

2.1. Health Promotion and Disease Prevention

Health promotion is the process of empowering people to increase control over their health and its determinants through health literacy efforts and multi-sectoral action to 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 follows a sedentary lifestyle which is more deadly than smoking; contributing a lot for emergence of non-communicable diseases (such as heart disease, diabetes and certain kinds 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 affects quality of human life. Therefore, the Health Promotion and Disease Prevention Research Sub-theme, identified the following research priority areas to study intervention strategies to prevent and control of communicable and non-communicable diseases

- Effects of housing, air pollution and LRTI (Pneumonia, TB);
- Vector and rodent infestation (Vector born disease) in residential and institutional environment;
- Investigation of disease burden, waste water irrigation in agriculture and nematode infections;
- Food-borne zoonotic diseases (zoonotic gastrointestinal disease);
- Water and health (water borne diseases);
- Water supply, Sanitation and Hygiene (WASH);
- Infection prevention (Healthcare Workers, waste handlers, patients);
- Developing waste management technologies (including wastewater treatment);
- Investigate health effects of waste (Hazardous wastes, waste and pollution);
- Work place risk factors and hazards (Occupational risk management);
- Work place health promotion (training, workplace guidelines & capacity building, good occupational practice);
- Gender and occupational health;
- HIV/AIDS in the work place;
- Physical activity and wellbeing (Weight control, rehabilitation from injury, stress management);
- Physical exercise as a mechanism to reduce risks and disease prevention for non-communicable diseases (Diabetes, hypertension, asthma);
- Physical exercise for special people (Obese, handicapped, pregnant).

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/advanced health services (curative, rehabilitative...) and health care delivery systems. However, the gaps of health service provision were identified as: poor quality of medical service, poor health seeking behavior of the community from public health facilities, low level of client 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/technologies, absence of prepayment plan to seek the service, gaps in care of patients, poor preparedness in addressing and response to emerging, re-emerging health concerns, limited intervention on mental health problems, poor investigation and response to injuries, poor health service evaluation. Therefore, Advances in Curative and Rehabilitative Health Services and Disease Management Sub-theme, identified the following research priority area to study intervention strategies that can improve health care delivery system.

- Biopharmaceutical and pharmacological aspects of Herbal medicine (Ethno botanical / ethno pharmacology assessment; Indigenous therapeutic practices;
- Identification of appropriate diagnostic technology; Drug-diagnostic Co-development;
- Assessment of therapeutic outcome; Identifying targeted drug delivery techniques;
- Enhancement of quality and efficient pharmaceutical service (Availability and affordability of essential drugs, Drug utilization pattern and cost analysis, Drug resistance pattern, adverse drug events and poly pharmacy and Rational use of medication;
- Medical care (Assessment of nursing standards, Clinical service assessment, Laboratory service quality and Disease Prognosis assessment;
- Health service readiness and availability; Quality of care and its determinants; Investigating service delivery modalities;
- Health professional development; Health worker job satisfaction level; Health workers attitude and ethics;
- Culture of information use; Trend analysis /mapping;
- Health care financing (Pre-payment plan / health insurance);
- Challenges in health care (Leadership skills, Technologies and Implication of health transition on health system;
- Service delivering methods and approaches for emerging but neglected human health problems (Mental health; Non communicable diseases /NCDs; Injuries and other emerging issues of public health important (Ebola, SARS, Zika, Hanta virus etc.).

2.3. Nutrition, Food Safety and Security, Dietetics and Nutritional Problems

Optimal nutrition is critical for human development, economic growth and for being 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 annual Gross Domestic Product (GDP) of 16.5% and 28% of all child. However, research on the impact of mothers' prenatal nutrition on their foetus 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

Theme II- 2016/17 Call-Human Health, Nutrition, and Welfare

adulteration of foods has become an ever-increasing concern. Therefore, nutrition, food safety and security, dietetics and nutritional problems sub-themes prioritized the following research areas that fill evidence gaps in the area.

- Maternal, fetal & child health nutrition in the first 1000 days;
- Prevention and management strategies for moderate acute malnutrition in infants younger than 6 months in community settings;
- Drivers of appropriate breastfeeding habits and transforming post-breastfeeding practices;
- Design effective nutritional intervention programs for Pre-school macro and micro nutrition and growth/development;
- 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 through demand creation and household service delivery, emphasizing on social protection programs, school feeding program, school curricula and agriculture and nutrition linkage);
- Policy and regulatory issues of food hygiene and safety and food adulteration;
- Effect of sewage irrigated vegetable farms on public health).
- Nutrition information system.

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

Maternal, Newborn, Child and Adolescent Health is central to the agenda of Health Care. 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 health-care services including family planning, information and education are unfinished. In Sub-Saharan African countries including Ethiopia, maternal, newborn and under-five mortality are still the major concern. In addition, concern 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, in this sub-theme the following potential research areas are given priority.

- Adolescent pregnancy and birth outcome;
- Health care uptake and reasons for seeking delayed maternal and neonatal health care 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.