

VOLUME 5



Ministry of Health
Republic of Maldives

2018

MALDIVES HEALTH RESEARCH BULLETIN

IN THIS VOLUME

1. ABSTRACTS
2. RESEARCH APPLICATION PROCESS
3. HEALTH RESEARCH PRIORITY AREAS 2017-2019

CONTENT

Foreword	1
School Health Survey 2017 (Maldives)	3
A Case Series of a Rising Trend of oral cancer in the Maldives	4
Achieving Universal Health Coverage in small island states: could importing health services provide a solution?	5
Protective effects of breastfeeding against acute respiratory tract infections and Diarrhea: Findings of a cohort study.	6
Factors Associated with Maternal Depression in the Maldives: A prospective cohort study	6
An Assessment of Knowledge and Perception About Menopause and Effects of Menopausal Symptoms Among Menopausal Women in Male', Maldives	7
Carrier screening for beta-thalassemia in the Maldives: perceptions of parents of affected children who did not take part in screening and its consequences.....	9
Policy Report: Introducing an Effective National Cancer Control Programme in the Maldives	10
Impact Evaluation of the Disability Allowance in the Maldives	12
National Health Research Committee (NHRC)	14
Approved Research Proposals 2017	16
Health Research Priority Areas 2017-2019	18

FOREWORD

The Government of Maldives is committed to improving health sector through creating a research culture in the country. We take pride in presenting the Health Research Bulletin Volume 5. This volume is considered as an achievement as it marks the publication of Health Research Bulletin for 5 consecutive years. The objectives of publishing a health research bulletin is to create a common platform for students, researchers, and other stakeholders to gain easy access to health research materials relevant to Maldivian context. Further, this volume includes nine abstracts of completed research, on-going research work, Health Research Priority areas 2017- 2019, and the research approval process that is followed by the National Health Research Committee (NHRC).

Importantly, research is an essential element to create a robust health sector. Similarly, in the Maldives, research is needed to provide critical information and guidance to policy formulation, planning, resource allocation, and delivery of health services. This will be done making use of empirical evidence in response to questions that challenge program managers and policy makers in their quest to improve service delivery and by extension of the health outcomes of the nation.

The aim of Maldives Health Research Bulletin, Volume 5, the aim being to create an opportunity for bridging the gap between researchers, program managers, policy makers, academia, and consumers of health services. On behalf of the Government, we therefore call upon all health service providers, policy makers, development partners, and relevant stakeholders to support the health research initiative with the intention of ensuring that ethical and scientific standards are met during research.

The Ministry of Health would like to acknowledge the contributions to Health Research Bulletin development team of the Health Information Research Section of the Policy Planning and International Health Division at the Ministry. Additionally, the Ministry of Health highly appreciates and acknowledges the efforts of health researchers including those who have contributed to this bulletin. It is hoped that the research undertaken in this area would further strengthen the health sector and aid the development of the health sector of Maldives, in turn contribute towards evidenced based policy making and formulation to strengthen of health interventions in the sector.

Abdulla Nazim Ibrahim
Minister of Health

© MINISTRY OF HEALTH 2018

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without a written permission from the Ministry of Health. Excerpts from this publication may be used for research and other purposes provided that due acknowledgment is made.

This publication is intended to provide accurate information and include materials from sources considered to be reliable. It should also be recognized that the data used in this publication were accurate at the time of compilation and printing, although some changes due to revision and change in collection may have occurred.

Published by:	Health Information & Research Section, Policy Planning and International Health (PIH) Division Ministry of Health (MoH) Republic of Maldives Tel: +960 3328887 Fax: +960 3328889 Email: ppd@health.gov.mv Website: http://www.health.gov.mv .
Data Compilation:	Aishath Muneeza (Senior Administrative Officer, PIH, MoH) Aminath Safrau (Accounts Officer, PIH, MoH)
Data Verification:	Aishath Samiya (Deputy Director General, PIH, MoH) Moomina Abdullah (Director, PIH, MoH) Sofoora Kawsar Usman (Assistant Director, PIH, MoH) Fathimath Sidana (Program Assistant, PIH, MoH)
Layout & Design:	Aishath Muneeza (Senior Administrative Officer, PIH, MoH)

School Health Survey 2017 (Maldives)

Author: Medical services, Maldives National Defense Force (MNDF), Male', Maldives

Research Duration: 9th July 2017 - 20th September 2017

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 undetected and left untreated, 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 itself, it makes sense to conduct a school health survey at primary grade one level. Ostensibly this survey helps for gaining a good understanding of the prevalence of various morbid conditions in young school-going population of Maldives. The evidence gleaned from these findings will help to plan for health and education in the future.

METHODOLOGY

All the students currently studying in grade one of Maldives were eligible for the survey. Face to face interviews and clinical examinations were 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 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.

RESULTS/FINDINGS

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

Gender distribution was 49.33% (3396) female students and 50.67% (3488) male students. Mean age was 6.09 years with $SD \pm 0.36$, whereas maximum age was 12 years 8 months and minimum age was 4 years 11 months.

Mean height of the screened students were 117.19 cm with $SD \pm 5.75$, maximum height was 150 cm and minimum height was 93.7cm. Mean weight of the screened students were 21.19 kg with $SD \pm 5.21$, whereas the minimum weight was 10.10 kg and maximum weight was 60.3 kg. Mean BMI of the screened students were 15.28kg/cm² with $SD \pm 2.79$, maximum BMI was 43 kg/cm² and minimum BMI was 8.5 kg/cm². Body Mass Index (BMI) among the screened children showed that 62.33% (4272) of the students were overweight and obese students made up the remainder with 10.97% (752) and 10.33% (708) respectively. The main problem identified in this survey was poor oral health (38.1% representing 2620 students). High number of visual acuity problems were observed, accounting to 16.4 % (881) among all screened students. Out of these 881 students, 45.3% (399) of the cases were newly identified during the health screening program. Most importantly, male students (62.1%) outnumbered female students (37.9%) in all disease conditions. Furthermore, a high prevalence of smoking tobacco among parents (45.7% representing 2953 students) were observed, 38.6 % (2499) of the parent's smoke at home, while 2% (129) of the parents smoked near their children. Some parents (5% representing 325 students) prefer smoking away from their children. 3460 (50.3%) out of 6884 students were identified as having pre-existing medical conditions and were referred to specialists for further care and management. Most of the referred students had dental conditions which comprised of 39.1% of the total referrals.

IMPLICATIONS

The data collected in this survey includes useful information which pursued the team to process, analyze and to come up with 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.

CONCLUSIONS

This survey was carried out to find out the existing medical problems in grade one students of Maldives, and it did not delve into the causative factors of these conditions. Future studies may be undertaken to establish cause and effect, which would help policy makers to target their interventions.

For full research, please send your requests to Educational Supervision and Quality Improvement Division (ESQID), of Ministry of Education.

A Case Series on a Rising trend of Oral Cancer in the Maldives

Dr. Mohamed Amru Ahmed, Dr Yahma Hassan, Dr Abdul Malik

Research Duration: 1st October 2017- 10th December 2017

OBJECTIVES

To describe risk factors for oral cancer and identify limitations in treatment of oral cancer currently in the Maldives to enable the generation of a hypothesis for further research into this area.

RATIONALE and JUSTIFICATION

This study was done to establish known risk factors in 5 individuals diagnosed with oral cancer. It can be used to shed light on planning awareness programs and screening protocols in different parts of the country. It also provided useful insight into planning a cancer treatment service in the country that would be efficient, enabling maximum number of cancer patients to be treated. This study was a poster presentation at the 12th SAARC Federation of Oncologists (SFO) International Cancer Conference & Sri Lanka College of Oncologists - Annual Academic Sessions 2017 which was held on 8th December 2017 in Colombo. It was a platform where issues relating to cancer in the Maldives was conveyed to regional partners. This may facilitate regional co-operation in any future plans for cancer care in the Maldives.

METHODOLOGY

Five individuals with a known diagnosis of oral cancer were selected from the Cancer Support Group of Maldives for this case series.

A survey questionnaire was administered to each individual to obtain information about their clinical condition, risk factors for disease, socioeconomic conditions, and treatment expenses. The data was analyzed using the Framework Analysis approach.

LIMITATION

- Statistical significance could not be established due to low sample size.
- As this is only a case series, it cannot be generalized to the whole population.

RESULTS/FINDINGS

The results show that treatment facilities for oral cancer are inadequate in terms of the needs of the country. Although biopsies could be done locally, all cancer-specific treatments such as surgery, chemotherapy and radiotherapy have to be sought abroad. Furthermore, the patients continued to have to go abroad for their follow up care.

Only hospital medical bills and the airline fees for the patient were covered by national health insurance which resulted in a significant financial burden on patients.

In the Maldives, both smoking and chewing of the betel quid is widespread and the results reflect this trend. According to Pettie [1], 25% of oral cancers are due to tobacco usage which include both smoking and chewing of tobacco, 7-19% is related to alcohol drinking and more than 50% is attributed to betel quid chewing in areas of high chewing prevalence.

It is important to note that none of the patients had received HPV vaccination despite HPV being a significant risk factor for oral cancer. [2]

Psychological support was not offered to any of these patients following their diagnosis and treatment. Zabora et al. [3] highlights the importance identifying high-risk patients through psychosocial screening in order to provide early intervention as elevated levels of distress negatively impacts the outcomes of cancer therapies.

IMPLICATIONS

Further studies on this area is essential. Suggested hypothesis for future research include the following:

- (1) research on Knowledge Attitude and Perceptions (KAP) of Areca Nut chewing as a risk factor for oral cancer (degree of awareness to risk factors)
- (2) research on the additional burden of financial costs not covered under the national health insurance scheme, borne by cancer patients
- (3) A research on cost-effectiveness of establishing and providing cancer treatment services in the Maldives as opposed to sending patients abroad.

CONCLUSIONS

The habit of betel nut chewing is consistent with increased trends of oral and tongue cancer in the Maldives. Dramatic reduction of treatment costs can be achieved by establishing a cancer treatment facility in the Maldives. Furthermore, treatment of oral cancers should be a priority when implementing cancer care services in the country.

REFERENCES

1. Petti S. Lifestyle risk factors for oral cancer. *Oral Oncology* 2009; 45(4-5):
2. Gillison ML, Koch WM, Capone RB, et al. Evidence for a causal association between human papillomavirus and a subset of head and neck cancers. *J Natl Cancer Inst* 2000; 92: 709-720
3. Zabora J, BrintzenhofeSzoc K, Curbow B, Hooker C, Piantadosi S. The prevalence of psychological distress by cancer site. *Psycho-Oncology* 2001; 10(1).

Achieving Universal Health coverage in small island states: could importing health services provide a solution?

Mariyam Suzana (PhD), Helen Walls (PhD), Richard Smith (PhD), Johanna Hanefeld (PhD)

Research Duration: Secondary data of 2003 to 2013

OBJECTIVES

- To present a cross country comparison on medical travel,
- To understand the pattern of consumption of health services abroad by SIDS
- To map the linkages between the import of health services and health indicators relevant to achieving UHC

RESEARCH QUESTION

How does import of health services through public medical travel schemes affect access to quality health services and UHC for SIDS.

RATIONALE and JUSTIFICATION

There is a dearth of systematic cataloguing and analysis of trade policy initiatives and their impact on health systems, which leaves an incomplete picture of their nature and effects, especially for small island states. This paper addresses this gap and seeks to fill through the comparative analysis of the experience of a large group of SIDS.

METHODOLOGY

Publicly accessible data for 14 SIDS covering health related travel and health indicators for the period 2003- 2013 was analyzed. In addition, an in-depth review of medical travel schemes for the two highest importing SIDS (Maldives and Tuvalu) was conducted.

RESULTS/FINDINGS

Medical travel from SIDS is accelerating. The SIDS studied generally lacked health infrastructure and technologies, and the majority of them had lower than the recommended number of physicians in country which limit their capacity for achieving UHC. Tuvalu and the Maldives were the highest importers of health care, and notably have public schemes that facilitate medical travel and help lower the out-of-pocket expenditure on medical travel. Although different in approach, design and performance, the medical travel schemes in Tuvalu and the Maldives are both examples of measures used to increase access to health services which cannot feasibly be provided in SIDS.

IMPLICATIONS

What this study adds: The multi-country analysis presented here is the first of medical travel among SIDS, and the findings confirm that, the import of health services among SIDS has occurred at a slower pace than the projected rise of the global medical travel industry. The non-linear growth of medical travel among SIDS gives evidence that the industry is volatile to external shocks a factor that needs to be taken into consideration by SIDS considering import as a mechanism to increase access to health services. While existing literature notes the scarcity of institutionalized arrangements for medical travel, our findings highlight the success of three government-funded schemes among SIDS. The Tuvalu medical treatment scheme spent 44.5% of its health budget on overseas treatment in 2013, whilst the Maldivian government spent \$11.6million on subsidized medical travel in 2012(29) and highly specialized treatment worth \$1.53 million per annum was funded by the Seychelles government.

CONCLUSIONS

Our findings suggest that importing health services (through schemes to facilitate medical travel) is a potential mechanism to help achieve universal health care for SIDS, but requires due diligence over cost, equity and quality control.

AVAILABLE ON

<http://researchonline.lshtm.ac.uk/4646751/1/Achieving%20universal%20health%20coverage%20in%20small%20island%20states.pdf>

<http://gh.bmj.com/content/3/1/e000612>

Protective effects of breastfeeding against acute respiratory tract infections and diarrhoea: Findings of a cohort study

Raheema Abdul Raheem (PhD), Colin W. Binns (PhD), Hui Jun Chih (PhD)

Research Duration: 4 years

OBJECTIVES

The objective of this paper is to identify associations between breastfeeding and acute respiratory tract infections (ARTIs) and diarrhea.

METHODOLOGY

A cohort of 458 mothers was recruited at the antenatal clinics at Indira Gandhi Memorial (IGMH) and Abdul Rahman DhonKaleyfaanu (ADK) hospitals. Mothers were interviewed 'face-to-face' at 36 weeks of gestation and at 1, 3, and 6 months after delivery. The questionnaires included demographic information about parents, infant feeding methods, and breastfeeding duration. The number of episodes of ARTIs and diarrhea was also recorded. Ethics approval was obtained from the National Research Committee of the Maldives and Curtin University Human Research Ethics Committee. Descriptive, univariate, logistic, and survival analyses were used to assess the effects of breastfeeding on infant ARTIs and diarrhea.

RESULTS/FINDINGS

The partial, predominant and exclusive breastfeeding rates at 1 month were 98.9, 67.6 and 26.9%, respectively. The risk of acquiring ARTIs is significantly reduced when the infants were predominantly breastfed for 3 months (adjusted odds ratio (OR): 0.56, 95% of adjusted OR: 0.34-0.94) and 6 months (adjusted OR: 0.45, 95% of adjusted OR: 0.24-0.84). The risk of getting diarrhea is significantly reduced even when the babies were partially breastfed for 6 months (adjusted OR): 0.31, 95% of adjusted OR: 0.11-0.90). Kaplan Meier curves demonstrated that the risk lowers with longer duration of breastfeeding.

CONCLUSIONS

Breastfeeding needs to be promoted because the risk of infant morbidity is negatively associated with the duration of breastfeeding.

AVAILABLE ON

<https://www.ncbi.nlm.nih.gov/pubmed/28134476>

Factors Associated With Maternal Depression in the Maldives: A Prospective Cohort Study

Raheema Abdul Raheem (PhD), Colin W. Binns (PhD), Hui Jun Chih (PhD)

Research Duration: 4 years

OBJECTIVES

The aim of the study was to document perinatal depression in mothers in the Maldives and associated factors.

METHODOLOGY

A cohort of 458 mothers was recruited at the 2 major hospitals in Malé, the Maldives, and followed from 36 weeks of pregnancy to 3 months after birth. The Edinburgh Postnatal Depression Scale (EPDS) was used to measure maternal depression. Maternal sociodemographic factors and infant's health were also recorded.

RESULTS/FINDINGS

The prevalence of depressive symptoms (EPDS score ≥ 13) at 36 weeks of pregnancy and at 1 and 3 months postpartum were 24%, 27%, and 12%, respectively. Having experienced stressful life events is an established risk factor for maternal depression across these time points. Having depressive symptoms during the postpartum period is significantly associated with presence of antenatal depressive symptoms.

CONCLUSIONS

Future studies may look into effectiveness of strategies that cope with stressors in the management of maternal depression.

AVAILABLE ON

<https://www.ncbi.nlm.nih.gov/pubmed/29457498>

An assessment of knowledge and perception about menopause and effects of menopausal symptoms among menopausal women in Male', Maldives

Mohamed Fazeen

Research Duration: January 2018

OBJECTIVES

The main objectives of this study was to assess the participants' knowledge and perception towards menopause, effects of menopause and experience of sexual activities among 45 to 65 years aged women in Male', Maldives. Furthermore, this study assessed whether there were any associations between the participant's socio demographic characteristics (age, level of education and monthly income) and perception, knowledge and pattern of sexual experiences.

RESEARCH QUESTION

1. What is the level of knowledge about menopause and menopausal symptom among the age group of 45 -54 and 55-65 year old women undergoing menopause?
2. What are the experiences and perceptions of menopause and menopausal symptoms among the age group of 45 -54 and 55-65 year old women undergoing menopause?
3. Is there any association between sociodemographic characteristic factors and the participant's perception, knowledge and the experiences towards menopausal symptoms and their sexual activities among the of 45 -54 and 55-65 year old women undergoing menopause?
4. What are the experiences of women undergoing menopause towards sexual activities among 45 to 65 years aged woman in Male' Maldives

RATIONALE and JUSTIFICATION

By examining the knowledge and perception of older women about menopause and their experiences of menopausal symptoms helped to identify the problems and understand the scenario better. This will help to educate older women and create awareness about various menopausal symptoms. It will also enable them to recognize these symptoms early, to seek timely medical treatment for the same and improve quality of life.

METHODOLOGY

The researcher used quantitative design to evaluate knowledge, perceptions of the participants toward menopause and their experiences towards menopausal symptoms.

The study was conducted within Male' Maldives. Samples were collected from the four wards of the Male', which were Henveiru, Maafannu, Machchangoalhi, and Galolhu.

Prior to the data collection, a pilot study was conducted for 7 people, which was 3% of the required samples in order to

evaluate feasibility, time, cost, adverse events, and effect size (statistical variability) in an attempt to predict an appropriate sample size and improve upon the study design prior to performance of a full-scale research project. Multi-stage Cluster Sampling technique was adopted to collect the samples.

According to the information received from National Bureau of Statistics (NBS) on 24th April 2017, based on the Census of 2014, the total female population living in the Maldives, between the age group of 45 to 65, is 25,029 and the same age group living in Male' is 9,192. In addition, NBS informed that the number of the target population in Henveiru was 2,948 (32%) where in Maafannu was 2,394 (30%) and target population in Galolhu was 1,747 (19) where as it was 1,747 (19%), also in Machcangoalhi.

The required number of samples calculated by using Raosoft sample size calculator (Raosoft, Inc 2014), was 263. These 263 samples were taken from all four wards based on the target population percentage living in the particular ward.

For example:

- 32% of the target population were living in Henveiru (NSB, 2014). Therefore 32% of 263 samples were taken from Henveiru.
- $263(\text{required total samples}) \div 100 \times 32 = 85$
- Total number of samples required from Henveiru was 85.
- There were 30 % of the target population living in Maafannu (NSB, 2014). Therefore 32% of 263 were taken from Maafannu.
- $263(\text{required total samples}) \div 100 \times 30 = 80$
- The total number of samples required from Maafannu was 80.
- There were 19% of the target population living in Galolhu and also in Machchangoalhi (NSB, 2014). Therefore 19% of 263 samples were taken from each of these wards.
- $263 (\text{required total samples}) \div 100 \times 19 = 49$

The total number of samples required from Galolhu was 49 and the total number of required samples from Machchangoalhi is 49. One or two clusters (house hold blocks) were selected randomly from each ward by using the stratified sampling method.

As this was a female related topic and a very sensitive area, the data was collected by 4 female enumerators who were from the medical background. The enumerators were given a 2 hours training session on filling the forms prior to collection of data. Statistical Package for Social Science (SPSS)

RESULTS/FINDINGS

There were significant associations between age, education and income and their perceptions and knowledge about menopause, effects of menopausal symptoms and their level of sexual activities. The level of income of the study population and the level of their sexual activities had a very strong correlation.

However, the participants had a very skewed perception towards menopause and its symptoms. It was found that, 99% of the participants were affected with 5 or more symptoms including hot flashes, irregular periods, loss of interest in sex and sexual activities, pain and dryness of vagina when having sexual intercourse.

IMPLICATIONS

- This study was limited due to the participant's nature as the information they shared were very personal and confidential as women are more sensitive when it comes to discussing about ageing and sexual issues.
- This study was not generalized to the whole Maldives as it covered the participants from Male area only.

Carrier screening for beta-thalassemia in the Maldives: perceptions of parents of affected children who did not take part in screening and its consequences

Fazeela Waheed, Colleen Fisher, AwoNiyi Awofeso and David Stanley

Research Duration: 4 years (this paper is a part of my PhD thesis)

OBJECTIVES

The aim of this study was to explore the reasons for not testing for thalassemia in Maldives before or after marriage.

RATIONALE and JUSTIFICATION

Studies show that Maldives has one of the world's highest thalassemia carrier rates. It is estimated that 16–18 per cent of Maldivians are β -thalassemia carriers, and approximately 28 new β -thal cases are recorded annually. Poor uptake of screening for the condition is one of the main reasons for this high number of new cases. Therefore, it is important to explore the reasons for not testing for thalassemia in Maldives before or after marriage.

Please Note: It is now mandatory to do thalassemia carrier test before marriage. Hence, the uptake of testing might be different now, but the findings of this study will still be relevant to Maldives as there will be many married couples in Maldives who got married without testing for thalassemia and are of still child bearing age.

METHODOLOGY

A Generic Qualitative Approach using face-to-face in-depth interviews was utilized for this study to enable exploration of the participants' perspectives and reasons for their decisions in relation to the objectives of the study.

RESULTS/FINDINGS

Findings show that participants did not undergo carrier tests because of lack of awareness and being uninformed of the devastating consequences of the condition. The outcomes of not testing were distressing for most participants. Religion played a vital role in all the decisions made by the participants before and after the birth of a β -thal child.

IMPLICATIONS

Awareness is still an important component of thalassaemia prevention in the Maldives. Thalassaemia awareness programs should incorporate the devastating consequences of the condition from the perspectives of parents, patients and medical doctors. In addition, religious aspects should be incorporated to all awareness programs.

CONCLUSIONS

It is apparent from our findings that the thalassemia awareness program of Maldives needs to be strengthened. Maldives has a culture of selecting own partners and dating before proceeding to a marriage. Therefore, even if the population receives the awareness messages, cancellation of marriages based on premarital test results might be less effective compared to many other Muslim countries where marriages are mostly arranged. Therefore, in order to improve outcomes, the prevention program needs to incorporate more reproductive options such as prenatal diagnosis and pre-implantation diagnosis.

AVAILABLE ON

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4960032/>

Policy Report

Introducing an effective National Cancer Control Programme in the Maldives

Author: Abdul Malik

Supervisor: Krystyna Makowiecka, London School of Hygiene and Tropical Medicine

Co-Supervisor: Michel Coleman, London School of Hygiene and Tropical Medicine

In collaboration with: Cancer Society of Maldives,

Co- Researcher: Juwairiya Saeed

Research Duration: April - September 2016

OBJECTIVES

The main aim of the project is to produce a policy report to guide the development of an effective National Cancer Control Programme (NCCP) in the Maldives. The objectives are to estimate the total period prevalence of cancer in the Maldives (2013- 2014); to understand the views of key stakeholders; and synthesize this to develop a policy report and applying the “Cancer Control, Knowledge into Action: WHO Guide for Effective Programmes – in Low and Middle income countries”, to the Maldives context to identify priority components in light of the prevalence estimates and views of the key stakeholders.

RESEARCH QUESTION

How to develop an effective National Cancer Control Programme (NCCP) in the Maldives?

RATIONALE and JUSTIFICATION

This research will attempt to obtain a period prevalence of cancer in the Maldives; which has previously not been calculated. It would highlight if there is a need for development of a National Cancer Control Plan and what components would be a priority for the plan. This may differ from the Regional or the other Low-Income countries as the disease profile for Maldives has now passed the epidemiologic transition and Maldives has more NCDs than communicable diseases unlike most countries in the region.

This research would create an outline of how the National Cancer Control plan may be drawn out and the initial consultations from key stakeholders including government institutions, civil society, patient advocates and cooperates would be included. This would pave the way for development of a National Cancer Control Plan for the Maldives. The main reason why this research is important is because we do not have any comprehensive research done on cancer prevalence and on the public health aspects of the need for a cancer control plan in the Maldives so far.

METHODOLOGY

This project comprises a mixed methods design. The policy report will bring together the findings from secondary analysis of quantitative data, analysis of key informant in-depth interviews from stakeholders including government institutions, private health sector and civil society using the framework analysis method for qualitative data analysis and applying the “WHO Guide”, to the Maldives context and identify priority components in light of the prevalence estimates and views of the key stakeholders.

RESULTS/FINDINGS

Among a population of 344,023 people, the estimated total period prevalence for all cancers in the period of 2013-2014 in Maldives is 0.92% (920 cases per 100,000 population). The estimated prevalence is 0.84% for males and 1.01% for females. Oral cancers (including lip, tongue, gum, mouth, and palate) is the most common cancer, followed by eye, breast (with carcinoma in situ), sinuses, skin (melanoma and skin cancers and carcinoma in situ). How common eye cancers and sinus cancers could be reflected as an anomaly in the data as these are uncommon when regional prevalence is compared or is an area where further research is warranted. to Thyroid, prostate, lymphomas, leukemias and lung cancers are among the top 10 cancers. From the key informant interviews it is clear that there are very limited services available for cancer prevention, diagnosis, treatment and care.

It is evident that there is a substantial amount of work to be done with regard to cancer control in the Maldives. The high prevalence of cancer and the views of the respondents from the study emphasizes the need for developing a National Cancer Control Plan (NCCP) which would be the initial step towards comprehensive cancer control efforts in the Maldives. Estimating the incidence of cancers and determining the causes or etiology of common cancers in Maldives would be vital for cancer control. This policy report would pave the way forward for developing an NCCP and furthermore, this study will be useful for hypothesis generation for further research.

IMPLICATIONS

It is evident that there is a substantial amount of work to be done with regard to cancer control in the Maldives. The high prevalence of cancer and the views of the respondents from the study emphasizes the need for developing a National Cancer Control Plan (NCCP). A comprehensive cancer prevention strategy with early detection- early diagnosis and screening has to be a priority component for the NCCP, with improvement of diagnosis and treatment services and establishment of a comprehensive palliative and psychosocial care programme across the cancer care continuum. In this regard this policy report will provide guidance to development of an NCCP with priorities identified. Furthermore, this study will be useful for hypothesis generation for further studies.

CONCLUSIONS

There is no existing National Cancer Control Plan (NCCP). In terms of cancer control, the country needs an NCCP which comprehensively covers prevention, diagnostics, treatment and palliative care services. To accomplish that, accurate data on cancer incidence, prevalence and mortality should be collected in the Maldives furthermore there is a need for research studies to determine the cancer incidence and prevalence in the Maldives. The project will determine an estimated prevalence, providing the foundation that would lead to an effective NCCP in the Maldives. This would be beneficial for all stakeholders, including the government, the private sector, NGOs, cancer patients and their families as the study can inform policy decisions to design public health cancer prevention programmes and establish cancer treatment facilities.

Impact evaluation of the Disability Allowance in the Maldives

Professor Hannah Kuper, London School of Hygiene & Tropical Medicine

Dr Shaffa Hameed, London School of Hygiene & Tropical Medicine

Morgon Banks, London School of Hygiene & Tropical Medicine

Research Duration: April 2016 -September 2016

OBJECTIVES

The overall aim of this research is to evaluate the impact of the Disability Allowance among people with disabilities and their households in the Maldives. Specific objectives of this study include:

- 1) To estimate the prevalence of disability in the Maldives, which can indicate both the need for the Disability Allowance and the coverage of the programme.
- 2) To compare poverty, quality of life and participation between people and households with and without members with disabilities.
- 3) To measure access to the Disability Allowance, including factors that facilitate or impeded participation.
- 4) To explore the impact of the Disability Allowance on poverty, quality of life and participation of people with disabilities and their families.

RESEARCH QUESTION

The primary evaluation question is "Does the Disability Allowance have an impact on poverty, quality of life and participation of people with disabilities and their families in the Maldives?"

Other key questions identified by 3ie and NSPA in relation to the Disability Allowance are:

- What impact does the programme have on the lives of beneficiaries?
- What difference does the allowance make to the recipient's standard of living, social inclusion and accessibility to required care and medical treatments?
- How effective is the existing targeting mechanism?
- Are the allowances reaching the right people?
- How effective is the implementation of the programme including all processes involved in enrolling beneficiaries?
- How can it be changed to improve the performance of the programme?

RATIONALE and JUSTIFICATION

Social protection is an increasingly important strategy for addressing poverty in many low and middle-income countries (LMICs), including in the Maldives. It is an umbrella term that covers schemes to address risk, alleviate poverty and enhance living conditions and includes social assistance, social insurance and labour market interventions.

In the Maldives, the Disability Allowance was established in 2010 to "provide financial support to the disabled and enable them to have equal opportunities in the society as others". This scheme is a noncontributory, non-means tested and non-conditional monthly cash transfer. It provides a monthly amount of MVR 2,000 (about US\$130) to Maldivian citizens with disabilities. Evidence is needed to demonstrate whether the Disability Allowance has a positive impact on its target population, and if any changes are required to improve its effectiveness.

This information is critical for policymakers in the Maldives to inform decision-making regarding the design and implementation of the Disability Allowance.

METHODOLOGY

A quasi-experimental study design is being implemented to evaluate the impact of the Disability Allowance among people with disabilities and their households in the Maldives, with a focus on primary indicators of poverty, quality of life and participation. The study uses mixed methods, with complementary qualitative and quantitative components.

Data collection is planned for baseline (2017) and end line (late 2018). For baseline data collection, a nationally representative, population-based survey was conducted to determine the prevalence of disability and coverage of the Disability Allowance. Further, a nested-case control involving people with disabilities identified in the survey and age-sex area matched controls without disabilities was used to establish baseline measurements of impact indicators (e.g. poverty, access to education, work and quality of life). To assess the impact of receiving the Disability Allowance, all people with disabilities identified in the survey who were not receiving the Disability Allowance at baseline were provided with information about the programme and encouraged to apply. Further, data was collected from new enrollees recruited from programme lists, before receipt of their first payment.

All cases and control groups were interviewed using standardized questionnaires. The interview included assessment of: participation, poverty, Quality of Life (QoL), as well as personal and contextual factors (e.g. age, gender, marital status). All cases and controls will be re-interviewed after one year (at end line) using the same questionnaires, to detect whether there have been changes in quality of life, poverty and participation.

Questions will also collect data on satisfaction with the programme (for those enrolled) or barriers to accessing the Disability Allowance (for those not enrolled). Baseline qualitative data was collected through in-depth interviews included questions on perceived poverty, need for social protection, impact of disability upon participation and Quality of Life, differences by age or gender, facilitators and barriers to inclusion, knowledge of the Disability Allowance. For Allowance recipients, views on the programme, level of satisfaction and how they feel it could be adjusted to better meet their needs were explored. Crosscutting themes such as experience of disability, participation, stigma and quality of life were also explored in depth. At end line, qualitative interviews will be conducted for those newly enrolled in the programme as well as those who were referred but not enrolled since baseline, to collect further data on barriers and facilitators to uptake. We will attempt to interview the same people as were interviewed at the baseline, though selection of additional participants will be required.

RESULTS/FINDINGS

Findings from the baseline data are still preliminary and are, at present, limited to the data from the population-based survey. After screening 5,363 people across 1,065 households, 395 people were identified as having a disability according to Washington Group Extended Set criteria. Baseline data indicates a high need for the Disability Allowance in the Maldives. Prevalence of disability was 6.7%, indicating almost 28,000 people are living with a disability across the Maldives.

Note: This study was commissioned by the National Social Protection Agency (NSPA) and funded by 3ie. It is being conducted by the International Centre for Evidence in Disability (ICED) at the London School of Hygiene & Tropical Medicine (LSHTM), UK.

People with disabilities were more likely to be living in poverty, had a lower quality of life and lower participation compared to people without disabilities. While coverage of the Disability Allowance, at 25.5%, is higher than regional averages (9.4% for Asia and the Pacific) (International Labour Organization, 2017), the majority of people with disabilities are not accessing a programme that they are eligible for and could benefit from. Barriers to the programme include anticipated stigma from community, and differing ideas about disability identity and eligibility. Although some recipients experience difficulties in accessing the cash allowance, there were indirect benefits to dignity and empowerment through some alleviation of household poverty.

IMPLICATIONS

While impact of the Disability Allowance can only be assessed at end line data collection, baseline data has highlighted strengths and necessary improvements to the programme.

CONCLUSIONS

The large, population-based sample has allowed us to provide nationally representative estimates on the prevalence and impact of disability on areas such as poverty, participation and quality of life. These figures have little precedence in the Maldives and are crucial for policymakers to inform evidence-based planning and delivery of social protection.

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

APPLICATION FOR RESEARCH REGISTRATION AND APPROVAL



APPROVED RESEARCH PROPOSALS 2017

1. Use of multimodal approach to improve recording and reporting system for dengue surveillance at Indira Gandhi Memorial Hospital (IGMH) in Maldives: An Implementation Research
2. Knowledge of cervical cancer attitude and practice towards screening among nurses in a tertiary Hospital, Maldives
3. Impact evaluation for the Disability Allowance of the Maldives
4. Primary prevention of Breast Cancer: knowledge attitude practice (KAP)
5. Knowledge of Cardiovascular Disease, attitude and practice towards its prevention among Villa College students in Male', Maldives
6. Five-country study on types of diabetes occurring in youth
7. Knowledge on health effects and currents practices towards arecanut use among secondary school children in Male' city
8. Basic life support: knowledge and skill of nurses in the Maldives
9. Prevalence of Antimicrobial Resistance (AMR) in Maldives
10. Patients satisfaction towards nursing care provided in ward B (Obstetric and gynecological private ward) of Indhira Gandhi Memorial Hospital (IGMH)
11. Factors contributing to drug use initiation among young people in the Maldives
12. Study on the effects of menopause, menopausal symptoms, perception and the attitude towards sex and sexual activities among the menopausal women at Male' city, Maldives
13. Knowledge of stroke among Maldivian Adults from Community of Male'
14. The experiences of newly graduate nurses and perception of senior registered nurses on knowledge - practice gap among newly graduate nurses in the Maldives
15. Parental satisfaction in Pediatric Ward (PW), Indira Gandhi Memorial Hospital (IGMH)
16. Prevention and management of health hazards due to needle-stick injuries and its perceptions among healthcare professionals - a qualitative hospital-based study

APPROVED RESEARCH PROPOSAL 2017

17. Knowledge, attitude and practice of nurses towards caring stroke patients of Indira Gandhi Memorial Hospital (IGMH)

18. Nurses' perception and experience with medication errors: among nurses working at Indira Gandhi Memorial Hospital (IGMH)

19. A case series on a rising trend of oral cancer in the Maldives

20. Study of the Soil Transmitted Helminthiasis (STH) among preschool and primary school children in the Maldives

21. Knowledge, attitude and motivation towards voluntary blood donation- A qualitative study among voluntary donors registered in Indira Gandhi Memorial Hospital (IGMH)

22. Post angioplasty patients' early experiences after treatment at the National Cardiac Centre of Maldives at the Indira Gandhi Memorial Hospital (IGMH)

HEALTH RESEARCH PRIORITY AREAS 2017 - 2019

Establishment of Burden of Disease

1. Assessment of prevalence of major Non-Communicable Diseases (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 RESEARCH PRIORITY AREAS 2017 - 2019

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



Health Information and Research Section
Policy Planning and International Health Division
Ministry of Health
Republic of Maldives