple Health System Model:* Financing → Provision of Service → Goals/Health Outcomes



- *Well-Functioning System:* Finance, Well-Trained/Paid Workforce, Reliable Info to Base Policy/Decision, Well-Maintained Facilities & Logistics to Deliver Quality Meds & Tech; Responds to Population Needs in Multiple Ways:
    - *Participating:* Possible to Participate in Decisions Affecting Health
    - *Improving:* Health Status of Individual & Community
    - *Protecting:* Against Financial Consequences of Ill Health
    - *Providing:* Equitable Access to People-Centered Care
    - *Defending:* Population Against Health Threats
    - Must Also be Culturally Sensitive; ex. First Nations Health Authority, 4.7 Billion Funding for Next 10 Years, Split Into 3 Blocks:
        - *(Primary Healthcare & Public Health) Protection:* Health Promotion, Disease Prevention, Environmental Health etc.
        - *(Supplemental) Benefits:* Med Transport, Mental Health Counsel, Dental, Drug, Supplies, Vision Care, Short-Term Crisis Intervention
        - *(Infrastructure) Support:* System Capacity, Human Resources, Facilities, Transport

- Self-Governance → Participation, Cultural Training, Access, Dec Service Time

Section 02: Healthcare System in High-Resource Countries

UHC in High-Resource Country: More Common, Provide High-Quality to Majority, (ex. Canada)

Tax-Funded Model: $$$ From Provincial & Federal Budget, Non-Commoditized (≠ Product/Service)

- Unemployed Have Access to (Unliked Social Insurance Model)
- Government is Single Pay for Medical Necessary Services (Non-Necessity = Paid out of Pocket)
- Public Funding, Private Providers (ex. Physicians); No Need to Market/Financial Motive to Deny Claim, No Concern for Profit, Cheaper & Simpler to Navigate
- Mental Health is Not Included → Two-Tier System (Can Afford vs. Not); Australia Covers More
- Family Doctor Coverage is Low (Same/Next Day Appt is Hard); Physician Penalized if Rostered Patient Goes to Walk-In Clinic
- Gov Oversees Home (In-Home Nurse Care, Clean) & Community Care (ex. Meals, Transport)
- *Strengths:* High Quality Care, Fiscally Conservative
- *Weakness:* Inequitable Access to Uncovered, Limited Home Care, Not Comprehensive for Mental Health/Physio, Low Doctor: Population (XS ER Use), Inequalities w/ Indigenous, ≠Drug

Historical Events in Canadian Healthcare: Government Has Critical Role as a Result

- *Urbanization (1870-1910):* Population Density → Health & Social Care Disappear → Need Gov
- *World War I (1914*-1918): To Aid Wounded, Gov Established Massive Hospital System, Sanitarium, Rehab Center → Gov Owe to Those who Served → Change for Healthcare
- *The Great Depression (1929-1939):* Many Need Gov-Fund Emerg Relief, Hospital Revenue Dec
- *World War II (1939-1945):* Most Talented Healthcare Joined Forced, Public Health Association Advocated for Federal Funds for Full-Time Health Units → PM King Promoted Social Welfare

Canadian Health Act (1984): Conditions to Receive Compensation from Federal Government

- *Public Administration:* Non-Profit Basis, Accountable to Province, Records are Subject to Audits
- *Comprehensiveness:* Include Hospital, Physician, Surgical Dentist
- *Universality:* Everyone Entitled to Same Level of Healthcare
- *Portability:* Resident of Province Can Move to Another, Still Covered from Home Province
- *Accessibility:* Reasonable Access to Facilities (Given Reasonable Compensation for Services)
- Federal Gov → Provincially Funded (W/ Federal Gov Equalization Payment)
    - Indigenous also has Federal Gov for Stuff Province ≠ Cover (Under Indian Act of 1876)
        - Governed by First Nation & Inuit Health Branch (FNIHB) of Federal Gov
        - Must be Registered Indian OR Inuk (Recognize by Inuit Land Claim Org) OR Infant Under 1 Year (Parent is Eligible)
    - ≠ Include Armed Force, Covered by National Defence (Must Have Similar Coverage)
        - Also Tailored Coverage to Meet the High Risk of the Forces: OT, Dent, etc.
    - Need for Quality, Publicly Funded Home Care Services for Elderly

Interim Federal Health Program (IFHP): Temp & Limited Coverage for Grps Not Covered (ex. Refugees, Human Trafficking Victim, Detainees, Protected Persons, etc.); Basic + Urgent Dent, Eye etc.

- Includes Immigration Medical Exam + Diagnostic Tests, but Immigrants Don't Count

Affordable Care Act (ACA): (US → UHC), Mandate Insurance + Subsidies & Medicaid Eligibility

- *Pro:* Slows Care Cost Risk, Covers Essential Benefits & Pre-Existing Conditions, Cover Kids

- *Con:* Inc Income Tax, People Choose to Pay Fine Instead, Business Red Hours to Avoid Offering Health Insurance

Section 03: Healthcare System in Low-Resource Countries

UHC In Low-Resource Country: Uncommon, Innovation & Optimization; Cuba

- Usually Out-of-Pocket due to Lack of Gov Funding
- Different Health Issues from High Resource Country (ex. Living Condition, Health Literacy)
- *Problem:* Geographic Accessibility due to Infrastructure, Communication & Travel Time Limits
- Not Enough Indigenous Doctors due to Barriers: Geographic, Funding, Separate from Community
- Struggle to Retain Talent Due to Lack of Incentive

Cuba: Surpasses / Rivals USA in Many Health Metrics (1/7 GDP Per Capita), Grassroots Method

- *Key Principals:* Insurance Covers all Med Fees, Providers Understand & Live in Communities they Serve, Focusing on Community is more Effective than Focus on Individual
- *Success Factors:* Integration of Public Health (Equal Emphasis on Preventative & Retroactive), High Doctor: Patient Ratio w/ Equal Distribution, Community Health Networks (Give Doctor Housing & Salary), Central Gov. Support
- *Weaknesses:* Drug & Equipment Storage, Lack of Freedom for Doctors and Patient
- Used for South-South Cooperation to Help Other Low-Resource Countries (ex. w/ Gambia)
    - *Obstacles:* Lack of Willingness From Doctors (Include Loss of Talent to Urban Center & Private Clinics) + Lack of Gov Support for UHC (Due to Structural Adjustments)