

2.1. Health Promotion and Disease Prevention

Health promotion is the process of empowering people to increase their control over their health and its determinants through health literacy efforts and multi-sectoral action that increase healthy behaviors. Much of the determinants for the burden of communicable diseases are attributed to the environment where people live. Apart from factors related to water, sanitation and hygiene, diseases of animal origins contribute a significant amount of burden on the impact of communicable diseases in human population. Health Care Workers (HCWs) involved in patient care are facing special occupational hazard because of exposure to human blood and body fluids.

People involved in managing wastes (such as healthcare wastes) are also exposed to Sharp Injury (SI) and Blood and Body Fluid (BBF) as a result of poor awareness, lack of protective device, lack of basic trainings, low attention given by the authorities, etc. Expansion of industries and other work places not only gave work opportunities for citizens but also becomes a cause for diseases, accidents and injuries for people who are working in and around these sectors. Even if the importance of physical activity is ample, the majority of our society is becoming to follow a sedentary lifestyle which is more deadly than smoking; contributing a lot for emergence of non-communicable diseases (such as cardiovascular diseases, diabetes and several types of cancer). However, research on work place hygiene, particularly the impact of hazardous wastes, occupational hazards and diseases, effect of substandard housing and safety, effects of buildings, indoor pollutants and health effect, satisfaction of fundamental physiological and psychological needs, protection against vector and rodent infestation, and the concept of the importance of physical exercise are lacking. As a result, the community especially the most vulnerable populations are under the risk of communicable and non-communicable diseases (double burden) that affect quality of human life. To this end, the health promotion and disease prevention as a subtheme included the following research priority areas that are identified for study intervention strategies to prevent and control communicable and non-communicable diseases:-

- Toxicological effects of pesticides used on khat and other plants;
- Health impacts of environmental or chemical toxin exposures;
- Health effects of counterfeit or sub-standard drugs and their identification;
- Health effects of wastes (e.g., hazardous wastes, waste and pollution, etc.);
- Disease burden related with waste water irrigation in agriculture and nematode infections;
- Water supply, sanitation and hygiene (WASH);
- Physical activity and wellbeing (i.e., weight control, rehabilitation from injury, stress management, mechanism to reduce or prevent risks for non-communicable diseases, etc.);
- Vector and rodent infestation in residential and institutional environments (i.e., vector borne diseases);
- Effects of housing, air pollution and lower respiratory tract infections;
- Food-borne zoonotic diseases (zoonotic gastrointestinal diseases);
- Work place risk factors and hazards;
- Work place health promotion (e.g., training, workplace guidelines & capacity building, good occupational practice, etc.); and
- Gender and occupational health

2.2. Advances in Curative and Rehabilitative Health Services and Disease Management

A well-functioning health system is verified by improving the health status of individuals, families and communities. Ethiopia, like most developing countries is affected by double burdens of health problems as a result of health transition, which necessitates improved or advanced health services and health care delivery systems. However, the gaps of health service provision were identified as: poor quality of medical services; poor health seeking behavior of the community from public health facilities; low level of patient satisfaction; shortage and inappropriate use of drugs and medical supplies; poor attitude of health care providers; poor patient provider interaction; lack of appropriate diagnostic services or technologies; absence of prepayment plan to seek the service; gaps in care of patients; poor preparedness in addressing and responding to emerging or reemerging health concerns; limited intervention on mental health problems; poor investigation and response to injuries; and poor health service evaluation. Therefore, the advances in curative and rehabilitative health

services and disease management as a sub-theme has given emphasis on intervention strategies that can improve health care delivery system and disease management through the following research priority areas identified:-

- Biopharmaceutical and pharmacological aspects of herbal or traditional medicines (e.g., ethnobotanical, ethno-pharmacological, indigenous therapeutic practices);
- Discovery or identification of appropriate diagnostic technology and drug-diagnostic co-development;
- Enhancement of quality and efficient pharmaceutical services; Availability and affordability of essential drugs (bottlenecks of pharmaceutical logistics system); Drugs utilization pattern and their cost analysis; Drug resistance patterns; Adverse drug events and polypharmacy; Rational use of medications;
- Medical care; Assessment of nursing standards, Clinical service assessment, Laboratory service quality, and Disease Prognosis assessment
- Health service readiness and availability; health service delivery modalities and quality of care and determinants;
- Health workers' attitude, ethics, development and job satisfaction;
- Culture of information use (i.e., trend analysis, mapping, etc.);
- Health care financing (i.e., prepayment plan, health insurance, etc.); and
- Service delivering methods and approaches for emerging but neglected human health problems (e.g., mental health diseases, non-communicable diseases, etc.)

2.3. Dietetics and nutritional safety, security, and problems

Optimal nutrition is critical for human development, economic growth and as a stepping-stone for equity. Food and nutrition security continue to represent challenges for developing countries as maker and marker of development. This is true for Ethiopia, where malnutrition remains serious public health problem that costs the nation's annual Gross Domestic Product (GDP) up to 16.5% and 28% of all child. However, research on the impact of mothers' prenatal nutrition on their fetus and young children neurodevelopmental outcomes and postnatal health; nutrition beyond 1000 days: food hygiene and safety, diet therapy and nutrition sensitive interventions are lacking. As a result nutritional problems remain as a threat for future healthy generation as well as food safety and hygiene from environmental chemicals and microbial contamination and adulteration of foods has become an ever-increasing concern. Therefore, the dietetics and nutritional safety, security and problems and as a sub-theme has given emphasis to fill the evidence gaps and has identified the following priority research areas:-

- Prevention and management strategies for moderate acute malnutrition in infants younger than 6 months in community settings;
- Maternal, fetal & child health nutrition in the first 1000 days;
- Effective nutritional intervention programs for Pre-school macro and micro nutrition and growth/development; school feeding program
- Childhood and adolescent obesity/overweight;
- Nutrition interventional approaches for non-communicable diseases;
- Nutrition concerns in gerontology;
- Food and nutrition security (strategies for using existing community-based delivery platforms for scaling up coverage of nutrition sensitive and specific interventions);
- Policy and regulatory issues of food hygiene and safety and food adulteration; and
- Nutrition information system.

2.4. Reproductive, Maternal, Newborn, Child and Adolescent Health

Maternal, Newborn, Child and Adolescent Health is central to the agenda of Healthcare. Women and children's health remains a main concern of the Sustainable Development Goals (SDGs), as evidenced by the strong commitment to end preventable newborn, child and maternal deaths by 2030. Issues of sexual and reproductive healthcare services including family planning, information and education are unfinished. In sub-Saharan Africa countries including Ethiopia, maternal, newborn and under-five mortality are still the major concerns. In

addition, concerns of sexual, reproductive and adolescents' health including HIV/AIDS continue to be health issues. Pregnancy during the period of adolescence is associated with an excess risk of poor outcomes, including low birth weight and prematurity. Adolescents are exposed to a range of risks and suffer from a variety of illnesses including HIV/AIDS and many health behaviors adopted during adolescence have lasting impacts on health throughout their lives. However, there is scarcity of information about these problems that calls for continued effort in generating up-to-date information for relevant intervention. Therefore, this sub-theme has given potential research priorities in the following areas:-

- Adolescent health and HIV/AIDS;
- Adolescent pregnancy and birth outcomes;
- Health care uptake and reasons for seeking delayed maternal and neonatal healthcare services;
- Exclusive breastfeeding, duration of breastfeeding, and the course of weaning;
- Childhood illnesses and disorders with a particular focus on under five years;
- Substance use, Adolescents Health and Technology (Social media; Mobile, Facebook);
- Child abuse, orphans and street/homeless children;
- Unwanted pregnancy, abortion and post abortion care;
- The extent and determinant of risky sexual behavior among adolescents; and
- Reproductive health problems (Cervical Cancer and others).