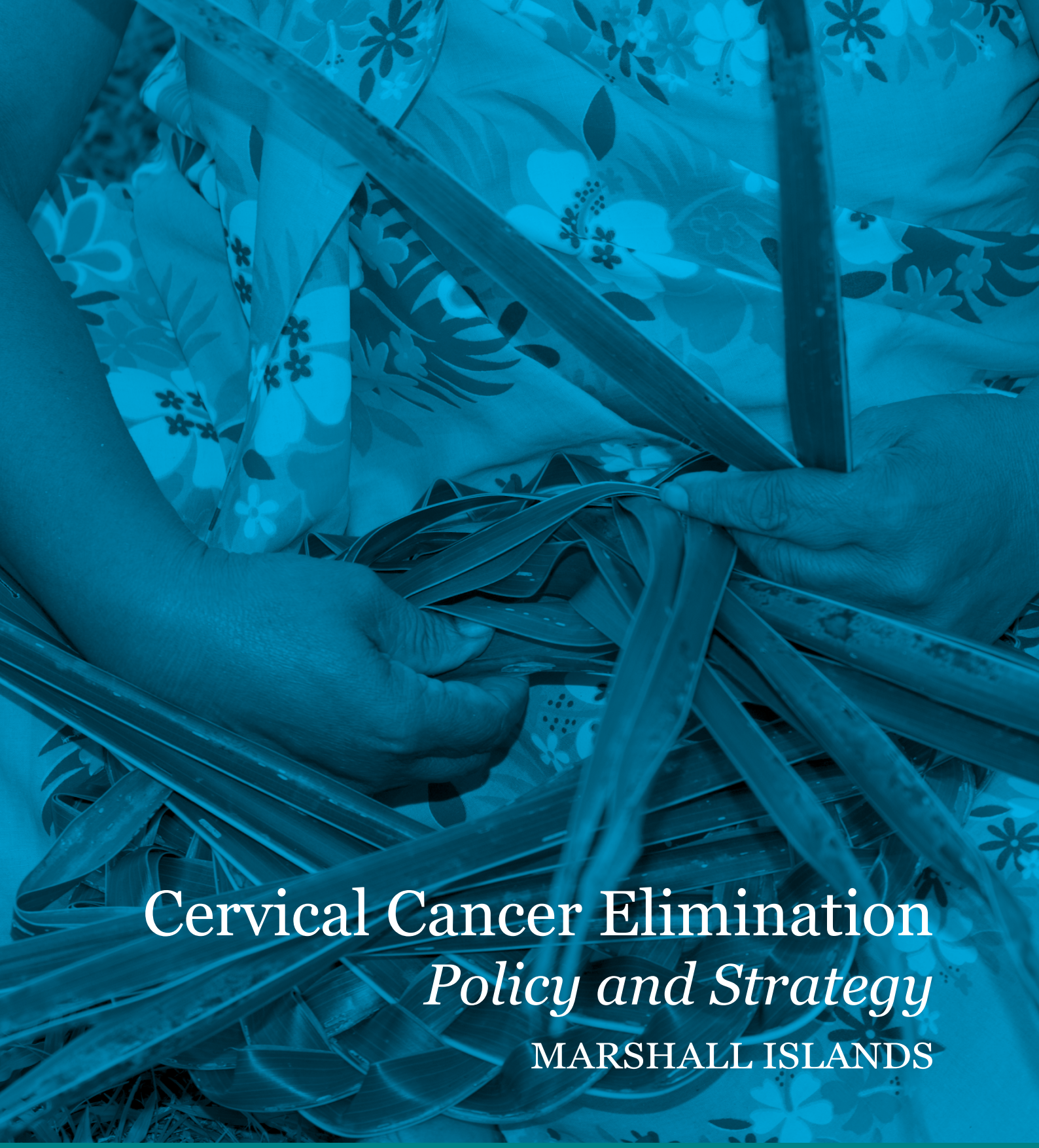

Cervical Cancer Elimination
Policy and Strategy
MARSHALL ISLANDS

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Cervical Cancer Elimination
Policy and Strategy
MARSHALL ISLANDS

ACKNOWLEDGEMENTS

We would like to acknowledge the partnership with the Marshall Islands Ministry of Health and Human Services and all of the sector partners for their valuable insights that have supported the development of this document. The leadership and support of the Ministry of Health and Human Services to strengthen efforts to support the elimination of cervical cancer in the Marshall Islands are acknowledged.

The policy and strategy were made possible through the collaboration of many organizations and individuals particularly the RMI Cancer Program. Sincere thanks are extended to: Caroline Johnny-Jibas, Director of Reproductive Health, MoHHS; Charles Lomae, Supervisor Head Clinical Nurse, MoHHS; Daisy Pedro, Director of Immunization Program, MoHHS; Daisy Alik-Momotaro, Women United Marshall Islands (WUTMI); Francyne Wase-Jacklick, Secretary of Health, MOHHS; Dr Frank Underwood, Director of Public Health, MoHHS; Dr Ivy Claire Lapidez , Director of Obstetrics and Gynaecology, MoHHS; Dr Mark Durand, Health Adviser, Early Child Development Project, MoHHS; Neiar Kabua, Program Director, National Cancer Control Program, MoHHS; Paul Lalita, Director of Laboratory Services, MoHHS; Ramson Kios, School Program Vaccination Coordinator, MoHHS; Dr Robert Maddison, Chief of Staff, Majuro Hospital; Rubida A. Hermios, Director, Ministry of Culture and Internal Affairs; Suzanne Philippo, Coordinator/Data Manager, National Cancer Control Program, MoHHS.

Gratitude is extended to the participants who attended the Cervical Cancer Elimination Policy and Strategy: Marshall Islands Validation Workshop in September 2023. The insights they shared and the confirmation of the policy and strategy were much appreciated.

This project was funded by the United Nations Population Fund, Pacific. We acknowledge the support and assistance from Dr Titilola Duro-Aina, Technical Advisor, SRHR and Ms Sumeet Kour throughout the process. We also acknowledge the extensive support provided in the Marshall Islands by Dr Marie Lanwi-Paul.

The development of the policy and strategy was led by Hilary Gorman, Senior Research Fellow along with Professor Heather Worth, Director and Lauren Turner, Research Assistant of Te Puna Vai Marama Cook Islands Centre for Research, University of the South Pacific.

ENDORSEMENT OF THE MARSHALL ISLANDS CERVICAL CANCER ELIMINATION POLICY AND STRATEGY

FOREWORD

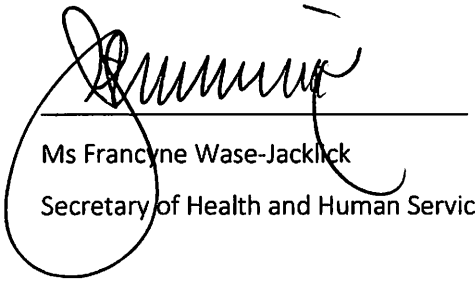
As the Secretary of the Ministry of Health and Human Services, it is my great pleasure to present the Cervical Cancer Elimination Policy and Strategy: Marshall Islands 2024-2030. This document sets out government's plans and targets to make the elimination of cervical cancer in the Marshall Islands a reality.

Our vision is that cervical cancer is eliminated in the Marshall Islands within two generations.

Most cases of cervical cancer are preventable. The Marshall Islands has one of the highest rates of cervical cancer in the world. However, through our collective action this can be addressed. As a nation we have already made progress through introducing the HPV vaccination more than a decade ago, in 2009. We have screening services in place. We provide referrals for treatment overseas to a small number of women who are diagnosed early and provide care and support for those who are diagnosed later. Yet, we know that much more can be done to improve prevention, screening and treatment of cervical cancer.

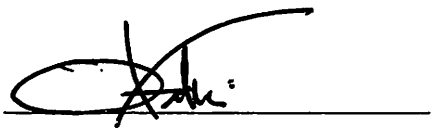
We recognise the pain, suffering and loss experienced by women and their families caused by cervical cancer. We know that we can accelerate the elimination of cervical cancer through the application of new health technologies, recent evidence and through enhancing our existing efforts. We recognise that we cannot do this work alone and this policy sets out ways in which partnerships can support and enhance efforts to eliminate cervical cancer.

We can make cervical cancer a distant memory for people of the Marshall Islands.



Ms Francyne Wase-Jacklick

Secretary of Health and Human Services



Hon. Ota Kisino

Minister of Health & Human Services

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INTRODUCTION

Cervical cancer is the most common cancer affecting women in the Marshall Islands (MOHHS, 2022). Data from 2007-2012 indicate the crude rate of cervical cancer being 70 per 100,000 women over the age of 20 years per year (Van Dyne et al. 2020). At the time this was the highest incidence of cervical cancer in the world (Ferlay et al., 2012; Van Dyne et al., 2020). This rate far exceeds that of neighbouring Micronesian countries (Buenconsejo-Lum, Jeong, Baksa and Palafox, 2023). It is seven times the rate of cervical cancer in the United States (Palafox et al., 2018). There is an opportunity to reduce and ultimately eliminate cervical cancer through improving human papillomavirus (HPV) vaccination and increasing cervical cancer screening and treatment including the introduction of HPV DNA testing.

Cervical cancer is caused by the HPV, and HPV vaccination is the key long-term means for the elimination of cervical cancer. Cervical cancer mostly affects women in their late 30s to early 40s – typically. Cervical cancer is easily prevented if pre-cancers are detected and treated early, but at present Marshallese women unnecessarily die each year as a result of late-stage diagnosis of cervical cancer. The HPV vaccination began in the year 2009 for schoolgirls in the Marshall Islands and is integral in realising the elimination of cervical cancer within the country.

The Pacific Islands Forum in 2015 identified cervical cancer as one of the top three regional priorities. In November 2020, the World Health Organization launched a Global Strategy to accelerate the elimination of cervical cancer as a public health problem. The WHO set targets for all countries:

- To reach and maintain an incidence rate of below four per 100,000 women by 2030

This goal rests on three pillars:

- 90% of girls fully vaccinated with the HPV vaccine by the age of 15;
- 70% of women screened using a high-performance test by the age of 35, and again by the age of 45; and
- 90% of women with pre-cancer treated and 90% of women with invasive cancer managed.

This document outlines a vision for the elimination of cervical cancer in the Marshall Islands and a set of strategies and actions to move the Marshall Islands toward the elimination of new diagnoses of cervical cancer. It intends to provide a cervical cancer elimination policy and strategy, including vaccination of girls and boys; widespread screening of women for HPV through HPV DNA testing; treatment of those testing positive for HPV; and treatment and management of those women with cervical cancer is an important step in establishing a platform for action and mobilizing resources and communities.

OVERVIEW OF THE POLICY FOR ELIMINATION OF CERVICAL CANCER IN THE MARSHALL ISLANDS

Policy Rationale

The Cervical Cancer Elimination Policy and Strategy is in alignment with key national policy frameworks. The National Strategic Plan 2020-2030 Republic of the Marshall Islands provides a roadmap for progress of national priorities. Health is identified as strategic area 1.1 within the plan, with the goal of "healthy lives and well-being for all ages." It includes the policy objectives of "Strengthened response and resilience to communicable disease, environmental health, and health emergency preparedness" and "Provision of quality health care infrastructure, especially cancer care, for all Marshallese."

The Cervical Cancer Elimination Policy and Strategy also aligns with the Ministry of Health and Human Services (MoHHS) National Strategic Plan 2022-2030. The mission of the MoHHS National Strategic Plan is to, "To strengthen the commitment on healthy islands concept in implementing health promotion to protect and promote healthy lifestyles to improve the lives of the people through primary health, and to build the capacity of Ministry of Health, communities, families and partners to actively participate and coordinate preventive services programs and activities as the core resources in primary health care services."

The draft Republic of the Marshall Islands National Comprehensive Cancer Control Plan 2022-2027, key objectives and strategies related to cervical cancer include increasing HPV vaccination, increasing risk-appropriate screening for cervical cancer, and improving survivorship initiatives.

- Objective 3 of the plan is to increase HPV vaccination, with a baseline of 45% of adolescent females age 11-15 years that have completed the 2-dose HPV vaccination series. The target is to increase it to 80%.
- Objective 7 is to increase risk-appropriate screening for cervical cancer. The measure for the objective is the cervical cancer screening rate (cervical cancer screening within the past 3 years among women 21-65 years with no hysterectomy) with a baseline of 25.3% and a target of 40.0%.[1]
- Objective 10 of the plan is to increase education about survivorship and awareness about survivorship needs and barriers to quality of life of survivors. It has a baseline of 4.56 average quality of life score of cancer survivors with a target of 7.06.
- Objective 11 in the plan is to improve clinical care and use of survivorship care plans. It has a baseline of 33% of survivors in the past two years that reported having a treatment summary and survivorship care plan.
- Objective 12 in the plan is to increase use of palliative care services. It has a baseline of 60% of patients with no cancer treatment receiving palliative care and a target of 75%.

The Marshall Islands Cervical Cancer Elimination Policy and Strategy serves to build upon the National Comprehensive Cancer Control Plan, in a way that is aligned with recent developments in cervical cancer prevention, screening, management and treatment.

Objective

The main objective of this Policy is to provide a framework to comprehensively address the elimination of cervical cancer in the Marshall Islands through the systematic implementation of evidence-based interventions for HPV vaccination, HPV and cervical cancer screening through HPV DNA testing, timely diagnosis, treatment, survivorship, and palliative care. It sets in place strategies to increase awareness of the local burden of disease, set priorities for elimination (long-term) and the treatment and management of cervical cancer based on evidence-based strategies. It aims to mobilise resourcing to provide sufficient funding to achieve targets to reduce morbidity and mortality relating to cervical cancer and to work towards its elimination.

Guiding Principles

The implementation of this policy will be guided by the following principles:

1. **Multi-sectoral approach:** that acknowledges that cervical cancer can only be addressed fully through involving both health and non-health sectors. This will be achieved through a coordination and partnership framework.

2. **Ownership:** with a focus on engagement and buy-in of stakeholders will ensure effective implementation of this policy.

3. **People-centred approach:** that focuses on interventions that are responsive to women's needs.

4. **Quality of care:** will be safeguarded to achieve desired outcomes in cervical cancer screening, treatment and care.

5. **Evidence-based:** all efforts to tackle cervical cancer in Marshall Islands will be guided by recognized best practices and scientific evidence and supported through monitoring and evaluation and research.

6. **Equity, social justice and universal coverage:** there is recognized need to ensure equitable access for all to HPV vaccination, cervical cancer screening, treatment and care with a focus on vulnerable women and girls.

7. **Cost-effectiveness:** prioritizing the allocation of resources and applying guidelines for the cancer elimination interventions that have the potential to yield the greatest improvement in health for the least resources.

8. **Accountability:** the policy to be implemented within a clear accountability framework.

9. **Appropriate technology:** is harnessed to support the delivery of gold standard quality HPV vaccination and HPV testing to prevent cervical cancer and to deliver best care for women with cervical cancer.

1. The target for screening in this policy and strategy is 70% given the introduction of HPV DNA testing and following WHO targets.

The Republic of the Marshall Islands (RMI) is made up of 29 atolls and five isolated islands, 24 of which are inhabited. The 2021 preliminary census recorded the population at 42,594 people. With 52.3% of the population living on Majuro, 21.5% on Kwajalein, 3.4% on Arno, 3.4% on Jaluit, 3.3% on Ailinglaplap and the remaining 16.3% spread across the remaining inhabited islands (Economic, Policy, Planning and Statistics Office and SPC, 2012). Transportation between the atolls and islands is by boat or air. There are 23 airstrips located on the larger of the outer atolls which are serviced by local operator Air Marshall, and government-owned boats make regular trips.

The Ministry of Health and Human Services oversees the delivery of healthcare in the Marshall Islands, served by two public hospitals, one in the capital Majuro and the other in Ebeye and approximately 49 health centres in the outer islands. The outer island healthcare centres are staffed by nurse practitioners and/or health assistants. Outer island communities have more limited health services compared to the two main atolls largely due to geographical challenges and the availability of transport to these remote locations. Basic healthcare services, including vaccinations and pap smears, are available at little expense to Marshallese citizens.

The number of cases of cancer in the Marshall Islands was 568 between 2007 and 2020, with a crude rate of 149.2 per 100,000 per year (Buenconsejo-Lum, Jeong, Baksa and Palafox, 2023). Cancer was the second leading cause of death between 2009-2013 (MOHHS, 2022), with lung, cervical and liver the most common cancer mortalities (Kroon et al., 2004; Ministry of Health 2011; Briand & Soe, 2004). For all cancers, the likelihood of fatality is 54%, with only 28 days median time from diagnosis to death (Van Dyne et al., 2020). The US used the Marshall Islands as a site for nuclear weapon testing between 1946-1958, and the release of iodizing radiation can be linked to many prevalent cancers (De Ishtar, n.d.; Tervonen et al., 2017). Studies have estimated that 20% of thyroid cancer cases, 5% of leukemia cases and approximately 1.6% of all cancers in Marshall Islands can be attributed to radiation exposure, and that 170 excess cases of cancer will occur due to radiation (Tervonen et al., 2017). The Nuclear Claims Tribunal, which renders determination and compensation on claims based on the nuclear testing, has acted as a record of cancer cases in the Marshall Islands prior to the formation of a cancer registry (Palafox et al., 2004). However, this has not included cervical cancer, as cervical cancer is not considered radiation related (Briand & Soe, 2004; De Ishtar, n.d).

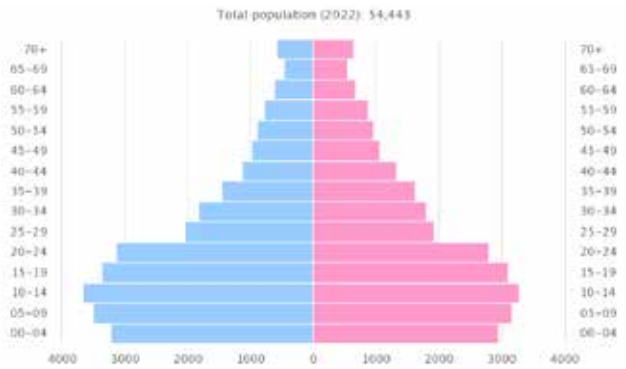
The Marshall Islands and US-affiliated Pacific Islands Cancer Coalitions

After an increase in cancer cases in the 1990s, many US-affiliated Pacific Islands (USAPIs) agreed that a concerted approach was needed to strengthen the governance, management and capacity for cancer prevention and control in the region. The Cancer Council of the Pacific Islands (CCPI) was formed in 2002 with funding from the US National Cancer Institute Health Disparities Program. Initially, this council was composed of a senior public health and a clinical professional from each USAPI. From this evolved the Pacific Regional Cancer Control Partnership (PRCP); a multi-national, community-based coalition between CCPI and external partners such as policy organizations, funding agencies, academic and advocacy agencies (see Palafox et al., 2018). As well as plans, programs and research, the Pacific Regional Central Cancer Registry has been implemented through the PRCP. The PRCP supports USAPI to secure Centre for Disease Control and Prevention (CDC) registry cooperative agreements. The registry, housed in Guam, has been systematically collecting population-based cancer data since 2007 across Guam, American Samoa, Northern Mariana Islands, Palau, Micronesia and RMI (Tervonen et al., 2017; Ekeroma et al., 2019; Haruyama et al., 2021; Sarfati et al., 2019; WHO, 2020).

Cervical Cancer Risk in Marshall Islands

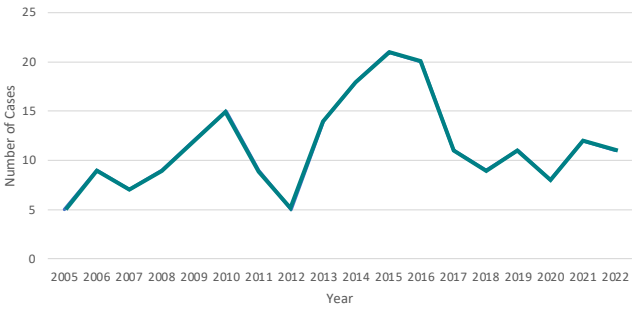
While HPV vaccination of girls and boys holds the key to the elimination of cervical cancer there are approximately two generations of Marshallese women who will not be vaccinated and who may be at risk of cervical cancer. There are an estimated 26,767 women and girls in Marshall Islands in 2022, as demonstrated in Table 1 (SPC, 2022). Of these women and girls there are 12,387 that are the most at-risk age group for cervical cancer, aged between 20-59 years.

Table 1: Population Pyramid 2022



Cervical cancer is the most common form of cancer in the Marshall Islands, according to data from the National Cancer Registry (MOHHS, 2022). It is followed by lung, breast and uterus cancer. As indicated in Figure 1, there were a total of 206 cases of cervical cancer between 2005 and 2022. The lowest number of cases per year was 5 cases reported in 2005 and 2012 and the highest number of cases per year was 21 reported in 2015 (MOHHS, 2022). There are many factors including the screening rates that affect the number of cases of cervical cancer diagnosed per year.

Figure 1: Cases of Cervical Cancer in the Marshall Islands 2005-2022



Source: Marshall Islands Ministry of Health and Human Services, 2022.

Data from 2007-2012 indicate the crude rate of cervical cancer being 70 per 100,000 women over the age of 20 years per year (Van Dyne et al. 2020). At the time was the highest incidence of cervical cancer in the world (Ferlay et al., 2012; Van Dyne et al., 2020). The incidence-based mortality rate among women due to cervical cancer is of 34.0 per 100,000 women over the age of 20 years in the Marshall Islands, 11.7 per 100,000 women over the age of 20 years in Palau and 1.7 per 100,000 women over the age of 20 years among Asian/Pacific Islanders in Hawai'i (Van Dyne et al., 2020). The cervical cancer mortality rate in the Marshall Islands is 20 times higher than in Hawai'i among Asian/Pacific Islanders. This may be due to differences in screening access, follow-up, late-stage presentation, and limited treatment in the Marshall Islands (Van Dyne et al., 2020). The 5-year survival rate of cervical cancer is only 58% (MOHHS, 2017).

More recent data from the Cancer Registry indicates that, as shown in Table 2, between 2017 and 2021 there were 52 women diagnosed with cervical cancer over that five-year period. This includes 12 cases in 2017, 9 cases in 2018, 11 cases in 2019, 8 cases in 2020 and 12 cases in 2021. Among the 52 cases between 2017 and 2021, 28 (54%) of women diagnosed during that period have died. This does not include the deaths of women who were diagnosed prior to 2017 and have died since then. The average number of deaths per year was five. Of these cases the youngest woman diagnosed was aged 27 and the oldest was aged 69 and the average age of diagnosis was aged 47.

Table 2 : Cervical Cancer Patient Data: Year of Diagnosis, number of deaths and age range (2017-2021)

Year	Number of cases	Number of deaths[2]	Age range
2017	12	5	30-66
2018	9	5	32-55
2019	11	7	30-63
2020	8	7	27-62
2021	12	4	27-69

Source: Cancer Registry, Marshall Islands Ministry of Health and Human Services, 2022. Date of Pro. = Date of Procedure

HPV Vaccination

The Marshall Islands began roll out of the HPV vaccination for girls in the year 2009. As indicated in Table 3 an average of 34% of eligible girls received their first dose of the HPV vaccine. The highest proportion reached a year was 67% in 2019 and the lowest was 11% in 2012. In 2021, HPV vaccination was put on hold due to the focus on the roll-out of the COVID-19 vaccine. The target age for HPV vaccination was grade 6-7 or 12-13 years of age for those who are not in school. In this policy the age for HPV vaccination has been amended to grade 3-6 and 9-12 years of age. Two doses of the vaccine are provided six months apart.

2. This refers to the number of deaths among women diagnosed in the given year but may have died in that year or a later year.

Table 3: HPV vaccination coverage in Marshall Islands 2010-2021

Year	Vaccination coverage as a % of eligible girls	
	First Dose	Second Dose
2010	30	46
2011	20	3
2012	11	10
2013	46	14
2014	31	23
2015	31	23
2016	38	31
2017	21	21
2018	48	28
2019	67	24
2020	50	33
2021	0	0

Source: Haruyama et al., 2021 for years 2010 to 2019; Marshall Islands Ministry of Health and Human Services for the year 2020

Table 4: Vaccination of Girls 2018-2020

Location	Number of girls vaccinated	% of eligible girls vaccinated
2018		
Majuro	334	28
Ebeye	220	70
NI	119	33
2019		
Majuro	315	30
Ebeye	208	69
NI	87	27
2020		
Majuro	268	28
Ebeye	211	63
NI	42	16

Source: Marshall Islands Ministry of Health and Human Services, 2022.

The HPV vaccine is supplied through the Centers for Disease Control and Prevention (CDC) of the government of the United States of America. The vaccine currently being used is the HPV 9 valent Gardasil. The CDC recommendation for HPV vaccination is to vaccinate both girls and boys. Vaccination of boys along with girls will be introduced within the Marshall Islands to increase vaccine coverage and reduce transmission of HPV as boys can be carriers of HPV. As well, recent evidence also indicates that a single-dose of the HPV vaccine were highly effective in preventing HPV infection in a way that is similar to multidose regimens (Barnabas et al., 2022). The country can consider moving to a single-dose of HPV vaccination.

There are differences in the vaccination rates among the proportion of eligible girls reached in different geographic locations across the country. As indicated in Table 4, Ebeye has reached a minimum of 69% vaccination rate between 2018 and 2020. In Majuro the rate was lower between 28-30% during 2018 and 2020. In the neighboring islands (NI) it was 33% in 2018, 27% in 2019 and lower at 16%. The decrease in the rate of vaccination was due to the travel restrictions to the NI and the health system focus on the COVID-19 response.

The Immunization Program within MoHHS lead the HPV vaccination program. There are 80 public elementary schools and 15 private elementary schools that go up to grade 8 or 13 years of age. Each year MoHHS undertake school visits to provide information and distribute consent forms for parents to provide approval for their daughters to be vaccinated. Both a lack of endorsement by some schools and refusal to consent by some parents contribute to reduced uptake of the vaccine. A low number of schools have refused to allow vaccination in which case the MoHHS conducts community outreach to reach students attending those schools. Parents in some cases refuse their daughters to be vaccinated for religious reasons or views that the vaccine is condoning adolescent sexual activity.

Community outreach in partnership with non-government organizations (NGOs) such as Women United Marshall Islands (WUTMI) are conducted to reach girls who are not attending school. The proportion of girls not attending school is notable, census data indicates that among the population over the age of 25 years, grade 6-7 was the highest grade completed among 14.1% of females and 9.2% of males (Economic, Policy, Planning and Statistics Office and SPC, 2012).

The challenges of HPV vaccination are different in the NI. MOHHS travel to the NI to conduct vaccination programs along with the provision of other health services. Parents in the NI attend the

health clinics and provide verbal consent for their daughters to be vaccinated. The rate of refusal tends to be lower in the outer islands as people tend to trust the health workers and the advice they provide. However, there are challenges in being able to travel to all of the more remote NI every year to conduct vaccinations. The Strategy aims to address these issues planned within MoHHS Strategic Plan 2022-2030.

Cervical Cancer Screening

The pap smear test and VIA are the cervical cancer screening tests carried out in the Marshall Islands. Pap smear tests are conducted in an opportunistic manner mainly among women who attend gynaecology clinic at the main hospital in Majuro and on an ad-hoc basis at other health centres. VIA is used in some instances but is noted as being operator dependent. Thermal ablation and cryotherapy have been used in the past but are currently not being regularly used.

The RMI Cancer Plan 2017-2022 Review, notes that under the 2017-2022 plan and the objective to increase cervical cancer screening. The baseline among women 21-65 years was 27%, the target was 60% and the actual reached was 24% in 2020 with the highest rate being 34% in 2017 (MOHHS, 2022). More than 2,500 Marshallese women will need to be screened for cervical cancer over the next 5 years if RMI are to meet the WHO screening recommendations (Bruni et al., 2022).

Pap smear and cervical biopsy specimens are processed by the hospital laboratory and then sent to Hawai'i to be processed as there is currently no pathologist in the country to process specimens. The cost of processing a single test is approximately USD$63. The estimated average wait time for processing is around two weeks but it can be significantly longer. However, the processing can be prioritised if it is an abnormal sample. Since, 2018 the laboratory has been using a digital system to manage testing data. Despite this data tends to be compiled in a fragmented way due to having limited human resources and technological limitations. HPV DNA testing using GeneXpert HPV cartridges is likely to be a more cost effective than pap smear tests. As well, they can be processed in the hospital laboratory and sample collection can be self-administered.

Data from the Marshall Islands Hospital Laboratory indicates that there are an average of approximately 400 pap smears conducted each year. As noted in Table 5, the highest number of 591 pap smears was conducted in 2021 and lowest rate of 294 in 2018. As indicated in Table 6, the number of pap smears conducted on Majuro varies by year, while Table 7 indicates that the number of pap smears has continually decreased from 2018 to 2022. For a population of approximately 12,000 women between the ages of 20 and 59 years, 400 pap smears a year is a low rate of cervical cancer screening.

Table 5: Cervical Cancer Data Marshall Islands 2018-2022

Year	Total Pap Smear	Abnormal Pap Smears	Cervical Cancer	Age Range	% with Cancer
2018	294	15	9	32-55	3.06
2019	452	26	11	30-63	2.43
2020	334	16	8	27-62	2.09
2021	591	19	12	27-69	2.03
2022	359	22	11	32-66	3.06

Source: Majuro & Ebeye Hospitals

Table 6: Cervical Cancer Data Majuro, 2018-2022

Year	Total Pap Smear	Cervical Cancer	Age Range	% with Cancer
2018	145	7	32-55	4.82
2019	357	9	30-63	2.52
2020	251	6	27-62	1.99
2021	555	10	27-60	1.80
2022	340	9	32-66	2.64

Source: Majuro Hospital

Table 7: Cervical Cancer Ebeye, 2018-2022

Year	Total Pap Smear	Cervical Cancer	Age Range	% with Cancer
2018	149	2	45-53	1.34
2019	95	2	39-45	2.11
2020	83	2	36-53	2.41
2021	36	2	37-69	5.56
2022	19	2	39-43	10.53

Source Ebeye Hospital

There are cultural, social and contextual factors that impact women's health seeking behaviour related to cervical cancer screening. Anecdotal evidence indicates that women may first try traditional medicine if they are experiencing vaginal bleeding, discharge or pain which can lead to delayed screening, diagnosis and treatment. In some NI there are only male health workers and women do not feel comfortable having male health workers conduct a pap smear or VIA. Patients are also being lost to follow-up while they are waiting for test results. Women who require multiple visits for follow-up, especially women from the NI can be greatly burdened with irregular transportation and the challenges associated with needing to leave their home island for weeks, or months or even years for screening and treatment if required (Senkomago et al., 2017). Pengpid et al.'s (2021) study showed that a higher socio-economic position increased likelihood of cervical screening uptake. This is consistent with other research conducted in other low- and middle-income country settings. The action plan for this policy and strategy aims to address cultural and social factors by increasing awareness of cervical cancer screening, introducing HPV DNA testing and increasing the pool of female health workers.

Treatment for Cervical Cancer

Advanced treatment for cervical cancer is not available in the Marshall Islands. Women who are diagnosed early with cervical cancer, at stage one or two can be referred for treatment overseas. As indicated in table 6, during the six-year period between 2017 and 2022 there were 125 cancer referrals made of which 19 were for cervical cancer. Referrals are made to send patients to either Hawai'i or to the Philippines for advanced cancer treatment such as radiation therapy and chemotherapy. When patients are referred overseas they are accompanied by an escort, typically a family member and they both receive a living allowance while they are there. Women with financial means may go overseas to seek treatment at their own cost. As well, even if treatment is available, some cancer patients may refuse it due to reasons such as health illiteracy, breakdown of communication between medical staff and patients, fear, lack of family support in decision making, or a preference for or stronger belief in traditional medicine (MOHHS, 2017; Pengpid et al., 2021).

Table 8: Referrals for Overseas Treatment: All, Cancer and Cervical Cancer 2017-2022

Year	All referrals	Cancer Referrals	Cervical Cancer Referrals
2018	132	19	0
2019	174	36	5
2020	16	9	5
2021	15	15	4
2022	103	14	1

Source: Cancer Registry, Marshall Islands Ministry of Health and Human Services

Management of Cervical Cancer Patients

Management of patients with cervical cancer occurs through the survivorship program within the Cancer Program within the MOHHS. According to the assessment of the RMI Cancer Plan 2017-2022 Review, in the past through the survivorship program they have conducted initiatives including cancer summits, survivorship care training, hiring of navigators/case managers, new support services, clinical guidelines and palliative care training. Areas for improvement included faster off-island referral, oncologist follow-up, increased on-island procedures, survivorship plans, psychological services and palliative care teams.

The new Cancer Control Plan identifies the following objectives and strategies related to survivorship.

1. Increase education about survivorship and awareness about survivorship needs and barriers to quality of life of survivors. Strategies include providing information to cancer survivors, healthcare providers and the public about cancer survivorship and meeting their needs as well as understanding patient navigation or case management.

2. Improve clinical care and use of survivorship care plans. Strategies include improving patient navigation or case management; education of cancer survivors on stages of survivorship during and right after treatment, education of policymakers about the role and value of long term follow up, implementing evidence-based care plans, and disseminating guidelines that support quality and timely service provision to cancer survivors.

3. Increase use of palliative care services. Strategies include increasing patient navigation or case management, establishing clinical practice guidelines for pain management and palliative care, and establishing integrated

multidisciplinary teams of health providers for pain management and palliative care.

HPV Testing and Treatment

According to the WHO, the gold standard for screening and testing for cervical cancer is HPV testing which looks for the DNA of the virus (human papillomavirus) that can cause these cell changes. HPV16 and 18 are the major oncogenic types (especially 16), so testing tends to concentrate on identifying these types. The advantage of HPV testing is that those women who test negative for HPV do not need a pelvic examination. The development of rapid molecular methods for detecting HPV DNA for screening and treating is a milestone in cervical screening in low-resource settings, making screening more feasible in the future and reducing the infrastructural requirements of previous screening programmes. Reviews comparing the different screening tools in low- and middle-income countries, indicate that once in a lifetime testing with HPV had a superior sensitivity and greater reduction in cervical cancer incidence compared to VIA or cytology testing (pap smear). However, the HPV strategy is more expensive than VIA.

HPV testing has been introduced in some US Affiliated Pacific Islands including Guam and Palau (CDC, 2022). In Palau for example, screening includes either a pap smear every three years for women age 21-65 years or an HPV test every five years for women over 30 years (HPV Information Centre, 2022). The introduction of HPV testing in the Marshall Islands has the potential to enhance cervical cancer screening but requires resourcing.

POLICY DIRECTION

VISION

The vision of the policy is the elimination of cervical cancer in the Marshall Islands within two generations.

MISSION

To eliminate HPV in girls and boys through HPV vaccination and to reduce the preventable burden, incidence, morbidity and mortality due to cervical cancer through multisectoral and multi-disciplinary collaboration and cooperation so that Marshallese women can reach the highest attainable standards of reproductive health, quality of life and productivity throughout their life course.

CERVICAL CANCER ELIMINATION OUTCOMES

To move towards the goal of cervical cancer elimination, it will be necessary to ensure that the Marshall Islands is able to implement increased HPV vaccination, HPV testing and treatment where necessary, and cervical cancer treatment and palliative care based on current scientific evidence. The aim is to achieve the actions and goals set out in this policy between 2024 and 2030.

The Goal is to ensure by 2030:

- 80% of all girls (both in and out of school) over the age of 9 to 12 years are vaccinated against HPV;
- 70% of Marshallese women by age 21-60 years are tested for HPV at least twice in their lifetime (once between 21-35 years and once between 35-45 years); and that
    - 90% of those testing positive for HPV undergo pelvic examination, with treatment if necessary, via thermal ablation or referral for gynaecological review and colposcopy;
    - 90% of those who are referred for gynaecological review with signs of pre-cancers are referred for specialist treatment;
- 90% of those diagnosed with early-stage cervical cancer are treated; and
- 90% of those diagnosed with late-stage cancer are managed, and obtain palliative care.

POLICY OBJECTIVES

1. Improve cervical cancer prevention, screening and precancer treatment through innovative strategies.
2. Improve access to services for cancer diagnosis, treatment, rehabilitation, and palliative care.
3. Build health worker capacity to diagnose, treat, and manage cervical cancer.
4. Strengthen linkages within the health system and national and overseas referral systems in alignment with the MoHHS National Strategic Plan 2022-2030 health service reform strategies.
5. Improve cervical cancer program organization, governance and information systems in alignment with the MoHHS National Strategic Plan, 2022-2030 actions for cervical cancer prevention and control.
6. Create an enabling environment for cervical cancer elimination.

STRATEGIES TO ACHIEVE POLICY OBJECTIVES

Policy Objective 1: Improve cervical cancer prevention, screening and precancer treatment through innovative strategies;

1.1. Increase rate of HPV vaccination of grade six girls and boys, including those out of school.

1.2. Increase awareness of HPV vaccination and cervical cancer screening.

1.3. Introduce HPV DNA testing to screen women over the age of 30 years.

1.4. Increase cervical visual inspections and thermal ablation to treat abnormal cervical lesions for women.

Policy Objective 2: Improve access to services for cancer diagnosis, treatment, rehabilitation, and palliative care.

2.1. Increase the number of women attending gynaecological review to have a recent pap smear.

2.2. Increase the number of women with abnormalities that are referred for gynaecological review.

2.3. Increase access to overseas treatment for those with early-stage cervical cancer.

2.4. Increase education about survivorship and about survivorship needs.

2.5. Improve clinical care and use of survivorship plans.

2.6. Increase awareness of palliative care services.

Policy Objective 3: Build health worker capacity to diagnose, treat, and manage cervical cancer.

3.1. Introduce HPV DNA testing at health facilities.

3.2. Increase health worker capacity to undertake HPV screening including VIA and thermal ablation treatment is increased.

3.3. Update health workers knowledge and skills on treating and managing cervical cancer.

3.4. Build capacity of staff to utilise HPV DNA testing using GeneXpert.

Policy Objective 4: Strengthen linkages within the health system and national and overseas referral systems in alignment with the MoHHS National Strategic Plan 2022-2030 health service reform strategies

4.1. Expand cervical cancer screening services to the outer islands.

4.2. Strengthen the referral pathway from the outer islands to Majuro is improved.

4.3. Strengthen the referral pathway from Majuro to overseas is improved.

Policy Objective 5: Improve cervical cancer program organization, governance and information systems in alignment with the MoHHS National Strategic Plan, 2022-2030 actions for cervical cancer prevention and control.

5.1. Strengthen the RMI National Comprehensive Cancer Control Coalition (RCC).

5.2. Continue cervical cancer data within the Cancer Registry.

5.3. Design and implement a programme for the elimination of cervical cancer.

5.4. Formulate a monitoring and evaluation framework for the national cervical cancer action plan, with targets and milestones for 2030.

Policy Objective 6: Create an enabling environment for cervical cancer elimination.

6.1. Strengthen partnerships at every level – other sectors, stakeholders and relevant disciplines.

6.2. Strengthen advocacy for cervical cancer at all levels.

6.3. Communities are mobilised to increase advocacy and outreach promoting HPV vaccination and cervical cancer screening.

ACTION PLAN

Strategy	Outcome	Activity	Achieve by	Responsibility
Policy Objective 1: Improve cervical cancer prevention, screening and precancer treatment through innovative strategies;				
1.1. Increase rate of HPV vaccination of grade four girls and boys, including those out of school.	HPV vaccination rate is increased with 80% of girls and boys, both in and out of school, age 9 to 12 years being vaccinated.	Continue conducting HPV vaccination in-schools.	31.12.23	MoH and other stakeholders
1.2. Increase awareness of HPV vaccination and cervical cancer screening.	Awareness of HPV vaccination and cervical cancer screening is increased.	Develop and conduct awareness raising campaigns and community engagement to increase awareness and promote HPV vaccination and cervical cancer screening. Including HPV vaccination champions to publicly promote HPV vaccination and screening.	2024	MoHHS & NGO partners
NGO partners	HPV DNA testing is provided to screen women aged 21-60 years.	Procure and resource roll-out of HPV DNA testing kits.	30.06.24 From 30.07.24	MoH MOHMS and other stakeholders
1.4. Increase cervical visual inspections and thermal ablation treatment to treat abnormal cervical lesions for women.	Cervical visual inspections and thermal ablation to treat abnormal cervical lesions are accessible for women.	Provide training for health workers to conduct cervical visual inspections and thermal ablation to treat abnormal cervical lesions.	30.06.24	MOHMS/SINU and other stakeholders
Policy Objective 2: Improve access to services for cancer diagnosis, treatment, rehabilitation, and palliative care.				
2.1. Increase the number of women attending gynaecological review to have a recent pap smear.	Women attending gynaecological review have a recent pap smear.	Develop guidelines and conduct refresher training for doing pap smears.	2025	MoHHS
2.2. Increase the number of women with abnormalities that are referred for gynaecological review.	Women with abnormalities are referred for gynaecological review.	Develop guidelines and conduct training for screening.	2025	MoHHS
2.3. Increase access to overseas treatment for those with early-stage cervical cancer.	Women have increased access to overseas treatment for those with early-stage cervical cancer.	Introduce HPV DNA testing to facilitate early diagnosis.	By 31/12/24	MOHMS/NRH
2.4. Increase education about survivorship and about survivorship needs.	Increased average Quality of Life Score of cancer survivors is increased to more than 7.0.	Provide information about survivorship to cancer survivors, health workers and the public.	2025	MoHHS
2.5. Improve clinical care and use of survivorship plans.	Increased proportion of patients with Survivorship Care Plan to more than 50%.	Develop guidelines for survivorship care plans. Educate cancer survivors and health workers on survivorship plans.	2025	MoHHS, Cancer Program

Strategy	Outcome	Activity	Achieve by	Responsibility
2.6. Increase awareness of palliative care services.	Increased proportion of patients receiving palliative care exceeds 75%.	Develop clinical practice guidelines for pain management and palliative care.	By 31/12/24	NRH
Policy Objective 3: Build health worker capacity to diagnose, treat, and manage cervical cancer.				
3.1. Make HPV DNA testing the primary means for cervical cancer screening within three years.	HPV DNA testing is the primary means for cervical cancer screening across the Marshall Islands by 2027.	Produce a plan for HPV DNA testing supply chain equipment and consumables. Produce guidelines for HPV DNA testing. Develop a plan and provide training for health workers to screen for HPV.	2027	MOHMS
3.2. Increase health worker capacity, particularly female health aides as per the MHHS National Strategic Plan 2022-2030, to undertake HPV screening including VIA and thermal ablation is increased.	Health workers have the ability to undertake HPV screening including VIA and thermal ablation treatment is increased.	Provide training targeted at female health workers on VIA inspection and thermal ablation with a focus on training of female health aides working in the outer islands	2025	MoHHS
3.3. Update health workers knowledge and skills on treating and managing cervical cancer.	Health workers are able to offer quality care for treating and managing cervical cancer.	Provide training for health workers on patients with pre-cancers and early stage cervical cancer.	2025	MoHHS & other partners (i.e. Pacific Island Health Officers' Association and Fiji National University)
3.4. Build capacity of staff to utilise HPV DNA testing using GeneXpert.	Laboratory staff at main hospitals can process HPV tests.	Training of laboratory staff to use GeneXpert machines to test for HPV 16.18.	2025	MoHHS
3.5. Strengthen data management at the hospital laboratory as per the MHHS National Strategic Plan, 2022-2030.	Cervical cancer data processing and management is efficient and effective.	An epidemiologist supervised registry data unit is functioning to assure continuity and accuracy of data entry.	2025	MoHHS
Policy Objective 4: Strengthen linkages within the health system and national and overseas referral systems in alignment with the MHHS National Strategic Plan 2022-2030 health service reform strategies				
4.1. Expand cervical cancer screening services to the neighbouring islands in alignment with the MoHHS National Strategic Plan, 2022-2030.	Cervical cancer screening services are regularly provided to the neighboring islands.	Integrate HPV DNA testing, VIA and thermal ablation into services provided to the neighboring islands.	2026	MoHHS, Outer Islands Health Services
4.2. Strengthen the referral pathway from the neighboring islands to Majuro is improved.	An increased number of women are referred from the neighboring islands to Majuro is improved.	Strengthen communication and protocols for referrals with NI health services and the Cancer Program referrals.	2026	MoHHS
4.3. Strengthen the referral pathway from Majuro to overseas is improved.	An increased number of women are referred from Majuro to overseas is improved.	Strengthen communication and protocols for referrals with clinicians and the Cancer Program referrals.	2026	MoHHS

Strategy	Outcome	Activity	Achieve by	Responsibility
Policy Objective 5: Improve cervical cancer program organization, governance and information systems in alignment with the MoHHS National Strategic Plan, 2022-2030 actions for cervical cancer prevention and control.				
5.1. Strengthen the RMI National Comprehensive Cancer Control Coalition (RCC).	The RMI National Comprehensive Cancer Control Coalition (RCC) meet on a regular basis and actions are taken up.	RCC meet regularly and produce reporting.	Ongoing	MoHHS
5.2. Improve the functioning and use of the cervical cancer screening registry.	Cervical cancer screening registry is functioning to collect and monitor patient screening.	Review, update and provide training on the cervical cancer screening registry.	Ongoing	MoHHS
5.3. Continue cervical cancer data within the Cancer Registry.	Cancer Registry is well functioning, and collects and monitors all relevant cervical cancer patient data.	Review and update Cancer Registry and produce regular reporting.	Ongoing	MoHHS
5.4. Design and implement a programme for the elimination of cervical cancer.	Cervical cancer programme is implemented.	Design a programme to provide detailed information on how to implement the activities in the action plan.	2024	MoHHS
5.5. Formulate a monitoring and evaluation framework for the national cervical cancer action plan, with targets and milestones for 2030.	M&E framework is endorsed by RCC.	Develop an M&E framework in consultation with stakeholders and seek endorsement.	2024	MoHHS
Policy Objective 6: Create an enabling environment for cervical cancer elimination.				
6.1. Strengthen partnerships at every level – other sectors, stakeholders and relevant disciplines.	Partners fully on board for promotion of cervical cancer elimination.	Develop and establish memorandum of understanding with various stakeholders.	Ongoing	MoHHS
6.2. Strengthen advocacy for cervical cancer at all levels.	Increased awareness of cervical cancer among the public.	Work with various stakeholders conduct campaigns to raise awareness of cervical cancer that are culturally appropriate and widely disseminated through different mediums	Ongoing	MoHHS
6.3. Communities are mobilised to increase advocacy and outreach promoting HPV vaccination and cervical cancer screening.	More out-of-school girls and boys and people with disabilities are vaccinated.	Work with relevant government department and NGOs to access girls (and boys) out-of-school and other marginalised groups.	Ongoing	MoHHS

MONITORING AND EVALUATION FRAMEWORK

Activity	Output	Percentages	Baseline	Target
HPV vaccination coverage	Annual report on HPV vaccination utilising disaggregated data	% of Grade 5 girls and boys vaccinated	45% of girls and 0% of boys	80% of Grade 5 girls and boys have received HPV vaccination
HPV testing and treatment coverage	Annual report on HPV testing and treatment	% of women over 21 to 60 years tested at least once for HPV % of those tested positive for HPV undergo pelvic examination, treatment and referral	No baseline data No baseline data	70% of women 21 to 60 years 90% of women tested positive undergo pelvic examination, treatment and referral
Treatment and management of cervical cancer	Survivorship section in annual Cancer Program report	% managed and obtain palliative care	60% of patients with no cancer treatment receive palliative care	75% of patients with no cancer treatment receive palliative care

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