



MINISTRY OF HEALTH  
REPUBLIC OF MALDIVES



# MALDIVES HEALTH RESEARCH BULLETIN

VOLUME IV



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# FOREWORD

**T**he Ministry of Health had previously published 3 volumes of the Maldives Health Research Bulletin based on research conducted by Maldivian researchers and those related to Maldives. Other objectives of publishing a health research bulletin include (1) to create a common platform in which health students, health researchers and those who are interested to pursue health research can gain easy access to health research materials relevant to Maldivian context, (2) to provide technical support to health students, health researchers and those who are interested in Maldivian health research by providing information related to priority areas and (3) to ensure that research is conducted in line with national health research priority areas in accordance with legislation of Maldives, health research policy and international best practice standards . This fourth volume of the Maldives Health Research Bulletin includes seven abstracts of Health research conducted in Maldives along with information about ongoing research, National Health Research Policy for Maldives and the recent health research priorities list updated in 2017. Ongoing and planned research studies will facilitate to develop, monitor and evaluate policies and programs in the field of health. The Ministry of Health would also like to acknowledge the contributions from the policy team, Research Bulletin development team of Health Information Research Section of Policy Planning and International Health, Ministry of Health. Additionally, the Ministry of Health highly appreciates and acknowledges the efforts of health researchers including those researchers who have contributed to this bulletin. It is hoped that these researches would further strengthen the health sector of Maldives and would contribute to evidenced based policy formulation to strengthen health interventions in the health sector.

Abdulla Nazim Ibrahim

Minister of Health

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## A STUDY ON EXPLORATION OF THE REASONS WHY TRADITIONAL CHINESE MEDICINE (TCM) IS USED IN MALDIVES

Author: Aishath Ibrahim, Maldives National University, Male', Maldives  
 Research Duration: 3rd February 2015 - 26th March 2016

### Objectives

The study Objective is to develop a framework to provide knowledge-based information on why patients use Alternative medicine (AM). To understand why patients, use TCM from Chinese Health Care Facilities (CHCFs).

### Rationale and Justification

WHO Traditional Medicine Policy 2014-2023, states that Traditional Medicine (TM) and Alternative Medicine (AM) is an important and often underestimated part of health system and encourages to integrate TM and AM into health system through health policy. For a health policy, knowledge based information is required and WHO Traditional Medicine Policy 2014-2023 has proposed questions. Among these questions, questions that are relevant to Maldivian context are taken as research questions in this study as for the reasons why Traditional Chinese Medicine (TCM) is used in Maldives.

### Methodology

This is an empirical study that will use deductive reasoning for exploration. Focus group discussion and individual interviews was used for patients, aged 18 and above, from

Natural Care Clinic and Chinese Health Care. A thematic, descriptive approach was applied to analyze the data.

### Results/Findings of the Research

The motivating factors for patients to use TCM are effectiveness of TCM, the inefficiency of CM (Conventional Medicine) and other forms of health care (AM, 'Dhivehi Beys'), TCM remaining as an option when there is no cure for their illnesses, increasing dissatisfaction with current health care services, comprehensive patients care, patients' belief that TCM have no side effects and CM not being ideal. TCM and CHCFs (Chinese Health Care Facilities) are mostly recommended by friends and family. Patients are using TCM when they have chronic and acute conditions and other minor ailments. Out of 23 patients 7 patients are using TCM along with CM. TCM is taken as a complementary to CM to restore health. They believe it could be beneficial and experienced that it is safe to use, which is a concerning discovery that relevant government sectors or authorities must take notice of. Patients should also inform their use of both types of medical care to Chinese health care provider and conventional health care professional. The rest of the 16 patients took only TCM. Just like the motivating factors, reasons for only taking TCM were its effectiveness, no side effects and use of herbal medicines.

## SCHOOL HEALTH SURVEY 2016 (MALDIVES)

Author: Maldives National Defense Force (MNDF), Male', Maldives  
Research Duration: 29th February 2016 - 04th May 2016

### Objectives

- Identify the prevalence of various morbid conditions among grade one students in the Maldives.
- To refer and treat students with identified health conditions for further management in Maldives.
- To deliver first hand health education to the parents in Maldives.
- To establish a base of health statistics to formulate future health policies in Maldives

### Rationale and Justification

Health related problems, if not detected and treated, can limit the ability of a child to learn. A combined survey would provide a national baseline and point out variation amongst schools and regions. As health issues, which could complicate adulthood, should be identified and tackled during childhood it makes sense to conduct a school health survey at primary grade one level.

### Methodology

All the students currently studying in grade one of Maldives is eligible for the survey. Face to face interview and clinical examination was carried out in a clinical setup at schools and health centers/hospitals. For the process of data collection, every student has to undergo several stages; relevant history, height and weight check, oral hygiene check, visual acuity check, hearing check, physical examination and contact with a physician or a Primary Health Care Officer. A reliable

parent/ guardian was requested to attend for clarification of child related health history.

The information obtained from these three stages were gathered into the health record sheet. This year an interventional arm was included in the survey design. In Male', the referred students were given appointments from "Senahiya" to see respective doctors. In atolls appointments were given for consultants at atoll health centers/ atoll hospitals

### Results/Findings of the Research

The survey undertook the samples from 210 schools in Maldives (18 schools of greater Male' and 192 schools of atolls) with a student population of 7844, of which 91.93% (6884) students were available for screening.

Gender distribution is 49.33% (3396) female students and 50.67% (3488) male students. Mean age is 6.09 years with SD  $\pm$  0.36. Whereas maximum age is 12 years 8 months and minimum age is 4 years 11 months. Mean height of the screened students is 117.19 cm with SD  $\pm$  5.75, maximum height is 150 cm and minimum height is 93.7cm. Mean weight of the screened students are 21.19 kg with SD  $\pm$  5.21, whereas the minimum weight is 10.10 kg and maximum weight is 60.3 kg. Mean BMI of the screened students are 15.28kg/cm<sup>2</sup> with SD  $\pm$  2.79, maximum BMI is 43 kg/cm<sup>2</sup> and minimum BMI is 8.5 kg/cm<sup>2</sup>. Body Mass Index (BMI) among the screened children shows 62.33% (4272) of the student overweight and obese students made up the remainder with 10.97%

(752) and 10.33% (708) respectively. The leading problem noticed in this survey was poor oral health (38.1% (2620)). There is a high number of visual acuity problem observed, accounting to 16.4 % (881) among all screened students. Out of these 881 children, 45.3% (399) of the cases were newly identified during the health screening program. Most importantly, male students (62.1%) outnumber females (37.9%) in all disease conditions. Furthermore, a high prevalence of smoking tobacco among parents (45.7% (2953)) were observed. 38.6 % (2499) of the parents smoke at home, while 2% (129) of the parent's smoke near the child. Some parents (5% (325)) prefer smoking away from their children. 3460 (50.3%) out of 6884 students were identified of having pre-existing medical conditions and referred to specialists for further care and management. Most of the referred students were having dental conditions which comprises of 39.1% of the total referrals.

### Implications

The data collected in this survey includes useful information which was processed, analyzed and a broader picture of the general health of the screened population. The findings obtained from this survey would be helpful in implementing strategic decisions within the educational and health sector. The schools need to adopt healthy school policies and make the schools a place for promoting health as well as education.

### Conclusion

This survey although was aimed to find out some of the existing medical problems with grade one students of Maldives, it did not divulge into the causative factors of these courses. Future studies may be undertaken to establish cause and effect which would help policy makers to target their intervention.



## FIRST RAPID ASSESSMENT OF AVOIDABLE BLINDNESS (RAAB) IN MALDIVES: SURVEY DESIGN AND PLANNING USING PEEK MRAAB SMARTPHONE DATA COLLECTION SOFTWARE

Author: Ubeydulla Thoufeeq, Yuddhasapkota, Taraprasad Das, Maharshimaitra, Lapam Panda, Asimsil, Fathimath Shabana, John Trevelyan, Male', Maldives

Research Duration: February to March 2017

### Objectives

To describe the survey design and planning of the first nationwide rapid assessment of avoidable blindness (RAAB) survey in Maldives.

### Rationale and Justification

The WHO World Health Assembly in May 2013 endorsed the Global Action Plan for universal Eye Health with target of 25 % reduction in avoidable blindness with data on base line data of 2010. As Maldives does not have base line blindness prevalence information it was felt necessary to carry out the population based survey which will give the prevalence and causes/ of blindness, impact and quality of present eye care services and coverage of eye care services in the rural population. These information's are crucial for the planning of eye care services in Maldives.

Design and planning of Rapid Assessment of Avoidable Blindness Surveys have used PEEK mRAAB smart phone data collection software effectively in many countries.

As RAAB survey was being conducted in Maldives, it was possible to use the software as compared to manual data collection.

### Methodology

The latest population and household data were used to create 768 study clusters, with population of 325 to 500 per cluster, covering 341,848 people in 20 atolls and capital Male'. The sample size was calculated with the assumed prevalence of blindness at 4.2% among people

aged 50 years and above with 20 % tolerable error, 95 % confidence interval, and 90% response rate. After adjusting the design effect of 1.5 for cluster sampling of 50 people, the sample size was 3,061 in 62 clusters in 20 atolls including capital Male'.

The team was trained in the survey methodology and inter observer variation was measured. A pilot study was done to enrolling and examining eligible participants in a door-to door visit using RAAB5 protocol and the PEEK android smart phone version 1.24.

### Results/ findings of the research

The un-weighted Kappa agreement were 0.78 (right eye) and 0.79 (left eye) for presenting vision; 0.76 (right eye) and 0.74 (left eye) for best corrected vision; 0.94 (right eye) and 0.82 (left eye) for lens status; and 0.67 for assigning the principal cause of visual impairment. While the smart phone based data collection was both rapid and effective, the clinical review- screen helped complete any inconsistent findings.

### Implications

Availability of accurate population and household data in Maldives coupled with good advocacy were the essential steps in effective and efficient implementation of RAAB using the modern technology for data collection.

### Conclusion

The experience gained in Maldives using PEEK mRAAB smartphone data collection software could be repeated in similar situations in other countries.

## ALPHA THALASSAEMIA: THE MALDIVIAN STORY MALDIVIAN MARRIED MEN'S PERCEPTION TOWARDS FAMILY PLANNING

Author: Zileena Zahir, Mariya Saeed, Asha Abdul Kareem, Ali Umar, Fathmath Fiureen, Mariyam Zila and Naila Firdous, Male', Maldives  
Research Duration: 9 Years

### Objectives

Determine the prevalence of  $\alpha$ -thalassemia in the Maldivian population

### Rationale and Justification

Society for Health Education (SHE) was established in 1988 and is one of the largest, most vibrant national NGOs promoting family well-being of Maldivians. SHE houses service centers for Thalassemia screening, Sexual and Reproductive Health as well as Counselling and Psychosocial support. SHE has conducted a nationwide Thalassemia awareness, prevention and screening program and established that 16.3% of the population are  $\beta$ -thalassemia carriers. However, a significant proportion (12%) of the population had unexplained microcytic hypochromic anaemia implicating  $\alpha$ -thalassemia. The  $\alpha$ -thalassemia is one of the most common monogenetic hereditary disorders worldwide. Currently, diagnosis of  $\alpha$ -thalassemia is achieved via molecular techniques. Molecular diagnostic techniques for thalassemia's were initiated in the Maldives to reduce the number of inconclusive cases in the population.

### Methodology

Analysis for  $\alpha$ -thalassemia gene mutations were carried out using Multiplex GAP polymerase chain reaction (PCR) for three common  $\alpha$ -gene deletions ( $-\alpha(3.7)$ ,  $-\alpha(4.2)$ , and  $-\alpha(\text{SEA})$ ) and for  $-\alpha(\text{Fil})$ ,  $-\alpha(\text{Med})$  and  $-\alpha(\text{Thai})$  mutations in certain instances. Results of 7253 individuals referred to our genetics laboratory between the years 2005 and 2014 were evaluated. Also 529 cases of known  $\beta$ -thalassemia carriers were analyzed for co-inheritance of  $\alpha$ -thalassemia.

### Results/Findings of the research

Most common gene abnormality observed was  $\alpha\alpha/\alpha^{3.7}$  (49.1%), followed by  $\alpha^{3.7}/\alpha^{3.7}$  (18.8%),  $\alpha\alpha/\alpha^{4.2}$  (1.2%),  $\alpha^{3.7}/\alpha^{4.2}$  (0.4%) and  $\alpha^{4.2}/\alpha^{4.2}$  (0.1%). Thus  $\alpha$ -thalassemia carriers accounted for 69.6% of the total cases analyzed.

Conversely, 27.9% of the referral cases did not have any of the mutations ( $-3.7$ ,  $-4.2$  or  $-\text{SEA}$ ). There were 6 suggestive cases of HbH disease where Hb Bart's peak was observed with HPLC, together with HbH inclusions detected with brilliant cresyl blue stain, although only  $\alpha^{3.7}/\alpha^{3.7}$  mutations were observed.

Additionally, 2.5% of the cases did not have any of the mutations while they had abnormally low red cell parameters. Furthermore, 40.6% of  $\beta$ -thalassemia carriers had co-inherited  $\alpha$ -thalassemia mutations.

### Implications

Our findings suggest that  $\alpha$ -thalassemia (namely,  $-\alpha(3.7)$  single gene deletion) is highly prevalent in the population. Results are suggestive of the possible presence of undetected  $\alpha$ -thalassaemia mutations in the population. It is essential to expand our molecular facility to enable diagnosis of a wider range of alpha mutations, particularly  $\alpha$ -thalassaemia mutations. Furthermore, the relatively high prevalence of co-inherited  $\alpha$ -thalassemia among  $\beta$ -thalassemia carriers indicates the importance of molecular analysis to diagnose double heterozygous cases.

### Conclusion

Molecular techniques have helped to conclusively diagnose the thalassemia status of cases that were inconclusive via hematological studies alone, the number of inconclusive cases in the population has been reduced significantly from 12% to 2.4%. Our studies confirmed that the Maldivian population has one of the world's highest thalassemia carrier prevalence

in the world. Hence, confirmatory diagnoses for thalassemia for people over 18 years of age have been established as an

integral part of the public health thalassemia prevention program in the country.

### **MALDIVIAN MARRIED MEN'S PERCEPTION TOWARDS FAMILY PLANNING: A QUALITATIVE STUDY OF MEN VISITING REPRODUCTIVE HEALTH CENTER (RHC), INDIRA GANDHI MEMORIAL HOSPITAL (IGMH)**

Author: Humaira Jamal, Male', Maldives

Research Duration: 1 Year 6 Months

#### Objectives

Male involvement in family planning and support from men can improve family planning use and its continuation. Yet, in countries with high unmet need for family planning, men have often been regarded as unsupportive of their wives' use of family planning methods. This study examines Maldivian married men's perceptions towards family planning and their role in making family planning decisions.

#### Methodology

A qualitative descriptive phenomenological study was conducted in 2016 in the Reproductive Health Center (RHC) of Indira Gandhi Memorial Hospital (IGMH). In-depth interviews were done for purposively selected seven men aged 18-40 years. Semi-structured open-ended questionnaire was used to explore men's perceptions towards family planning and their experiences of their wives using a family planning method and how it impacts in reproductive health. All interviews were recorded, translated, and transcribed verbatim. Transcripts were coded and analyzed using Colaizzi's (1978) phenomenological method of data analysis.

#### Implications

Engage the private sector more in family planning service provision and promotion activities. The present family planning services provided in the country needs to be rebranded and modified with the new innovations which come in existence with evidence based practice worldwide. Family planning information needs to be started and continuous ongoing education programs need to be implemented for young men starting from high schools and onwards. A reproductive health component need to be incorporated in high school curriculums to make young men aware of reproductive health needs, to make them aware of when they grow up as an adult and start a life.

Ongoing programs from radios and televisions need to be restarted to make the reproductive health age group aware of how to live a healthy life.

#### Conclusion

Making family planning decision is the shared responsibility of both men and women. Effective developments to initiate involvement in family planning programs need to be strengthened. Factors preventing men for active participation in family planning and reproductive health should be addressed by the program planners.

## KNOWLEDGE, ATTITUDE, AND PRACTICE OF STANDARD AND TRANSMISSION-BASED PRECAUTIONS IN TERTIARY AND SECONDARY HEALTH CARE SETTINGS OF MALDIVES

Author: Nazeera Najeeb, Male', Maldives

Research Duration: 18th February 2008 - 20th March 2008

### Objectives

The aim of this study was to assess the level of knowledge, attitude, and practice of standard and transmission-based precautions among doctors and nurses working in tertiary and secondary health care settings of Maldives. Specific Objectives include (1) to find out the association of knowledge, attitude, and practice of standard and transmission –based precautions among doctors and nurses in tertiary and secondary health care settings of Maldives, (2) To study the relationship of standard and transmission –based precautions and factors; age, sex, education, years of work experience, working area (department), and training on infection control practices.

### Rationale and Justification

Compliance with infection control is a worldwide concern. Consequences of poor infection and prevention control lead from disabilities to deaths. In the Maldives health care associated Infection was unknown as such studies were scarce in the country. Likewise, no studies were available regarding the level of compliance on infection control practice adhered to by health care providers. According to the Ministry of Health (MoH) (2006), 1% of health care facilities adopted universal precaution thus the target was to achieve 85% by 2010 and above 95% by 2015. Assessing compliance with infection control measures in any health care setting is vital. Regular updating and strengthening of infection control practices also should be one of the priority functions of any facility where health services are rendered.

### Methodology

This was a cross sectional survey conducted in three different hospitals. Three health care facilities were selected with cluster sampling followed by stratified random sampling. Doctors and nurses from Male' (IGMH & ADK Hospital) and in one of the secondary health care facility (Thinadhoo Regional Hospital) were included. A pilot study was conducted in Hithadhoo Regional Hospital to test the reliability of the questionnaire. Sample size was calculated by using Yame formula and sample was calculated proportionately from each hospital. Required sample size was 330. Ethical Approval was obtained from National Health Research Committee of Maldives.

A self-administered anonymous questionnaire was distributed to 330 participants and the response rate was 84.2%. A total of 70 doctors and 124 nurses responded. Additionally, each hospital was observed for compliance of standard and transmission-based precaution for consecutive 3 days prior to administration of the questionnaire.

### Results/Findings of the research

The total number of respondents were 294 comprising of 70 doctors and 224 nurses. Among respondents 75.0% doctors were male and 95.8% of nurses were female. The majority of the respondents were married. Participants 44.9 (36.2% doctors and 47.5% nurses) reported that they did not attend any form of infection prevention and control training control program. The analysis of correlation between 'attitude' and 'practice' discovered a direct scientific association at the level of 0.01( $r=.412$ ). No correlation between knowledge and practice was found ( $r= -.001$ ), however the relationship tends to be negative. A marginally significant association was found

in training precaution practices with a p value of 0.92. The only socio-demographic factor which showed significant association was marital status with a p value of 0.02. This indicates that those who were single had better compliance than married people.

Based on the inferences of standard and transmission based precaution was not optimum in the three hospitals surveyed. The level of knowledge was in the 'low' category, attitude was 'neutral to negative' and practice was 'moderate to high'.

More focus to infection control measures was observed at IGMH in terms of availability of resources with introduction of 'Patient Safety Program'. However, all the three hospitals need improvement in terms of implementing standard and transmission based precaution in these facilities.

### Implications

Existing policies should be strengthened to improve standard of infection control measures adhered by all staff. Establishment of a regular auditing program for nosocomial infections should be considered as this is a vital element of any health facility rendering health care services. There could be several factors within hospital premises that may influence infection control practices adhered to in a particular set up. Thus, in-depth studies will help to learn other associated factors.

### Conclusion

This survey reveals that standard and transmission based precautions were only partially followed in the three hospitals surveyed. Activities from development of policies to staff education and motivation are required to implement and sustain standard and transmission-based precautions in accordance with the updated guidelines.

## KNOWLEDGE, ATTITUDE, AND PRACTICE OF FOLIC ACID / FOLATE CONSUMPTION AMONG PRIMIGRAVID WOMEN ATTENDING RHC/IGMH

Author: Aminath Nahooda and Zeena Qasim Abdul Qayyoom, Male', Maldives  
 Research Duration: 18th February 2008 – 20th March 2008

### Objectives

The purpose of this research was to identify the knowledge, attitude and practice of Maldivian primigravids (first time pregnant women) with regard to the usage of daily folic acid supplementation during the preconception period and early stage of pregnancy.

### Rationale and Justification

Research indicates that neural tube defects (NTDs) of the fetuses can only be prevented if folic acid is taken at least one month prior to pregnancy and continued during the first 3 months of pregnancy, as the neural tube closes by 28 days after conception (Derbyshire, 2012; McNulty et al, 2011). NTDs are among the most commonly occurring congenital malformations, affecting about 250,000 pregnancies worldwide contributing towards child mortality rate (Hage, et al., 2012). In the absence of any research done in the Maldives regarding folic acid consumption, the knowledge, attitude and practices of Maldivian primigravids the subsequent consequences remain unknown. Additionally, the practice of seeking antenatal care and undergoing delivery in other countries, renders it difficult to maintain national statistics of pregnancies ending in NTDs.

Therefore, a KAP study can reveal what Maldivian primigravid women know about folic acid/folate, their attitude towards consumption of folic acid, and their practice of folic acid intake during pre-conception period and early pregnancy.

### Methodology

The research was undertaken as a cross-sectional, quantitative, descriptive correlational study with the Health Belief Model (HBM) as the theoretical framework. Using Yamane formula (1967) with the level of precision set at 0.05, 185 Maldivian primigravid women who attended the Reproductive Health Center (RHC) of Indira Gandhi Memorial Hospital (IGMH) were randomly selected. IGMH being the only government tertiary level hospital in the Maldives, a large percentage of all pregnant women seeks service from the RHC of IGMH.

A tested questionnaire was adapted and translated for the study, and was pilot tested for further validation. Collected data consisted of knowledge of folic acid/folate, the attitude towards folic acid supplementation and the practice of folic acid consumption during the pre-conceptual period and early pregnancy. Data was analyzed using the Statistical Package for the Social Sciences (SPSS, version 17.0).

### Results/Findings of the research

The mean age of the participants was found to be 24 years, which is similar to the findings of the Census of the year 2014, which showed that the mean age at first pregnancy is 21 years for the Maldives and 22 years for the capital city Male'. Although 95.1% of the women had heard of folic acid, only 21.1% were aware of what folate is. Almost half of the participants (49.7%) did not know which food were good sources of folate/folic acid. Overall, the knowledge score of 74.6% of the studied population was found to be very poor, with only 5.9% of the surveyed population being well-informed about folic acid/ folate.

The overall attitude scores indicated that most participants had a negative attitude towards taking folic acid/ folate supplementation during pre-conception period and early pregnancy, with 13.5% of the women stating that having a birth defect is not a serious condition. Negative attitudes were identified from results such as 25.3% stating that an occasional reminder (like a text message) and 31.9% of the participants stating that a friend or someone they knew reminding them to take folate high food, will not help them intake more food which are high in folate.

Results of questions based about practices showed that even when 48.6% of the surveyed women had received advice to take folic acid prior to them getting pregnant, only 18.7% of the women had taken folic acid supplementation at least one month before getting pregnant. A huge percentage of the surveyed women (68.6%) had started taking folic acid supplementation only after their pregnancies had been confirmed (at 4 weeks of pregnancy and later).

### Implications

The poor knowledge score highlights the importance of creating awareness in the general population of the Maldives with a special emphasis on the women of the reproductive age group about folic acid consumption, sources of folic acid/ folate and consequences of taking an inadequate amount (less than 400mcg) of folic acid/folate daily. As indicated by the HBM, improved awareness may also help to overcome the negative attitudes and poor practices prevalent in the population regarding folic acid/folate consumption during pre-conception period and early pregnancy. In addition to identifying the knowledge, attitude and practice of Maldivian primigravid women regarding folic acid consumption, the research can act as a situation analysis of the Maldives. It can be further taken as an indication that the activities carried out to create awareness of the importance of folic acid consumption needs to be strengthened. It can also be helpful in implementing the strategic framework developed by World Health Organization (WHO) to tackle the issue of slow

reduction of under-five mortality rate in South-East Asia region.

### Conclusion

Folic acid/folate intake at least one month prior to pregnancy and through early pregnancy is proven to have beneficial effects in preventing neural tube defects. However, the findings of this research showed a high percentage of pregnant women started folic acid supplementation only after the closure of the neural tube of the fetus. It also brings to focus the negative attitudes and poor practices of Maldivian primigravid women. Therefore, it can be concluded that a lot of effort and awareness programmes need to be implemented to improve prenatal care and increase need to be implemented to improve prenatal care and increase folic acid consumption among primigravid women of Maldives. As the Maldivian population is hugely dispersed a more comprehensive study focusing on hospitals and private clinics across the nation will help strengthen the current evidence. These findings may help in the development of customized interventions and strategic framework that will help Maldives successfully improve maternal and neonatal health outcomes.

# NATIONAL HEALTH RESEARCH POLICY

## Preamble

“Whatever the level of development of its health research system, every country will benefit from having a strong health research policy. A well-designed health policy framework is an enabler and a driver for the national health research effort to have a positive impact on national development. – whether in health, health services performance, health equity, or for more general social and economic development.”

- *Andrew Kennedy and Carell Jssel muiden*

Maldives is in transition where transformations are observed at macro, meso and micro levels. At the macro level, transitions are seen in governance, economic, demographic and social aspects of its population. Meso level changes in health sector include the increasing chronic diseases due to epidemiological transition and health system financing. At the micro-level, transitions are occurring at the household and individual levels in family structures, living arrangements and individual behaviors and lifestyles. All these have implications for health of Maldivian population.

Health of Maldivian population has improved significantly as seen by increasing life expectancy, reductions in fertility and mortality rates, and remarkable achievement of Millennium Development Goals. Notable achievements have been made in the control of many of the communicable disease with the country being certified Malaria and Filaria Free and is moving towards the regional elimination of leprosy target. Vaccine preventable diseases have also been controlled to such an extent that diseases like polio, neonatal tetanus, pertussis and diphtheria are non-existent. However, newer challenges are emerging. These include reemergence of tuberculosis, within country spread of HIV, increase in vector borne diseases like dengue and zoonoses. Non-communicable diseases are perhaps the biggest threat to the country due to increasing life expectancy, globalization and changing lifestyles (Health Master Plan, 2016 – 2025).

Addressing these national health priorities needs robust scientific evidence. The ultimate objective of health research is to improve health outcomes and this means that the generation of knowledge alone is not sufficient: it must be harnessed to inform policy and practice. Unfortunately, till now Maldives has not invested sufficiently in health research; but there is an increasing recognition of the importance of health research for Maldives to improve the health of its population.

The development of a National Health Research Policy is the first step in that direction and aims to maximize the benefits that can be achieved from health research. This national health research policy is relevant to all those who host, conduct, participate in, fund and manage health research in Maldives. This policy has been developed following a broad consultative process and has been facilitated by World Health Organization.



## 1. Need and Scope of the Policy

“Research” is defined as the development of knowledge with the aim of understanding health challenges and mounting an improved response to them. This definition covers the full spectrum of research, which spans the following five generic areas of activity:

- measuring the magnitude and distribution of the health problem;
- understanding the diverse causes or the determinants of the problem -biological, behavioral, social or environmental factors;
- developing solutions or interventions that will help to prevent or mitigate the problem;
- implementing or delivering solutions through policies and programmes;
- evaluating the impact of these solutions on the level and distribution of the problem.

Health research has not been considered a priority in the health plans of most countries and investment in the sector is generally lower than it should be. Globally, health sector faces serious resource crunch, and it is critical that in such a situation, health policies and practices are informed by sound evidence. Despite great disparities between countries, they share similar health problems that need to be researched for effective redressal. These would include increasing incidence of chronic non-communicable diseases, safe reproductive and child health practices and global threats to health security. In addition, protection of intellectual property, reduction in health inequities is an issue of relevance to all countries. Research has played a central part in improving health and health care over the centuries resulting in unprecedented longevity of human beings. In the past few decades, the growth in new technologies and the generation of new knowledge in medical sciences is unsurpassed. At the same time, however, and in stark contrast, millions of people lack access to the most basic medical technologies. In most countries, research is done in an ‘ad hoc’ manner with researchers operating in isolation rather than working towards addressing common national priorities. Health research is often conducted with little coordination or consultation with the users of findings who are tasked with improving the health of the populations.

A health research policy framework provides the formal platform to define the goals of the national research effort and to identify the structures and means of achieving such goals. It facilitates regulation of the establishment of research councils, strategic plans for increasing capacity, for ethics review committees, for communication of research results, and for international liaison. A good policy framework defines the type of original research that is needed to address nationally relevant priorities in relation to ‘translation’ of research done elsewhere. It also locates ‘research for health’ as a national endeavor, bridging the traditional divisions between health and other sectors. The policy framework is an enabler as well as a driver for the national health research effort to maximize potential towards national development.

Robust and vibrant national health research systems in all countries are critical for accelerating the achievement of national and global health goals, namely better health, improved health equity, and fairer, safer and more efficient health systems. There has long been an understanding of the basic prerequisites for health research systems, namely

clear national research policy, leadership, adequate financing, priority-setting mechanisms, well-equipped research institutions with capable research workforce, strong regulatory frameworks and structures including ethical oversight, and effective information systems and dissemination plans.

## 2. Situational Analysis

The Health Master Plan 2016-2025 of Maldives has three strategic areas – Governance, Public health protection and Health care delivery. Health research finds mention in the strategic focus area of Health Care Delivery under section 3.3 - Enable timely surveillance of diseases, births, deaths, morbidity patterns as well as social determinant of health through an integrated health information systems and research. It has three strategies listed under it.

1. Identify Research Priorities and manage research to meet information needs for programming, planning and policy
2. Strengthen research management, ethics and publication of academic literature based on research
3. Build Capacity in the area of health information management and research

Thus, it is apparent that there is a strong government commitment to promote health research in Maldives. This has resulted in many new initiatives. A research prioritization exercise was conducted recently with all stakeholders and priority areas of research were identified. These are detailed in the annexure to this document. A data release policy has been framed which allows all stakeholders to access research data generated by Government of Maldives by applying for it.

A multi-disciplinary National Health Research Committee exists, though it mainly serves as national ethics committee. A decision to convert this into a National Health Research Council (NHRC) has been taken and a detailed term of reference is worked out. As per its terms of reference all proposals of research excluding undergraduate studies need to be cleared by this committee. However, research done in undergraduate studies will be reviewed only for invasive, research affecting patient/client safety, clinical, behavioral and other research with ethical implications. All other health researches (other than undergraduate health research) shall be submitted to be reviewed by NHRC. Also, all national research with a health component should be submitted to NHRC.

Currently, there are no other governmental ethics committees in Maldives. Institutions of higher education and universities like Maldives National University (MNU) in public sector and Villa college in private sector are now fully functional and are in the process of strengthening research activities within. While Villa College has a Research Ethics Committee (it does not conform to international norms). MNU has initiated the process of setting up its Institutional Ethics Committee (IEC). Ministry of Health publishes an annual Research Bulletin which includes abstracts by Maldivian health researchers, update on ongoing and completed health researches in Maldives and health research priority areas. Multi-disciplinary journals are being published both by MNU and Islamic University of Maldives as well as Villa College which also have health related articles. No health specific journal is currently published in Maldives. Similarly, annual multi-disciplinary conferences are held with some sessions devoted to health matters. Many large-scale surveys including WHO Steps Survey, Demographic Health Surveys, and Rapid Assessment of Avoidable Blindness Survey have been carried out. Most of these are contracted out and have international partners who work

with local institutions. Thus, the country has limited local institutional and individual capacity in health sector for conducting research. Few studies have found their way into publication in a peer-reviewed journal indicating inadequate scientific writing capacity.

Health care service is provided through a large network of island and atoll hospitals with Indira Gandhi Medical Hospital (IGMH) at the apex. The role of private sector in health care is increasing including in tertiary care. IGMH has a state of the art fully automated laboratory system and collaborates with Centers for Disease Prevention and Control (CDC) for infectious disease surveillance. These can provide a good support for laboratory based research in future.

Today, advances in health research are interlinked with development of science and technology. There is no specific department to promote Science & Technology in Maldives. Maldives also has not yet assigned roles to the regulatory bodies like Maldives Food and Drug Authority to provide oversight to drug trials and regulate licensing of drugs. No drug trials have ever been carried out in Maldives, though this might be a possibility in the future.

At present funds for specific health research led by Ministry of Health are budgeted from government funds and/or supported through donor funding. MNU has funds for funding student and faculty research which are governed by their Research Grant Committee.

### Key indicators of research output from Maldives

- Health related publications in PUBMED for 2006-2017 that have Maldives in title or abstract – 94
- Number of articles published from Maldives in WHO South-east Asian Journal of Public Health – 1 out of 222 since its inception.

The panel below summarizes the key research indicators of research output from Maldives.

In conclusion, a vicious cycle of inadequate research resulting in lack of evidence based decision making and inadequate demand for evidence resulting in no research being produced exists which needs to be broken. Thus, while there is a growing interest for research among policy makers and program managers, gradual strengthening of academic institutions and research governance mechanisms, there is inadequate funding and capacity to conduct and publish health research in Maldives. Research as a career is an area that could be explored in future.

### 3. Maldives Health Research Policy (MHRP)

#### 3.1. Goal

The goal of the National Health Research Policy of Maldives is to

*“Establish an effective national health research system that promotes research culture, addresses national health priorities using highest scientific and ethical standards and is used for improving the health of the people of Maldives.”*

#### 3.2. Guiding Principles of NHRP

The National Health Research Policy of Maldives is founded on six principles that will guide achievement of the goal. The policy ensures that the research that is conducted:

- Makes highest **impact** on health of people of Maldives as they be aligned to national health priorities
- Is of high scientific **quality** and is conducted in an ethical manner which meets international scrutiny
- Is **sustainable** as it results from strengthening of local institutional and individual capacity and is based on judicious use of resources.
- Is **collaborative** between different disciplines, sectors and among internal and external stakeholders and partners.
- Occurs in an **enabling environment** that incentivizes and encourages research and researchers
- Is used for decision making by government and other stakeholders and is **translational**

#### 3.3. Objectives

The National Health Research Policy has five main objectives. These are to:

1. Establish a national health research agenda, which is updated periodically, through a consultative and transparent process.
2. Ensure that the research being conducted in the country meets the highest international standards by establishing effective mechanisms for its oversight
3. Increase availability of funds for health research by mobilizing internal and external financial resources
4. Promote research by strengthening individual and institutional capacity for health research, incentivizing research and building effective partnerships.
5. Promote the use of evidence in policy and program planning and evaluation by establishing appropriate mechanisms for dissemination of research results.

## 4. Health Research Promotion Strategy

### 4.1. Setting Prioritized Agenda for Health Research

Each country has a responsibility to develop its own agenda for research to respond to the health needs important to its population within its own social, political and environmental setting. This prioritized research agenda should be based on disease burden, equity as well as social relevance. It is clear that in times of resource as well as capacity constraints, it is best that the research efforts are restricted to those which address national priorities which are reflected in national health policy or through international commitments, currently the most important being the Sustainable Development Goals. These priority research agenda need to be revisited periodically in alignment with the development of national health action plans. This should help in resource allocation as well. The process of development of the research agenda should be transparent and broadly consultative and include all stakeholders. In addition, present and emerging health challenges could be met through international collaborative research.

#### Specific strategies for health research prioritization

1. Develop and institutionalize the mechanism to lead periodic health research prioritization exercise
2. Hold periodic consultations with all stakeholders including academicians, private sector, international donors, civil society, health care providers, policy makers and program managers for research prioritization.
3. Disseminate the prioritized research agenda among all stakeholders including international partners and put it in public domain.
4. Link the prioritized research agenda to specific institutions, research partners including international collaborators and identify possible source of funding.

### 4.2. Ethics and Research Oversight

Research ethics govern the standards of conduct for scientific researchers. It is important to adhere to ethical principles to protect the dignity, rights and welfare of research participants. It is mandatory that all proposals on biomedical research involving human participants are cleared by an appropriately constituted Institutional Ethics Committee (IEC), to safeguard the welfare and the rights of the participants. The Ethics Committees are entrusted not only with the initial review of the proposed research protocols prior to initiation of the projects but also have a continuing responsibility of regular monitoring of the approved projects to oversee the compliance with the ethical principles during its implementation. The IECs should be multidisciplinary in composition, have independence in its decision making and members should have sufficient competence to judge the ethical issues. This should be in conformity with the accreditation requirements of international agencies such as Forum for Ethical Review Committees in Asia and Western Pacific (FERCAP), Strategic Initiative for the Development of Capacity for Ethical Review (SIDCER) /Alliance for Accreditation of Human Research Protection Program (AAHRPP).

Countries need to formulate their national ethical guidelines and standards for health research among human participants that is harmonized with international guidelines and is revised periodically. The standards relate to those of ethics, ethics review committees, clinical trial registrations and laboratory biosafety and biosecurity. While there has to be a national level body to oversee ethical conduct of research, Institutions conducting research should have their own institutional ethical committees formed in conformity with the national guidelines in order to hasten ethical clearances and to ensure a good screening of research proposals submitted to National Health Research Committee/Council. It is also recognized that periodical capacity building of members of Institutional Ethics Committee (IEC) as well as researchers in ethical conduct of research will be required.

### Specific Strategies for ethical oversight

1. Formulate relevant operational guidelines/standard operating procedures and establish National Health Research Council/ Bio-ethics Board to oversee ethical conduct of research in the country.
2. Formulate national guidelines and standards for ethical conduct of research in human beings, animals, and laboratory biosafety and biosecurity guidelines and oversee their implementation.
3. Periodically review operational guidelines/standard operating procedures of the National Ethics Committee/National Health Research Council and formulate national operational guidelines or standard operating procedures (SOPs) for Institutional ethical committees and periodically review their adherence by IECs.
4. Conduct capacity building activities for members of National Ethics Committee/National Health Research Council and IECs and develop reference/training manual for committee/council members.
5. Facilitate the accreditation of IECs with international agencies such as FERCAP, SIDCER etc.
6. Develop guidelines for International Collaborations including policies and protocols for transfer of biological materials and data protection.

### **4.3. Resource Generation for Research**

The political commitment for research must be translated into allocation of resources. Research must be line item in the funds allocated to health ministry. In addition, there is a need to set aside some funds for health research under health programs. Mechanisms to access international funds should be made transparent and easier with sufficient safeguards for monitoring its use. Government should consider providing tax and other incentives for researchers to participate in priority research area.

### Specific Strategies for resource generation

1. Work towards establishing a national health research fund from government budget and in a phased manner aim to allocate 2% of the government health budget for research.
2. Allocate dedicated funds for research within health programs.
3. Explore MoUs with bilateral or multilateral partners which are specific to health or health is a part of a broader MoU.

4. Establish transparent and simple procedures for accessing international funds for institutional and individual researcher along with a transparent system for monitoring of utilization of research funds.
5. Encourage Foreign Direct Investment in biotechnology, pharmaceutical, bio-medical and related technologies.
6. Work towards providing fiscal reliefs for institutions involved in health research for importing high end equipment.

### 4.4. Promote Research

Capacity for health research is defined as 'an ability of individuals, organizations, or systems to perform and utilize health research effectively, efficiently, and sustainably'. It includes the ability to conduct, synthesize, manage, share, and apply research. Increasing research output requires a three-pronged approach - development and maintenance of research capacity, incentivizing research and building partnerships between researchers and institutions. Capacity development efforts will focus on both the supply side (research methodology, research management, research communication) as well as demand side (evidence based policy development, research prioritization). A mapping exercise to identify gaps in capacity will be followed by development of a phased and realistic plan to ensure constructive and sustained capacity development. This mapping exercise will be broad and include all stakeholders including that of academia, research institutions, health service institutions, private sector. A wide array of tools for developing capacity like fellowships, training workshops, site visits, twinning arrangement between institutions are available to choose from. A critical mass of researchers is needed for building the momentum for sustained promotion of research. Laboratories are critical for all aspects of research, especially for communicable diseases and molecular studies and need to be strengthened.

It is also important to create an enabling environment for people to do research. For more people to take up research, a career in research has to be made attractive. This would include development of a research cadre with promotional avenues, special research allowance or performance based incentive for publications, provision of travel grants for international conferences and covering publication fees. Annual Awards for the best health research can be instituted nationally and selected in a transparent manner.

It is recognized that while in the long-term, efforts need to be made for Maldives to be self-sufficient in all critical areas of research. There is a strong need for international partnerships in this regard and institutional mechanisms need to be strengthened for this.

### Specific Strategy for Research promotion

#### Build Capacity

1. Conduct a situational analysis to map the capacity available and identify gaps in specific areas in different sectors and disciplines.
2. Strengthen research capacity through initiatives such as courses on research methodology and scientific writing and short-term trainings/fellowships/scholarships in identified gap areas.

3. Strengthen the existing laboratories such as in the Indira Gandhi Memorial Hospital (IGMH) with necessary infrastructure with international support and establish External Quality Assurance System (EQAS).
4. Establish Centers for Excellence /WHO Collaborating Centers in specific areas of key national research priorities as identified in the prioritization exercise (Annex).
5. Establish twinning of academic institutions with other leading academic institutions in the Region.

### Incentivize Research

1. Establish a cadre of research scientists with designated career structure and performance based incentives for research output.
2. Establish national research excellence awards for recognizing good research.
3. Strengthen Library and Information retrieval system for improving access to global published literature.

### Build partnerships

1. Identify and actively seek international collaboration for prioritized research items.
2. Encourage all internationally funded research to include a capacity development component of local researcher/institution.

### 4.5. Linking Evidence to Policy

Policy and practice should be informed by evidence generated by research. However, evidence often fails to inform policy and practice, and research often does not respond to policy needs. “Research translation” – the process by which the evidence produced by research is translated into policy, practice and product development. Improved methods are required for communicating health information and evidence to different target audiences. Barriers to be overcome include the lack of communication skills among researchers, problems of affordability and language in dissemination of research results, and copyright restrictions on the use of research data and materials.

### Specific Strategy for Linking Evidence to Policy

1. Formulate guidelines for putting all available research reports in public domain with adequate safeguards.
2. Share research data from ministry of health and other agencies from all sectors including private and non-governmental sectors with a data release document/contract between researcher and agency.
3. Establish a National Health Research and Policy Network of researchers and scientific institutions along with key national policy makers and program managers which holds annual or periodic meetings.
4. Publish health journal(s)/bulletins/policy briefs covering different aspects of health and allied sciences.
5. Build capacity of policy makers and program managers in evidence based policy development.
6. Train media and communication experts in reporting on health issues and sensitize health researchers to communicate with media.



## 5. Architecture for Implementation of NHRP

The implementation of this policy needs functional structures, two of which are critical - a nodal point in the Ministry of Health and an autonomous National Health Research Council (NHRC). These are shown in the organogram below and are described briefly below.

### 5.1. National Health Research Council (NHRC)

NHRC should be an independent body which reports directly to the Minister of Health. It has to be multi-disciplinary committee with its own secretariat and budget (including seating allowance for members). In the initial transition phase, the proposed division/department of health information and research will act as its Secretariat. It should have three roles – regulatory, facilitatory and capacity building. Some of these roles are expanded below;

#### Regulatory

- Draft national ethical research guidelines and guidelines for IEC
- Oversee institutional ethics committees to ensure that they follow national guidelines that information of research approved by IES are shared with NHRC.
- Support Accreditation/Affiliation processes with FERCAP
- Investigate research misconduct by researchers
- Review designated research proposals for example, those that have International Collaboration, are clinical Trials, are from Institutions that do not have IEC etc
- Establish Guidelines for international collaboration
- Establish a clinical trial registration system as appropriate
- Conduct audits of ongoing health research, as appropriate

#### Faciliatory

- Set Research Prioritization Exercise/ agenda
- Make recommendations for grant of funds from government budget on health research
- Manage Research excellence awards and Recognitions
- Hold annual or periodical meetings of researchers and policy makers
- Publish journals/bulletins/policy briefs for dissemination of research and research related information

#### Capacity Building

- Conduct Mapping exercise periodically to identify gap areas in health research
- Facilitate Training of IEC members
- Facilitate Annual capacity building programs on different aspects of Research in partnership with other agencies – national and international
- Build capacity in health communication and evidence based health policy development

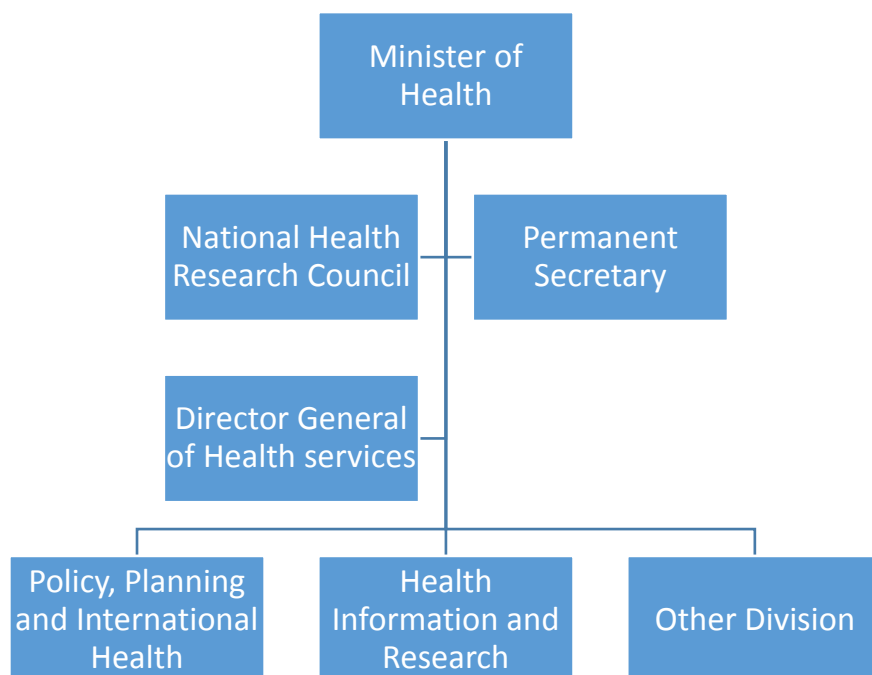


Figure 1: Proposed Health Research System

### 5.2. Health Information and Research Division/Department

The key role of this unit is to advocate for research in Maldives and co-ordinate with health programs to identify research agenda. It will also be the nodal body within the MoH to liaise with NHRC.

## 6. Monitoring and Evaluation of the NHRP

A monitoring framework for evaluation of the changes and initiatives resulting from implementation of this national health research is proposed in table 1. It lists some of the key indicators under each strategic area. NHRC should publish a report on national research capacity and activities every three to five years. The overall impact of the implementation would be in terms of increase in the number of publications in peer-reviewed journals from Maldives annually and its usage can be measured by their citation indices and their influence on policies and programs. This would need support from different partners including the WHO.

Objective	Implementation partners	Indicators for Monitoring
1. Setting Prioritized Agenda for Health Research	National Health Research Council (Primary); Ministry of Health, International partners	<ul style="list-style-type: none"> <li>• Availability of a National Priority Research agenda based on consultative process.</li> </ul>
2. Ethics and Research Oversight	National Health Research Council (primary); Institutional Ethics Committees (IECs)	<ul style="list-style-type: none"> <li>• Availability of national Guidelines for Ethics and IECs</li> <li>• Number of registered IECs</li> <li>• Number of people trained in ethical review of research</li> <li>• Number of research misconduct</li> </ul>

		reported/investigated
3. Resource generation for research	Department /Division of Health Research, MoH	<ul style="list-style-type: none"> <li>Local and International Funds generated for research</li> <li>Guidelines for international funding of research developed.</li> </ul>
4. Increase Research Output	National Health Research Council (Primary); Academic Institutions, International Partners	<ul style="list-style-type: none"> <li>Total Publications from Maldives annually</li> <li>List of international collaborations</li> <li>List of researchers awarded</li> <li>Number of people trained in different areas of research</li> </ul>
5. Linking evidence to policy	National Health Research Council (Primary); Ministry of Health	<ul style="list-style-type: none"> <li>Establishment of a national health research and policy network forum</li> </ul>

## 7. Conclusion

This policy provides an enabling framework for promoting health research in Maldives. It also identifies the outline of a national health research system which includes a prioritized research agenda, implementation architecture and a monitoring mechanism. The policy seeks to tackle the persisting gaps in the management and coordination of health research in Maldives. It hopes to create a demand for evidence in decision making, increased allocation of government spending on health research, and establishes channels for capacity building and redressing of inequities in health research.

# Health Research Priority Areas (2017-2019)

Two consultations were held in Male' with all relevant stakeholders to identify research priorities in the health sector for Maldives. The first one (26.03.2017) focused on broad areas of research and the second one (16.05.2017) focused on refining these areas into specific questions. The results of the exercise have been grouped and summarized below.

## Establishment of Burden of Disease

1. Assessment of prevalence of major NCDs – diabetes, cardiovascular diseases including stroke, chronic respiratory Disease and cancers (Breast, oral).
2. Assessment of behaviors, lifestyles and different risk factors especially obesity and their contribution to NCDs
3. Thalassemia and its impact on quality of life
4. Measurement of long-term sequelae and complications of chronic conditions (e.g.; diabetes and hypertension)
5. Measurement of burden of mental health disorders
6. Assessment quality of life in people with chronic conditions including mental health
7. Assessment of abortion situation in the Maldives
8. Prevalence of TB and emerging new incidence of TB

## Assessing Causes and Risk Factors

1. Role of dietary habits in relation to malignancy and other NCDs
2. Health impacts of pesticide overuse in agricultural areas of Maldives
3. Role of Environmental factors in development of cancer in the population
4. Understanding the determinants of physical inactivity among Maldivians and its role in obesity
5. Measurement of food consumption patterns in Maldives
6. Measurement of prevalence of i) smoking and ii) smokeless tobacco users among different age groups
7. Assessment of air quality and its effects on health

## Assessing Effectiveness of Interventions

1. Effectiveness of various interventions addressing NCD's and its risk factors (e.g.: diet and physical activity related interventions such as ban on energy drinks advertisement or setting up of outdoor exercise opportunities and/or centers)
2. Effectiveness of interventions to reduce traffic accidents in urban areas of Maldives
3. Effectiveness of interventions to improve quality of life of people with disabilities
4. Effectiveness of prevention measures of Thalassemia utilized in Maldives
5. Assessment of Anti-Microbial Resistance (AMR) situation in Maldives
6. Assessment of anti-biotic prescription and consumption patterns
7. Understanding the situation of low fertility levels with low Contraceptive Prevalence Rate (CPR)
8. Effectiveness of community interventions in dengue control

## Clinical Management

1. Identification of key challenges faced in clinical management outcome of Dengue at health care facilities.

## Health System/Operational Research

1. Identification of challenges faced by service providers in delivering quality health care
2. Review of existing practice of dealing with alleged negligence cases
3. Identification of barriers and supporting/enabling factors in referral of patients between health facilities
4. Identification of supporting/enabling factors and interventions required for joining service and retention of health care professionals (e.g.: doctors, nurses, etc.) in public sectors
5. Assessment of Maldivian health system capacity to address national disasters and emergencies
6. Measurement of quality of care in health sector of Maldives and impact of Quality Improvement Programs
7. Public satisfaction as a measure of health system performance

### Health Care Financing

1. Comprehensive evaluation of Social Health Insurance System including public expectation and satisfaction
2. Identification of mechanisms to ensure financial sustainability of health systems and Social Health Insurance System
3. Identification of appropriate models for Public Private Partnership in health sector of Maldives
4. Involvement of Private Providers and NGOs in health promotion activities

### Health Policy Issues

1. Effectiveness of existing regulatory framework in implementing current policies
2. Assessment of the level of stakeholder involvement in developing public health policies
3. Evaluation of the current public policy development process with an aim to make it more transparent and evidence based

### Social Determinants

1. Measurement of inequities in various key health parameters of Maldives (e.g.: by gender or other special/vulnerable groups)
2. Coverage of the disadvantaged/vulnerable population groups with universal coverage scheme
3. Reasons for Maldivians seeking help from National Social Protection Agency (NSPA) in addition to Aasandha
4. Migrant health issues in the Maldives

# National Health Research Committee (NHRC)

The National Health Research Committee (NHRC) was established in 1999. It was established as a strategy outlined in the Health Master Plan 1996-2005 to strengthen the development and implementation of research relating to the health sector, and with the recommendation of WHO to develop and establish ethical and research guidelines. The Health Information and Research Section of Policy Planning and International Health Division of Ministry of Health is the Secretariat of this Committee.

Since the established of the NHRC, the government decided that all research related to health be submitted to the NHRC and its approval be sought before implementation. In this regard, the ministry of health issued a circular (23-C3/99/C-24) on August 15, 1999. With effect from this date, the NHRC received several research proposals for approval. A guideline was developed to assist researchers such as medical and nursing practitioners, program managers and students in developing research proposals for submission to the NHRC.

## REPRESENTATIVES IN THE NATIONAL HEALTH RESEARCH COMMITTEE

1. Ministry of Health / Director General of Health Services
2. Ministry of Health / Policy planning & International Health
3. Ministry of Health / Maldives Blood Service
4. Ministry of Health / Maldives Food and Drug Authority
5. Ministry of Health / Health Protection Agency
6. Ministry of Health / Quality Assurance
7. Ministry of Islamic Affairs
8. Attorney General Office
9. Indira Gandhi Memorial Hospital
10. National Bureau of Statistics
11. Ministry of Education
12. Ministry of Law and Gender
13. Faculty of Health Sciences
14. Islamic University Maldives

## APPLICATION FOR RESEARCH REGISTRTION AND APPROVAL

Each proposal submitted for approval should have a Research Registration Form completed with it. The research registration form and copies of the guideline can be obtained from the Health Information and Research section of Policy Planning and International Health Division, Ministry of Health and it is also available via the Ministry of Health website ([www.health.gov.mv](http://www.health.gov.mv)).

Proposals should be submitted to the Ministry in print and electronic form. One copy of the printed proposal should be submitted to the Health Information and Research section. Proposals can also be mailed to [ppd@health.gov.mv](mailto:ppd@health.gov.mv). In addition, students need to submit their supervisor's endorsement letter along with the proposal.

Application form can be downloaded from:

**[http://health.gov.mv/Uploads/Downloads//Forms/20\\_Research%20Approval%20From.pdf](http://health.gov.mv/Uploads/Downloads//Forms/20_Research%20Approval%20From.pdf)**

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## National Health Research Committee approved Research list 2016-2017

- 2nd Biological & Behavioral Survey (BBS 2016) Among Key Populations at Risk for HIV in Maldives (Researcher: Health Protection Agency)
- Maldivian married men's perception towards Family Planning: A qualitative study done at Reproductive Health Center of Indira Gandhi Memorial Hospital (Researcher: Humaira Jamaal)
- Policy Report: Introducing an effective National Cancer Control programme in the Maldives. (Researcher: Dr. Abdul Malik)
- The impact of online social networking on psychological functioning, social support and wellbeing (Researcher: Afiya Ali)
- Energy drink consumption pattern and its associated factors among college students in Male' City (Researcher: Fathimath Fileeshiya)
- Use of multimodal approach to improve recording and reporting system for dengue surveillance at IGM Hospital in Maldives: An Implementation Research (Researcher: Ibrahim Ashraf)



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