

Welcome!

**Lecture 3:
Disparities and
Determinants of Health**



Key Takeaways



Interconnected Factors

Health outcomes are profoundly influenced by a complex web of environmental, socioeconomic, cultural, and political factors.



Feasible & Impactful Interventions

Understanding these diverse determinants is crucial for designing and implementing health interventions that are both feasible and truly impactful.



Addressing Systemic Barriers

Through robust health system analysis and comprehensive stakeholder mapping, we can identify and overcome real-world barriers to change.



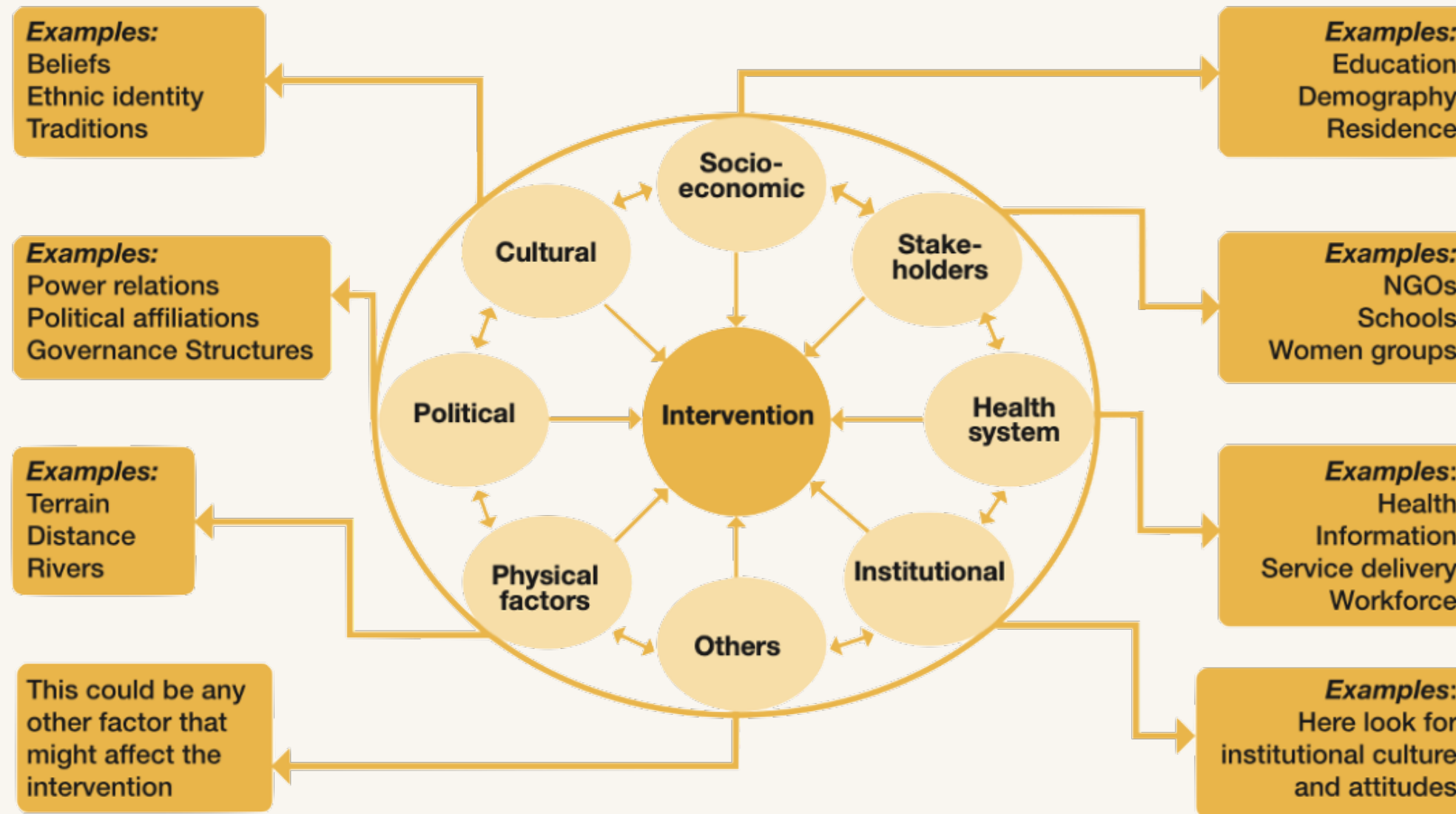
The Implementation Research Cycle



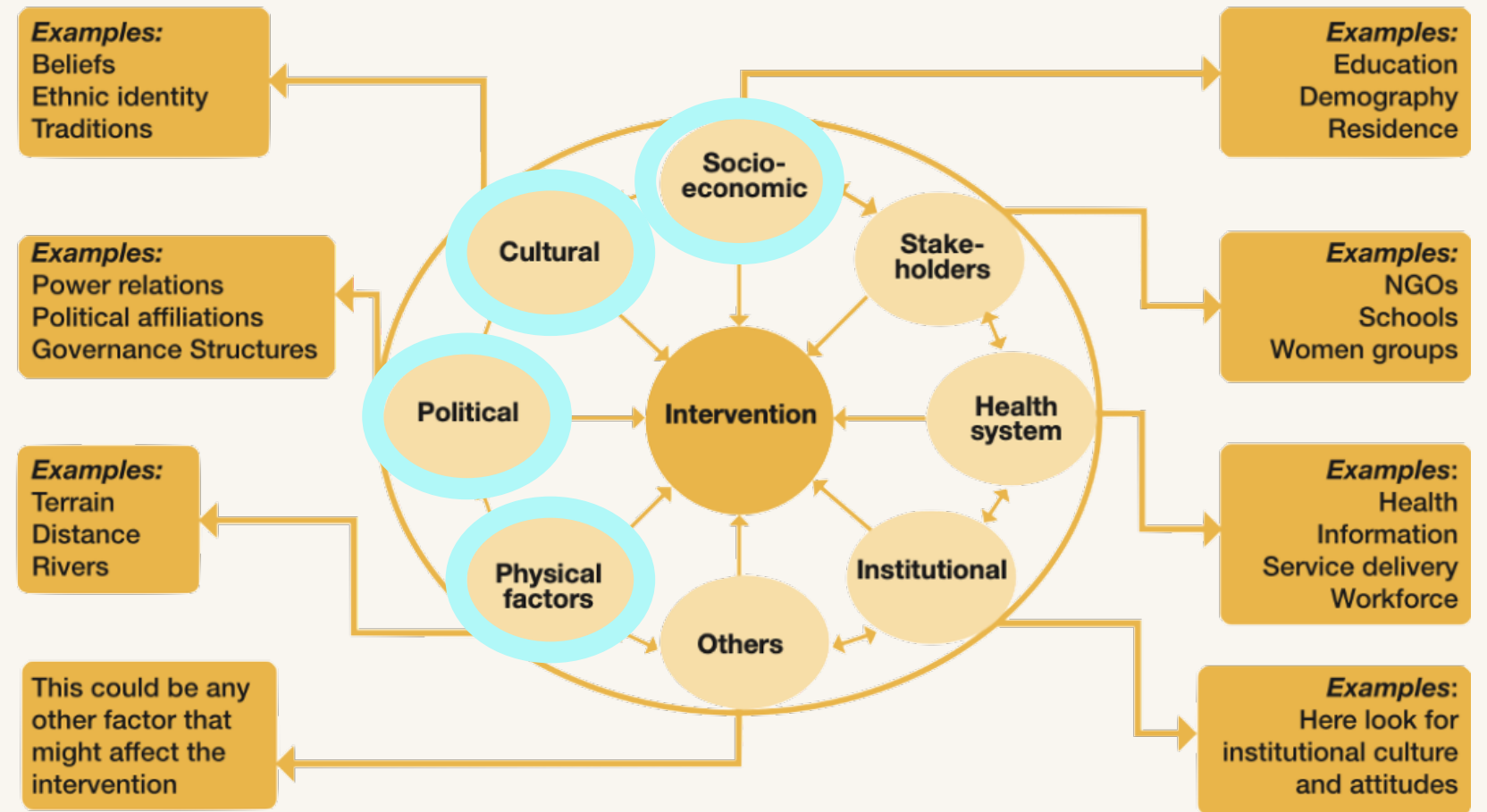
The Implementation Research Cycle



Interacting Domains of Contextual Considerations



Physical, Socioeconomic and Cultural Context



Physical and Demographic Factors



Geographical Features

Rural/urban location, distance to healthcare facilities, physical barriers to access (mountains, rivers), and infrastructure such as transport systems, electricity, and water supply all contribute to health disparities. Communities with limited infrastructure often experience worse health outcomes.



Demographics

Population size, distribution by location, gender, age, and other characteristics help identify patterns of health disparities. Demographic analysis reveals which populations bear disproportionate disease burdens and mortality rates by location and/or group.



Infrastructure

Inadequate transport systems can limit access to healthcare, employment, and healthy food, while unreliable electricity and water supply can lead to poor sanitation, increased disease risk, and reduced healthcare service efficiency. Underinvestment in these essential services disproportionately affects marginalized populations.



Socioeconomic Factors



Income and Occupation

Economic resources directly impact access to healthcare, nutrition, housing, and other necessities. Lower income populations experiencing higher rates of chronic disease, shorter life expectancy, and reduced access to preventive care.



Education

Educational attainment influences health literacy, employment opportunities, and income potential. Those with less education often have reduced ability to navigate complex healthcare systems, understand health information, and engage in preventive health behaviors.



Housing and Neighborhood

Housing quality, neighborhood safety, access to healthy food, green spaces, and transportation options all contribute to health outcomes. Residential segregation and neighborhood disadvantage are powerful drivers of health disparities.



Cultural and Political Factors



Cultural beliefs

Cultural beliefs related to health, illness, and healthcare seeking behaviors influence how different populations interact with health systems. Beliefs related to gender equality and ethnicity segregation can disproportionately impact access to health resources.



Policy and political factors

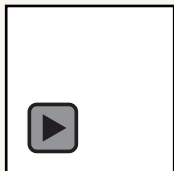
Policy decisions, government capacity, political support for social services, and healthcare funding directly impact health disparities. Government capacity to deliver services and ongoing policies/interventions are also important to evaluate.



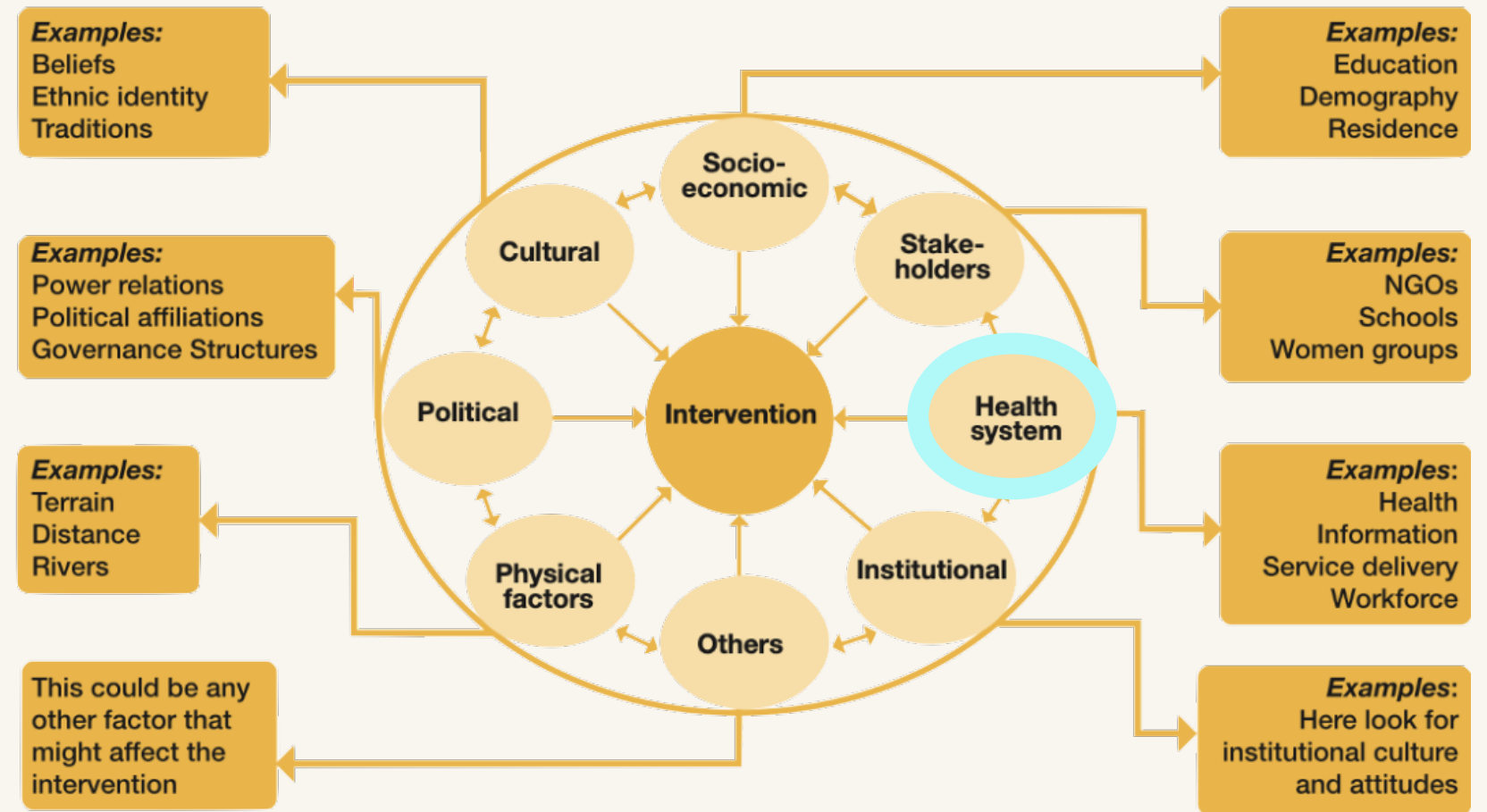
Case Study: TB/HIV in Sisonke District

“Researchers established that KwaZulu-Natal is the epicentre of TB and HIV epidemics with a TB-HIV co-infection rate of 75–80% in some settings. They also established that Sisonke District – one of KZN’s 11 districts – was mostly rural with poor roads, an area of 11 128 km², a population of ~500,000, 79% of whom were unemployed, and poverty levels among the population was 71%. The people of Sisonke District had relatively poor access to basic health services when compared to residents of similar, inland rural districts. Only 33% of Sisonke residents had access to piped water (on or off site), 57% relied on candles for lighting, 74% were reliant on either paraffin or wood for cooking and only 22% had access to good sanitation (i.e. flush or chemical toilets). The most common spoken language was IsiZulu while majority of the district population (53.62%) were females. The antenatal HIV prevalence, which was estimated at 35% compared to 39.5 province-wide in 2008– 2009, was determined through review of the National Antenatal Sentinel HIV and Syphilis Prevalence Survey in South Africa, 2010. New TB cases numbered 1079 per 100 000 population, with an HIV co-infection rate of 81% (compared to 52% overall in South Africa in 2009).”

What might this inform about the types of interventions that might be less effective, or more effective?



The Health System

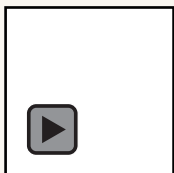
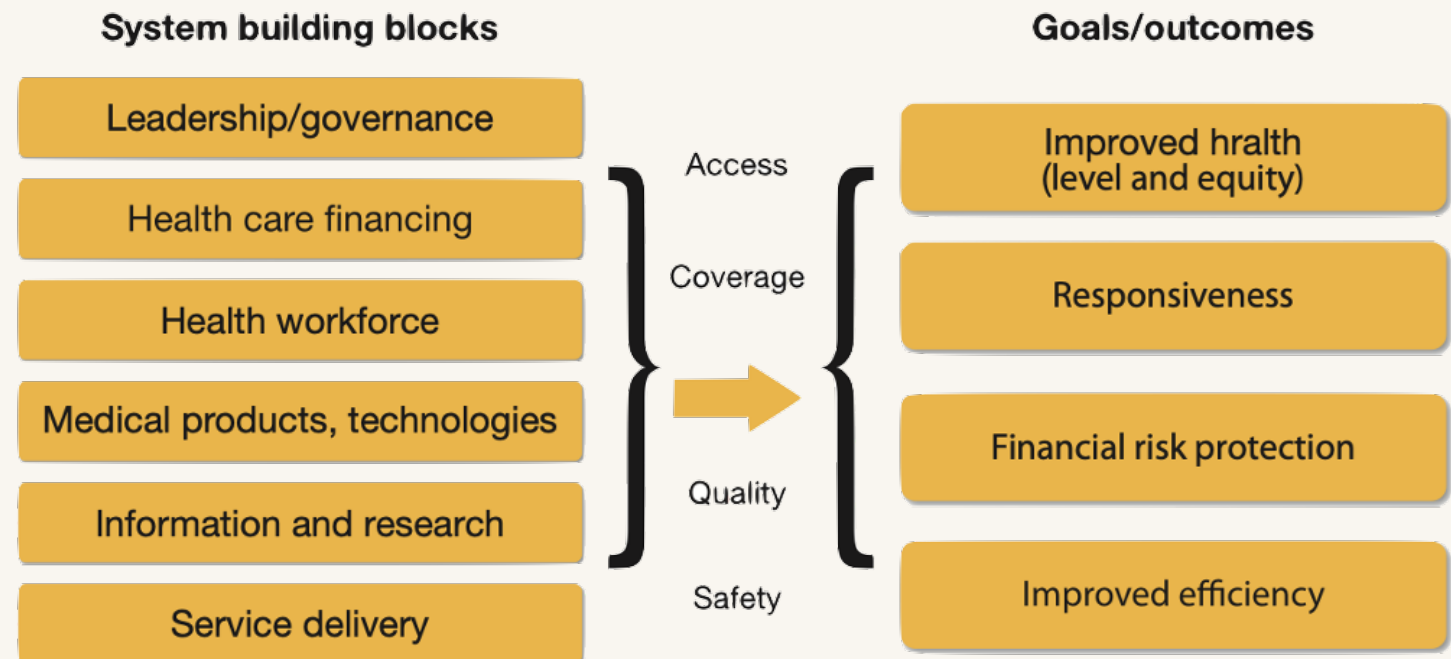


What are Health Systems?

The network of people, institutions, policies, and resources that interact to deliver health services.

WHO's Six Building Blocks of Health Systems

1. Leadership/ governance
2. Health care financing
3. Health workforce
4. Medical products and technologies
5. Information and research
6. Service delivery



Health System Building Blocks

-  **Leadership and governance** – Policies, regulations, and accountability mechanisms.
-  **Health financing** – The allocation and sustainability of financial resources for health care.
-  **Health workforce** – The training, distribution, and retention of health professionals.
-  **Medical products, vaccines & technologies** – The availability and accessibility of essential medicines and supplies.
-  **Health information and research** – The data collection and analysis for decision-making.
-  **Service delivery** – The availability, accessibility, and quality of health services.



Case Study: HPV Immunization Programs in Sub-Saharan Africa

Leadership/Governance

Political support from influential figures like Uganda's First Lady has helped prioritize HPV vaccination programs

Health Information

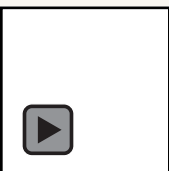
Limited education and inadequate engagement with key community members, including fathers, teachers, and residents in hard-to-reach areas

Service Delivery

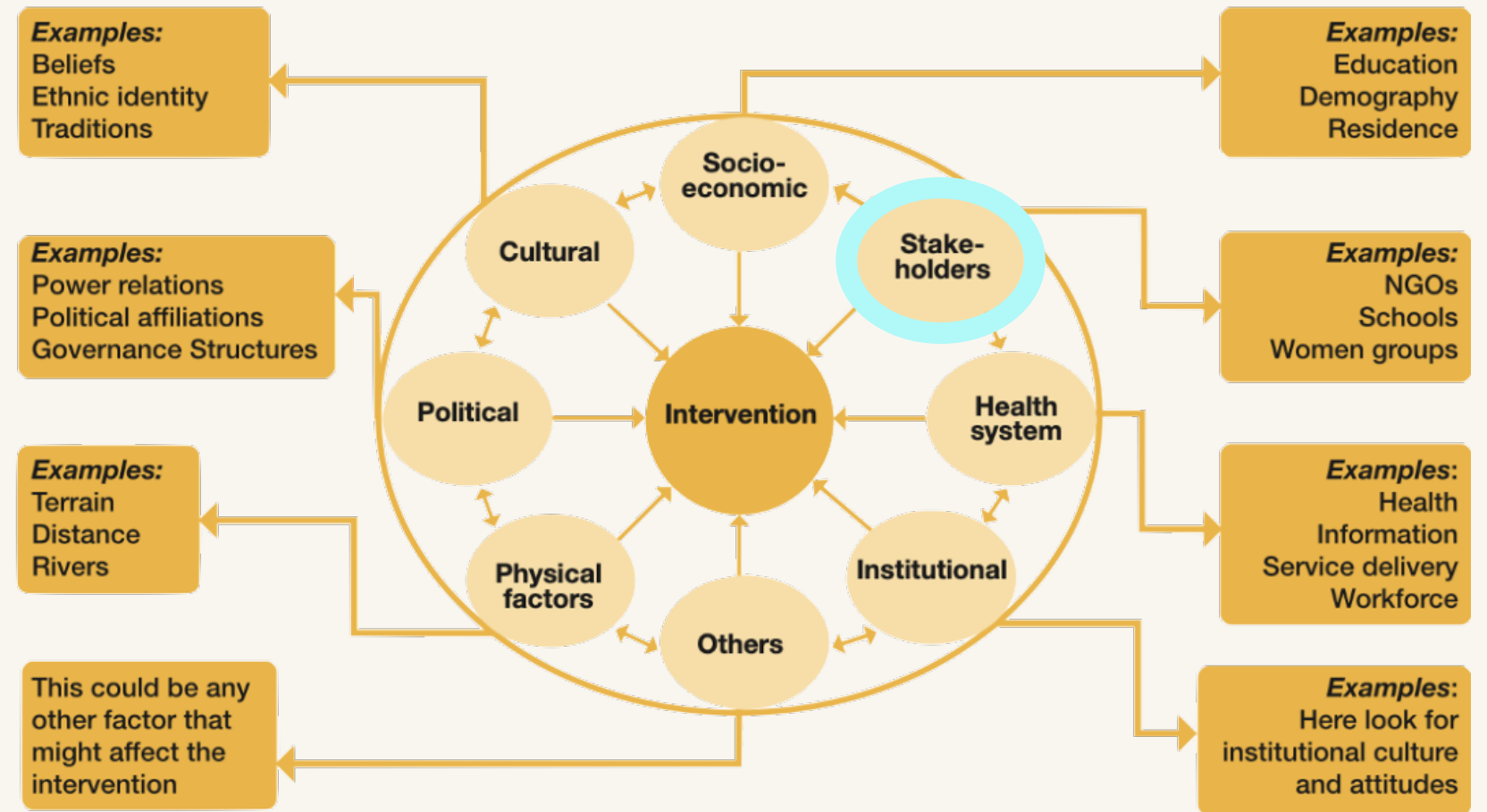
School-based vaccine delivery strategies were more effective in achieving high vaccination coverage than facility-based models

Health Workforce

Shortage of trained healthcare workers; many lacked knowledge and acceptance of the vaccine's safety and efficacy



Stakeholders

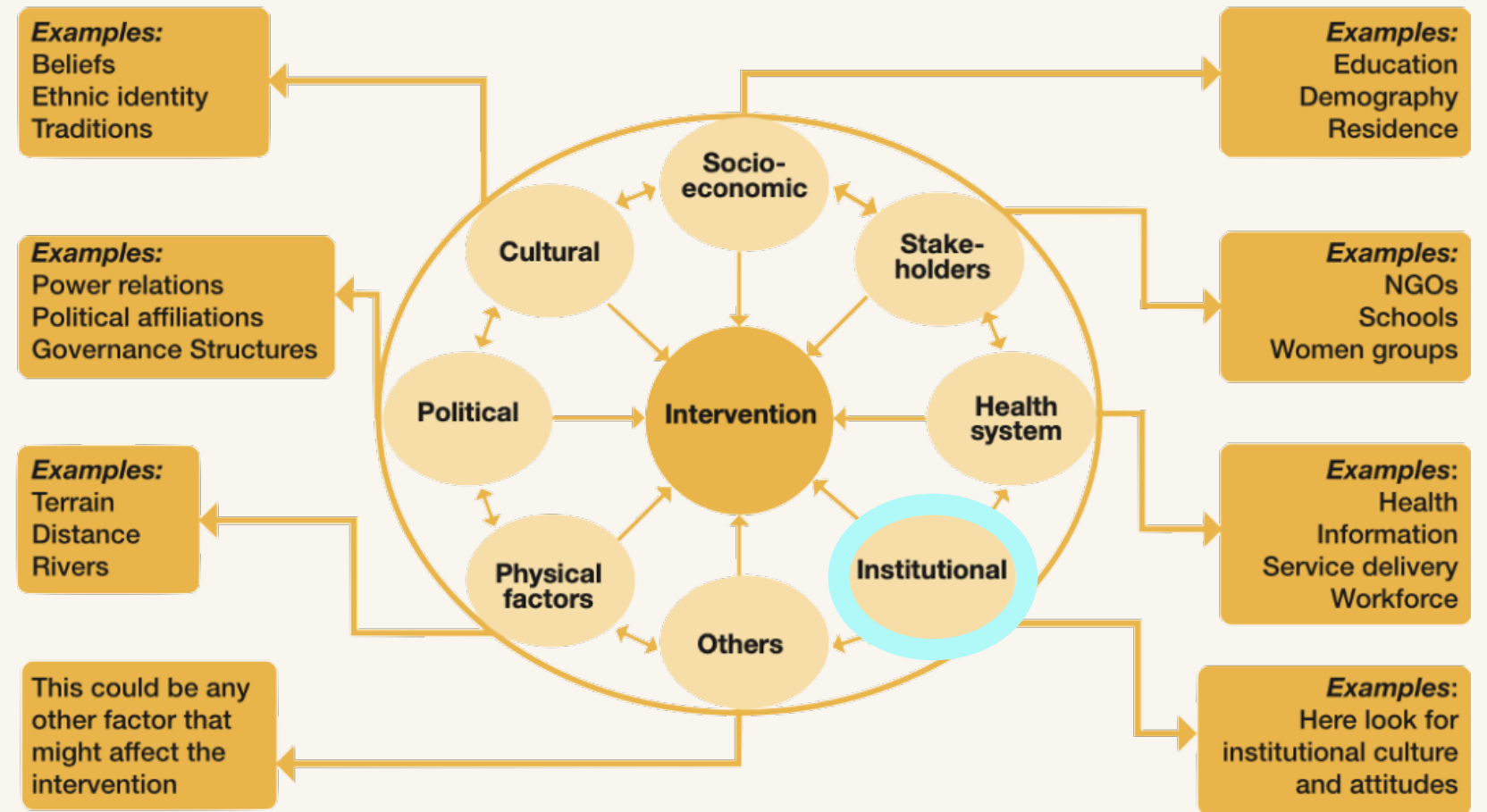


Key Stakeholders in Global Health Research

- Government officials & policymakers
- Healthcare providers & health workers
- Non-governmental organizations (NGOs) & Civil Society Groups
- International & multilateral organizations
- Academic & research institutions
- Community members & civil society
- Donors & funding organizations
- Private sector & industry



Institutional Factors



Institutional Factors

The structures, policies, regulations, and organizational dynamics *within* health systems, governments, and other entities that influence the implementation, sustainability, and effectiveness of health interventions

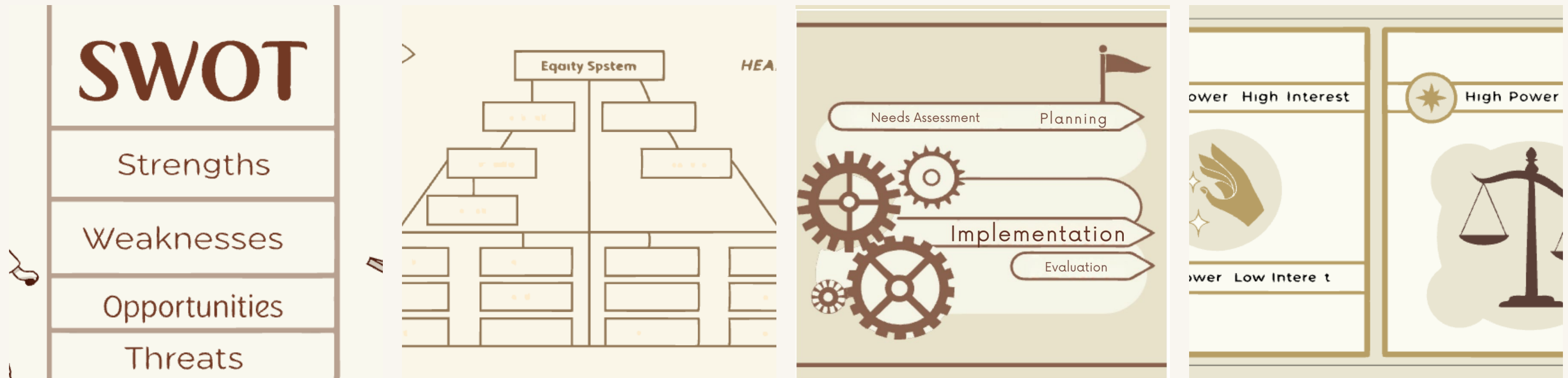
- Health governance, funding mechanisms, regulations, workforce policies, partnerships, and organizational capacity.

SWOT Technique for Institutional Analysis

- Used to identify...
 - **Strengths** and **Weaknesses** (internal factors).
 - **Opportunities** and **Threats** (external factors).



Institutional Analysis for Health Equity



Institutional analysis is crucial for understanding how organizational structures impact health equity. SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) helps identify factors affecting the success or failure of health equity interventions. This systematic examination reveals organizational behaviors, power dynamics, resource allocation patterns, and institutional biases that may perpetuate health disparities.

When conducting institutional analysis for health equity research, examine formal and informal rules, organizational culture, leadership commitment to equity, diversity in staffing, and mechanisms for community voice and accountability. These factors significantly influence how effectively institutions can implement interventions to reduce health disparities.

Reflect!

How might the efficacy of AI -driven health interventions differ depending on the contextual factors of a certain region?



End of Lecture 3

Next up Lecture 4: Technology, Innovation & AI for Global Health IR

Knowing the barriers, we turn to technology and AI as tools to address them