World Health Organization

WHO COUNTRY COOPERATION STRATEGY 2015-2019

MAURITIUS

I. INTRODUCTION

The World Health Organization's Country Cooperation Strategy (CCS) is an Organization wide reference for country work, which guides planning, budgeting, resource allocation and partnership.

The CCS reflects the overarching values of the United Nations that underpin WHO's Constitution and contribute to improving global health, health-related human rights, equity and gender equality.

The key principles guiding WHO cooperation in countries and on which the CCS is based are:

1. ownership by the country of the development process;
2. alignment with national priorities and strengthening national systems in support of the national health strategies or plans;
3. harmonization with the work of other UN agencies and other partners in the country for better aid effectiveness; and
4. collaboration with Member States' contributions in shaping the global health agenda.

The CCS is a medium-term vision for WHO's technical cooperation with Mauritius in support of the country's national health policies, strategies and plans.

It is expected to constitute the main tool or harmonizing WHO cooperation in Mauritius with government plans and those of other UN agencies and development partners.

The work of WHO as the world's health agency is directed by the General Programme of Work (GPW). The general programme of work also describes the WHO core functions, which reflect the comparative advantages of the Organization . The purpose of the general programme of work is to provide high level strategic vision for the work of WHO. The Twelfth GPW establishes priorities and provides an overall direction for the six-year period beginning in January 2014.

The 12th GPW reflects the three main components of WHO reform: programmes and priorities, governance and management. In this context, its sets out leadership priorities that will both define the key areas in which WHO seeks to exert its influence in the world of global health and drive the way work is carried out across and between the different levels of the Secretariat.

The six core function that were articulated in the Eleventh General Programme of Work remain a sound basis for describing the nature of WHO's work. They are:

1. Providing leadership on matters critical to health and engaging in partnerships where joint action is needed;
2. Shaping the research agenda and stimulating the generation, translation and dissemination of valuable knowledge;
3. Setting norms and standards, and promoting and monitoring their implementation;
4. Articulating ethical and evidence-based policy options;
5. Providing technical support, catalysing change, and building sustainable institutional capacity;
6. Monitoring the health situation and assessing health trends.

The 12th General Programme of Work of WHO identified six leadership priorities (Box 1).

Box 1 Leadership priorities 2014-2019

Advancing universal health coverage: enabling countries to sustain or expand access to essential health services and financial protection and promoting universal health coverage as a unifying concept in global health.
Health-related Millenium Development Goals – addressing unfinished and future challenges: accelerating the achievement of the current health-related Goals up to and beyond 2015. This priority includes completing the eradication of polio and selected neglected tropical diseases.
Addressing the challenge of noncommunicable diseases and mental health, violence and injuries and disabilities.
Implementing the provisions of the **International Health Regulations**: ensuring that all countries can meet the capacity requirements specified in the International Health Regulations (2005).
Increasing access to essential, high-quality and affordable **medical products** (medicines, vaccines, diagnostics and other health technologies).

Addressing the **social, economic and environmental determinants** of health as a means of reducing health inequities within and between countries.

The strategic priorities for the period 2014–2019 set forward directions for WHO reform, which reflect new realities, and the need for both continuity and change. The Twelfth General Programme of Work of WHO agreed on six categories, which will define the structure for successive programme budgets from 2014 (box 2)

Box 2: Categories for priority setting
1. Communicable diseases
2. Noncommunicable diseases
3. Promoting health through the life-course
4. Health systems
5. Preparedness, surveillance and response
6. Corporate services & enabling functions

The first generation WHO CCS in Mauritius covered the period 2004–2007, followed by the second generation CCS for 2008-2013.

The CCS development process was guided by the new WHO CCS Guide 2015 involved documentary reviews, situation analysis and broad based consultation with key national stakeholders in health, including UN agencies, WHO Regional office for Africa and WHO headquarters.

Important documents, such as the Health Master Plan 2012–2015, the Government Programme (2015-2019), the WHO GPWs, the WHO Programme Budget 2014-2015 and other documents were reviewed and used as the basis for identifying priorities for WHO's work in Mauritius.

The CCS development process involved extensive consultation with stakeholders and high-level decision makers in formulating the priorities and the working modalities reflected in the current CCS. Among the principal outcomes of these consultations are:

- identification of the strategic agenda for WHO collaboration;
- agreement on strategic priorities, main focus areas and strategic approaches; and
- a new country cooperation strategy.

2. HEALTH AND DEVELOPMENT SITUATION

2.1 Main health achievements and challenges

Macroeconomic, political and social context of the country

With an average economic growth rates of 4.5% over the period 1990 – 2012 the Gross National Income per capita rose (PPP) was US$ 17,220 in 2013. Sustainable macroeconomic polices and reforms have boosted Mauritius to emerge as an Upper Middle Income Country within three decades.

Since independence in 1968, free and fair elections have been held. All democratically elected governments have upheld democratic values, good governance and promoted social inclusion.

Mauritius is a full-fledged member of all the major African regional organizations, namely the African Union, Southern African Development Community (SADC), Common Market for Eastern and Southern Africa (COMESA) and Indian Ocean Commission (IOC). By virtue of its geographical location and size Mauritius is classified by the UN as a Small Island Developing States (SIDS).

Demographic transition

Island of Mauritius has already undergone the classical phases of demographic transition to attain the third phase of a declining birth rate and a relatively stable low death rate since the early 1990's. Crude birth rate dropped well below the ten year average for period 2003-2012 (13.56 per 1000 mid-year population) to 10.7 per 1000 mid-year population in 2013. Crude death rate was 7.6 per 1000 mid-year population in 2013.

The general shape of the population pyramid over the period 2000 – 2011 has the sterotype features of highly developed countries, with relatively smaller proportion in the less-than-39 -years-of-age categories and larger proportion of the population older age group. 52% of the population comprises women in the reproductive age group (15–49 years) in 2011 compared 56% in 2000.

The size of the population over the age of 65 accounting 7.2% in 2010 for the Republic of Mauritius is projected to more than double by 2030, rising to 15.9%.

The rapid ageing population is a main challenge for the health care delivery system in terms of provision of geriatric care.

Health Status of the population

The health status of the people of Mauritius has improved in the past two decades. Life expectancy at birth improved from 70 years In 1990 to 74.1 years on average in 2013 (70.7 years for males and 77.7 years for females). Health Adjusted Life Expectancy (HALE) was estimated at 62 years for males and 68 years for females in 2012. This implies that that about 12% of the total life expectancy is lived with disability.

Mauritius has reached an advanced stage in its epidemiological transition, characterized by a leveling of population growth resulting from declines in fertility rates and shift from infectious diseases to chronic diseases over time due to expanded public health and sanitation.

Table 1 CURRENT HEALTH INDICATORS

Total population in thousands (2013)[1]	1217(Mauritius Island) 41 (Rodrigues Island)
% Population under 15 (2013)[1]	19.7
% Population over 60 (2013)[1]	13.7
Life expectancy at birth (2013)[1] Total, Male, Female	70 (Male) 78 (Female) 74 (Both sexes)
Infant mortality rate per 1000 live births(2013)[1]	12.2(Mauritius Island) 8.5(Rodrigues Island)
Under-5 mortality rate per 1000 live births (2013)[1]	14.6 12.8(Rodrigues Island)
Maternal mortality ratio per 100 000 live births Interagency estimates (2013)[2]	73
% DPT3 Immunization coverage among 1-year olds (2013)[2]	98
% Births attended by skilled health workers(2013)[2]	100
Density of physicians per 1, 000 population (2013)[1]	1.62(Mauritius Island) 0.46(Rodrigues Island)
Density of nurses and midwives per 1 000 population (2013)[1]	3.08(Mauritius Island) 3.8(Rodrigues Island)
Total expenditure on health as % of GDP (2012)[2]	4.9
General government expenditure on health as % of total government expenditure (2012)[2]	9.7
Private expenditure on health as % of total expenditure on health (2012)[2]	51.8
Adult (15+) literacy rate (2010)[2] Total	89
Population using improved drinking-water sources (%) (2011)[2]	100 (Total) 100 (Urban) 100 (Rural)
Population using improved sanitation facilities (%) (2011)[2]	90 (Rural) 91 (Total) 92 (Urban)
Poverty headcount ratio at $1.25 a day (PPP) (% of population) (2005)	
Gender-related Development Index rank out of 187 countries (2012)[3]	70
Human Development Index rank out of 187 countries (2013)[3]	80

Sources:
[1] MoH Health Statistics
[2] WHO World Health Statistics
[3] UN Human Development Report /

Sustained programme of Immunization led to eradication of several communicable diseases such as Diphtheria, Whooping Cough and Poliomyelitis. The last case of poliomyelitis was in 1965 and certification of

Mauritius as a polio free zone is underway. In order for Mauritius to maintain its polio free status the challenge is to maintain immunization national coverage above 80% and on ongoing active Acute Flaccid Paralysis Surveillance Programme. Other communicable diseases such as Measles, Mumps, Rubella and Tuberculosis are, also, under control.

The immunization schedule includes BCG, polio and DPT, Tetanus Toxoid (TT), Measles-Mumps-Rubella (MMR). Hepatitis B (Hep B). Rotavirus vaccination was introduced in 2015. Vaccination coverage against tuberculosis, diphtheria, whooping cough, tetanus, hepatitis B, poliomyelitis, measles, mumps and rubella is about 90% of live births in the public sector. In addition, it is reasonable to assume coverage of about 8% in the private sector. Nevertheless, immunity gaps do exist in some districts.

Burden of chronic noncommunicable diseases and risk factors

In view of the sheer importance of cardiovascular diseases and cancer as a cause of death, interventions addressing risk factors that prompting conditions such as diabetes, hypertension, high cholesterol and obesity and high-risk behaviour, in particular smoking, alcohol abuse needs to be evaluated and re-orientated. The pace at which the island has opened itself to the external world has brought in its wake changes in life styles in turn impacting adversely on the health and nutritional welfare of the communities.

The leading causes of NCD deaths, including Rodrigues Island, in 2013 were : Diseases of the Circulatory system (23.4 ths per 10,000 or 31.1% of total deaths) followed by Diabetes -predominantly Type 2 (18.4 death per 10,000 or 24.5 % of total deaths), Cancers (10 deaths per 10,000 or 13.3 % of total deaths), Diseases of the respiratory system (6.4 deaths per 10,000 or 8.5 % of total deaths).

Table 2 : Trends in Diabetes and NCDs Risk factors

Diseases & Risk factors	Trends	1987	1992	1998	2004 *	2009
NCDs		Prevalence Rate	Prevalence Rate	Prevalence Rate	Prevalence Rate	Prevalence Rate
Diabetes Mellitus	Increase (1987 - 2009)	14.3 % M: 14.2% F: 14.5%	16.9% M: 16.3% F: 17.4%	19.5% M: 18.4% F: 20.6%	19.3% M: 18.9% F: 19.7%	21.3% M: 21.9% F: 20.6%
Metabolic Risk Factors						
Hypertension (BP >= 140/90 mm)	Decrease (1987-1992) Increase (1992-2009)	30.2% M: 31.7% F: 28.9%	26.2% M: 26.5% F: 26.1%	29.6% M: 30.0% F: 29.5%	29.8% M: 29.7% F: 29.9%	37.9% M: 40.5% F: 35.4%
Overweight/obesity (Body Mass Index > 25Kg/m2)	Increase (1987 - 2009)	30.5% M: 24.8% F: 35.7%	40% M: 33.4% F: 45.7%	40.6% M: 36.1% F: 43.2%	35.7% M: 30.7% F: 39.4%	50.9% M: 46% F: 55.65%
Behaviourally modifiable risk factors						
Cigarette smoking	Decrease(1987–2004) Increase (2004 – 2009)	30.7% M : 57.9 % F:7.0 %	24.3% M: 47.3 % F:4.8%	20.2% M:42.0% F:3.3%	18.0% M:35.9% F:5.1%	21.7% M:40.3% F3.7%
Abusive Alcohol Consumption (≥4 days weekly for men or ≥ 2 days weekly for women)	Decrease (1987-1998) Increase (1998 - 2009)	9.6% M: 18.2% F: 2.2%	7.5% M: 14.4% F: 1.6%	7.2% M: 15.9% F: 0.45%	9.1% M: 19.1% F: 1.9%	M: 19.1% F: 1.7%
Physical Activity	Increase (1987 - 2009)	M: 11.8% F: 1.4%	M: 17.3% F: 2.3%	M: 21.2% F: 7.2%	M: 24.5 % F: 9.5 %	M:23.2 % F: 10.9%

Source: NCD Survey, Ministry of Health & Quality of Life

Prevalence of Diabetes Mellitus has maintained an upward trend over the period 1987- 2009 to reach a prevalence rate of 21.3% for age group 20-74. Diabetes is predominantly of type 2 in Mauritius. Furthermore, another 24.2% in the age group 25-74 years are in a pre-diabetes state. A worrying concern is that 50 % of people known to have diabetes is poorly controlled and have a risk profile of developing complications. 8000

diabetic patients are at risk of Diabetic retinopathy due to poor glycemic control.The National Diabetes Registry estimated 175000 Type II diabetic patients and 500 Type I. In the same vein, it is estimated that number of cases of diabetes in adults that are undiagnosed is as high as 70,440. Among 80,000 Type II diabetic patient 56% do not suffer from retinopathy.

The high rates of diabetes and pre-diabetes, coupled with concomitant risk factors – Overweight and obesity (65.6%), hypertension (37.9%) , Dyslipidaemia (30%), Smoking: 21.7% (M 40%; F 4%) and lack of physical fitness (16.5%), represent significant future social and economic burden of cardiovascular disease and diabetes complications for Mauritius. This will impact adversely on medical costs and national productivity due to the impact of these diseases on the workforce .

Metabolic/physiological risk factors

Raised blood pressure

The Prevalence of high blood pressure continued to maintain an upward trend since 1986; except in 1992 where a negligible drop was observed. The age and gender-standardised prevalence of hypertension[1] was on average 37.9% (40.5% in males and 35.4% in females). The prevalence of hypertension rose steadily with age in both men and women. After the age of 54 years, hypertension was more prevalent in females. Across all age groups untreated hypertension was more common among men than women. Medication to control hypertension was being taken by 15.5% of the population and its usage increased with age, from levels of 1-2% for the youngest groups, to an average of 45% for the oldest group. Overall, for every patient being treated for hypertension there was at least another untreated person except for the older age groups.

Obesity and overweight

The NCD Survey (2009) estimated 477,000 Mauritius aged within the age group 25 and 74 years were overweight/ obese. This represents a prevalence[2] of 65.6% (62.8% in males and 68.2% in females).

A comparative analysis of the last two Nutrition Surveys [3](2004 and 2012) shows some positive signs while in absolute terms the prevalence confirms the urgency to address overweight/ obesity among both adults and children. Among the 5 to 11 years age group, prevalence of overweight increased from 7.7% in 2004 to 9.8% in 2012, whereas a minor fall in the prevalence of obesity from 8.1% in 2004 to 7.8% in 2012 has been noted.

The adverse health impacts of obesity occuring in childhood, as well as in the long term, need to be underscored. Whilst child obesity is associated with higher risk of obesity and NCDs in later stages of life, likelihood of adverse outcomes such as breathing difficulties, increased risk of fractures, hypertension, early markers of cardiovascular diseases are real in childhood.

Prevalence of overweight slightly increased from 8.4% in 2004 to 9.2% in 2012 among the age group 12 to 19 years. On the otherhand the prevalence of obesity for the same above referred age group remained almost the same (7.4 % in 2012 as compared to 7.3 % in 2004).

In adults aged between 20 to 49 years a slight decrease has been noted in the prevalence of overweight from 32.9 % in 2004 to 31.6% in 2012. This declining trend was more significant for obesity as prevalence decreased from 22.9% in 2004 to 17.6 % in 2012 in adults aged 20 to 49 years.

Alcohol

Prevalence of abusive alcohol consumption among males was 19.1% in 2009, representing an increase of 20% over a ten year period. Among women, abusive alcohol consumption is low. Management of management of mental and behavioural disorders due to high alcohol in take is exerting much pressure already on the health care system. Approximately 51% of cases treated as in-patient at the BS Psychiatric Hospital were related to mental and behavioural disorders due to alcohol. To prevent and control the harmful use of alcohol amendments were bought in 2009 to the Public Health Act to regulate the availability of alcoholic products (including reasonable limitations on the distribution of alcohol and operation of alcohol outlets) and marketing of alcoholic beverages. The main challenge is the enforcement of these regulations.

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Smoking

Tobacco consumption decreased steadily with current smoking among males dropping from 57.9% in 1987 to 35.9% in 2004; a rise was recorded in 2009 with prevalence rate estimated at 40.3%. In females the trend has been on the decline over the period 1987 -2009. Notwithstanding that smoking patterns among the youth

[1] *both untreated persons with hypertension and those who have been diagnosed and are on treatment*

[2] *Applying the World Health Organization classification of BMI (weight/height) - cut points depending on ethnicity (European and asian origins)*

[3] *using a different standard classification of BMI (CDC)*

demonstrates a decling trend it remains a cause for concern. According to the 2008 Global Youth Tobacco Survey, 28.4 % of students had ever smoked cigarettes in 2008 as compared to 31.3% in 2003. Over the same corresponding period youth attending school and who currently smoke cigarettes dropped from 14.8% to 13.7%.

National strategies, plans and programmes on tobacco control developed are reinforced by existing legislation amended in line with the Framework Convention for Tobacco Control (FCTC). Mauritius is implementing regulations to strengthen policies on smoking in public places; and tobacco advertising, promotion, and sponsorship as well as regulations on pictorial warning labels, packaging descriptors, and the sale of tobacco products. Embracing the FCTC Mauritius is actively engaged in implementation of programs for smoking cessation, including programs for diagnosing, counselling, preventing, and treating tobacco dependence, as well as facilitating accessible and affordable treatments. Seven (7) smoking cessation clinics are operational once a week at the regional level. Brief interventions are conducted at all primary health care points to assess readiness to quit and provide referrals for counseling and pharmacological therapies in smoking cessation clinics at the regional level. As counseling is at the core of the behavioural therapy for cessation clinics, the use of mobile phone technology through the mHealth Initiative of WHO and ITU, will leverage smoking cessation interventions.

Cancer

The National population-based Cancer Registry shows a rising incidience of cancer among both males and females. The Age Standardised Incidence Rate (World) in males rose from 84.8 per 10^5 in 2009 to 127 per 10^5 in 2013; and among females from 111.5 per 10^5 in 2009 to 149 per 10^5 in 2013.

The most prevalent common site for cancer incidence among males in 2013 were colum/rectum (20.1 per 10^5 in 2013) followed by prostate (17.3 per 10^5 in 2013) and lungs (12.4 per 10^5 in 2013). Among females, breast cancer (56 per 10^5 in 2013) followed by colum/rectum (14.3 per 10^5 in 2013) and cervix (11.7 per 10^5 in 2013).

The Age Standardised Mortality Rate (World) for males rose from 78.4 per 10^5 in 2011 to 85.9 per 10^5 in 2013. Among females the ASR rise was more significant from 60.3 per 10^5 to 74.3 per 10^5 over the same corresponding period. The most prevalent common site for mortality among male is lungs (18.1 per 10^5 in 2013) and breast among females (20.9 per 10^5 in 2013).

Burden of communicable diseases

HIV/AIDS

The HIV epidemic in Mauritius is of a concentrated nature, with a prevalence of 1.02%[4] in the adult population, but high prevalence among key populations. People Living with HIV (PLWH) are currently estimated to be 9,200 (8,000 - 10,000) of whom 5,000 to 6,000 know their status. Thus, leaving 3,000 to 4,000 undiagnosed. An average of 83,000 HIV tests are being carried out annually, half of which are among blood donors while 20% are among pregnant women. Voluntary Counseling and testing which is done at rate of 1,000 annually needs to be scaled up rapidly.

Prevalence of HIV among key populations is highest among People who inject drugs (PWID) accounting for 44.3%, followed by 22.3% among female sex workers (FSW) 20% among men who have sex with men (MSM), and 19% among prison inmates (PI).

Evidence generated in 2013[5] projects that the emergence of the MSM population as a key driver of the epidemic accounting for 36.3% of new infections, compared to 1% in 2013. IDU will continue to be the main driver of the epidemic (representing approx.44% of new). Clients of sex workers (SWs) would be responsible for 7.3% of new infections, and 2.2 % would be among stable heterosexual couples. While outreach programmes towards SWs and MSM are constrained by stigma and discrimination, innovative approaches to improve and scale up access through peer support groups and community work are to be devised.

Based on mapping of PWID the total number of active PWID, including those on Methadone Substitution Treatment (MST) is estimated at 11,700. As 6000 members of the active PWID are enrolled on MST, this leaves about 5,700 active injectors. The 2013 PWID IBBS found that about 70% of people on MST had stopped injecting. The total number of active PWID, including those on MST and still injecting drugs amounts to 7598; of whom 6595 are male, 874 are female, and 129 are transgender.

[4] Spectrum 2014
[5] Mode of Tansmission Study

Furthermore, some 2540 PWID are reached with non-MST services such as NEP. About 75% of PWID have been tested for HIV at least once.

Free ARV treatment and care which was introduced in 2001 has been decentralized to all the five health regions, including the prison settings and Rodrigues Island. Much can be achieved still through revisiting the role of Area Health centres, Harm reduction centres, prisons and NDCC facilities in providing comprehensive and integrated HIV prevention, treatment and care including ART. Facilitating service integration as a standard of care is to be underscored. .

Coverage of ART according to existing protocols based and aligned with WHO Guidelines is good. The number of people ever enrolled on ART at end 2013 was 2200, with 1830 adherent to HIV treatment. In view of the concentrated nature of the HIV epidemic, among key populations, loss to follow up at every stage of the treatment cascade is high. The diagram illustrates the actual situation. A national target of 95% has been set for adherence to ART treatment. ART treatment adherence improved from 71.1% in the 2011 cohort to 82.1% in the 2013 cohort.

An impressive increase in the percentage of HIV-positive pregnant women receiving ART has been noted rising from 68% in 2010 to 97.4% in 2014. However, People Living with HIV (PLHIV) do not receive appropriate counselling and services to ensure self fertility management. In this regard, provision of fertility management education and services, needs to be urgently addressed.

HIV and co-fections

The major co-infection with HIV is Hepatitis B & C infection among the Injecting Drug Users with prevalence rate estimated as high as 95%.

HIV –TB co-infection among the population of TB patients is very low with only xx cases registered in 2013. Resistance to first line TB treatment is regularly monitored to ensure HIV/TB does not lead to an increased MDR-TB given the poor treatment adherence of PLHIV who inject drugs. More specific confirmatory tests such as routine sputum for AFB testing need to be carried out so as not to miss any genuine TB case, especially in the prisons.

STI management is also a big challenge amongst PLHIV as STI patients have to be referred to skin clinic and this is a recipe for defaulting.

Tropical and vector borne diseases

Notable achievements have been made in the control of communicable diseases and neglected tropical diseases. Mauritius is malaria free as the last indigenous case was reported in 1997. The total annual number of imported malaria cases notified annually from 2000 to 2013, ranged between 23 to 63. Rodrigues Island is malaria free with no case of malaria has been notified so far.

However, environmental and climate changes contributed to outbreak of dengue and chikungunya following a first imported case Following zero reporting of dengue for over 15 years , Dengue was re-introduced in 2008. An important outbreak of Dengue was reported in the capital city in 2009 when some 252 cases were confirmed. In 2014 within a period of few weeks a small outbreak of Dengue was reported with 19 confirmed cases concentrated within a particular locality. The outbreak was controlled with the prompt activation of the national preparedness and response plan for Dengue control. In the same vein, the treat of Chikungunya can