

# Research Priorities in Medical & Dental Services

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## Introduction

This document was prepared by the facts based on the Recommendations made at the Global Forum for Health Research II.

It has a 5 step approach. **(global burden of disease)**

1. The potential for disease burden reduction
2. The impact on equity
3. The likelihood of success in reaching the end point
4. The likelihood of being effective in disease burden reduction
5. Composite of three correlated dimension

Based on the Disease Burden pattern as per 2010 data (unpublished) from Indoor Morbidity and Mortality Registry, received from the Medical Statistics Unit of the Ministry of Health, following disease conditions are listed as priority research areas. Apart from that Research Priority areas given by the professional Colleges were also considered in preparation.

It was basically divided into five main topics

- Section A - General – Disease Based
- Section B - Health System Research
- Section C - Ayurvedic
- Section D - Oral Health
- Section E - Curiosity Research

## A. Research Priorities in General – Disease Based Research

### System / Disease Based

- I. Respiratory Tract Diseases
  - a. Chronic Obstructive Airway Diseases inclusive of Chronic Obstructive Pulmonary Disease and asthma
  - b. Occupational Lung Diseases
- II. Gastro Intestinal
  - a. Trends and sources of gastroenteritis
- III. Cardio Vascular system
  - a. Hypertension
  - b. Ischaemic Heart Disease
  - c. Total risk approach and use of risk prediction model on cardiovascular diseases
- IV. Endocrine system
  - a. Diabetes including Diabetes in young
  - b. Diseases related to thyroid
  - c. Other endocrine diseases
- V. Urinary system
  - a. Aetiology, Epidemiology and Pathogenesis of CKD
- VI. Nervous system
  - a. Stroke – Management and Rehabilitation
  - b. Epilepsy
- VII. Musculoskeletal system

- a. Arthritis
  - b. Osteoporosis
- VIII. Others
  - a. Malignancies

## Infections

- I. Rabies
- II. Tuberculosis
- III. Leprosy
- IV. Other respiratory infections – including Surveillance on respiratory pathogens and drug susceptibility both in community and hospital / ICU environments
- V. Dengue fever
  - a. Changing epidemiology of Dengue
  - b. Economic impact of Dengue
  - c. Vector control and bionomics
  - d. Evaluating impact of newly developed and introduced guidelines on clinical case management
  - e. Impact of media propaganda for behaviour changes (studies on KAP among different stakeholders)
  - f. Dengue management strategies
  - g. Policy studies on Dengue
  - h. Disease diagnostics – use of Dengue diagnostic in patient care
  - i. Assessment of multi – sectoral approach in DHF
- VI. Hanta virus epidemiology and emerging infections
- VII. Leptospirosis
- VIII. Leishmaniasis
  - a. Cutaneous Leishmaniasis
  - b. Identify and study the distribution of potential sand fly vector and their distribution in foci in Southern Sri Lanka – Vector bionomics and identifying reservoirs of phlebotomous - Sand Fly (vector of Leishmaniasis)

## Condition Based/related

- I. Pregnancy related
  - a. Complications (antenatal, intra-natal & postnatal, abortions)
  - b. Medical diseases
- II. Malnutrition
  - a. Monitoring and evaluation of micronutrient and nutrition interventions in Sri Lanka
  - b. Dietary studies to identify the deficiencies and excess at household levels
  - c. Trends in nutritional status and micronutrient situation in Sri Lanka
  - d. Nutrition interventions
  - e. Under nutrition and micronutrient deficiency
  - f. Qualitative studies on IYCF
  - g. Prevalence studies on nutritional problems in different age groups/sector/districts/ethnic groups
- III. Injuries and fractures
  - a. Intentional
    - i. Suicide
    - ii. Others
  - b. Unintentional
    - i. Road Traffic Accidents
    - ii. Fall
    - iii. Drowning

- iv. Home Accidents
- v. Sports and School Accidents
- vi. Occupational

## **Environmental and Occupational Health**

- I. Occupational health and safety
- II. Environmental health
- III. Environmental and health impacts due to hazardous industries
- IV. Health Effects of food additives
- V. Solid waste and the impact on health
- VI. Indoor and outdoor air quality
- VII. Safe drinking water

## **Rheumatoid Diseases**

- I. Bone Diseases
- II. Fractures
- III. Osteoporosis

## **Health Related Behavioural Issues**

- I. Smoking Prevention – Research to develop messages effective in overcoming misinformation spread by tobacco companies, building and strengthening social norms against tobacco, and building support for tobacco control policies and programmers
- II. Alcohol – Prevention of alcohol
- III. Behavioral disorders among children
- IV. To design and validate models for enabling NCD patients to become self- reliant in monitoring and management protocol
- V. Chelation treatment in Thalassaemia and Genetic counseling

## **Toxicology and Toxinology**

- I. Poisoning
- II. Snake Bite

## **B. Research Priorities in Health Systems Research**

- I. Health system
  - a. Strengthening service delivery
  - b. Health Workforce – including establishment of norms for all categories of staff
  - c. Access to Medicine and technologies
  - d. Strengthening governance, leadership and accountability
- II. Research in Primary Care
- III. Health economics, financing of health services, costing and universal health coverage
- IV. Issues of successful aging and management of elderly care
  - a. Assessment of Disease burden – Trends in morbidity and mortality
- V. Equity in provision of health services
- VI. Social Determinants of Health
- VII. Quality and safety in health care service provision and Clinical governance
- VIII. Health Information Systems – Quality of existing health information systems, e-Health, electronic medical records system, personal health record system, decision support systems

### **C. Research Priorities in Ayurveda and Alternative Medicine**

- Effect of medicinal plants/drugs/treatment plans for dementia and geriatric cognitive disorders (including Alzheimer's disease)
- Effect of medicinal plants/drugs/treatment plans in stroke/paralysis management
- Effect of medicinal plants/drugs/treatment plans for cancer
- Effect of medicinal plants/drugs/treatment plans for life style disorders (including diabetes, obesity & high blood pressure)
- Effect of medicinal plants/drugs/treatments plans for heart disease
- Effect of medicinal plants/drugs/treatment plans for HIV curing
- Antifungal, antibacterial& antiviral effect on medicinal plants
- Effect of medical plants/drugs/treatments plans for joint and bone disorders osteoarthritis, osteoporosis, rheumatoid arthritis
- Effect of medical plants/drugs/treatment plans for CKD
- Effect of medicinal plants/ remedies/ treatment plans for Dengue fever
- Effect of medicinal plants/remedies/ treatment plans for gynecology& obstetrics disorders including fibroids, polycystic ovarian disease, and male factor for infertility
- Effect of medicinal plants/remedies/treatment plans for childhood disorders
- Duchene muscular dystrophy and other muscular dystrophies and other childhood neuromuscular disorders, cerebral palsy and attention deficit hyperactivity disorders
- Quality control and standardization of herbal products (including develop good manufacturing practice (GMP))
- Develop mosquito control herbal products
- m-Develop integrated therapies with other conventional medical system
- Develop accepted ethical research methodologies in traditional based patterns
- Develop biopiracy system to protect indigenous knowledge
- Reverse pharmacological approach to develop new phytomedicinal patent drugs
- Develop herbal products as Functional foods and nutraceuticals
- Develop drugs from oceans reef habitats
- Develop Ayurveda teaching package for school children and teachers Develop ethical experimental and clinical studies for export/ import drugs

### **D. Research Priorities in Oral Health**

1. Oral Health Services
  - a. Effectiveness of school Dental Health Service
  - b. Effectiveness of community dental services
  - c. New interventions to improve quality of dental service
  - d. Development of an information system an oral health services
  - e. Knowledge attitude and practices (KAP) studies – on primary healthcare staff
  - f. Quality of oral healthcare
  - g. Work studies for manpower planning
  - h. Development of a referral system
  - i. Factors associated with creating long waiting list and long waiting hours in curative clinic
  - j. Patient satisfaction surveys

2. Early childhood Caries
  - a. Epidemiology of early childhood caries
  - b. Identification tools of early childhood caries
  - c. Dental fear place of use of counseling
  - d. Development and effectiveness of prevention/ treatment interventions
3. Craniofacial anomalies
  - a. Epidemiology of craniofacial anomalies
  - b. Genetics in craniofacial anomalies
  - c. Impact of craniofacial anomalies at individual and society level
  - d. Treatment modalities/ protocols in the management of craniofacial anomalies
4. Dental and Maxillo-facial Trauma
  - a. Epidemiology of dental and maxillofacial trauma
  - b. Treatment modalities in the management of dental and maxillofacial trauma
  - c. Outcome of treatment for dental and maxillofacial trauma
  - d. Post-surgical impact and quality of life
  - e. Timing of surgeries for dental and maxillofacial trauma surgeries and associated factors
5. Oral Cancer and potentially malignant Disorders (PMDs)
  - a. Epidemiology of oral cancer and potentially malignant disorders
  - b. Genetic involvement as a predisposing factors in oral cancer
  - c. Development of diagnostic tools for oral cancer and potentially malignant disorders
  - d. Protocols/ new applications in the management and prevention of oral cancer and potentially malignant disorders
  - e. Geographic information system (GIS) in mapping oral and potentially malignant disorders
  - f. Assessment of quality of life of patients with oral cancer or potentially malignancy disorders
  - g. Prevalence of oral cancers associated with Human papilloma Virus
  - h. Prevalence of oral sub mucus fibrosis (OSMF) among special group of the population
  - i. Interventional studies related to tobacco acts and regulation
  - j. Studies on oral cancer and smoking as a risk factor
6. Dental Fluorosis
  - a. Epidemiology of dental fluorosis
  - b. Dental Fluorosis and its psychological impact an daily life
  - c. Sustainability of the treatment modalities
  - d. Cost Effectiveness of the treatment modalities
7. Dental malocclusions
  - a. Need and demand for orthodontic treatments
  - b. Satisfaction with orthodontic treatment
  - c. Pain in orthodontic practice
  - d. Stability of orthodontic treatment
  - e. Primary prevention of malocclusions
  - f. Developing indices for orthodontic
  - g. Orthodontic malpractice
8. Market Research
  - a. Prevalence of Dental sensitivity/associated factors and use of desensitizing toothpaste
  - b. Costing studies an dental treatments

## E. Curiosity Research