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# Marketing Plan for enhance 'Non-Communicable Disease Screening' at Healthy Lifestyle Clinics in Ministry of Health.

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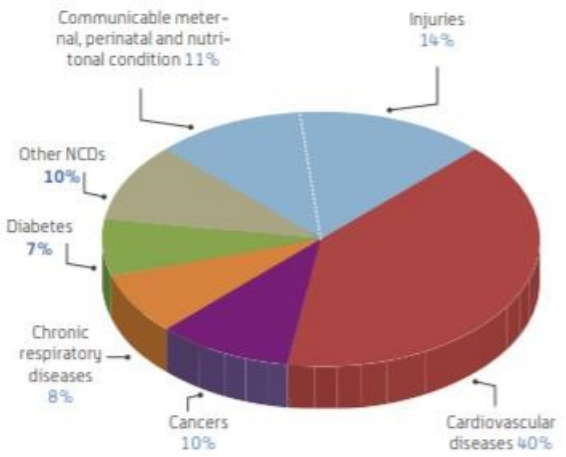
## 1. Introduction

Health seeking behaviour plays an important role in healthcare demand and utilization. Broadly it can be described as seeking medical help to keep healthy, to treat any digression of health or to prevent any impact of progression of an illness. An individual's decision to seek medical care depends on many factors. The access to healthcare, socio-cultural background, literacy, age, gender, type of the illness, economic status, perceived quality of the service are some of the key factors mainly contribute for this decision. (Tipping and Segall, 1995).

Healthcare is an industry thriving in a frequent changing and highly competitive environment. Utilizing marketing strategies to increase volume of patients to hospitals is mostly seen in private sector but less focused in non-profit oriented public sector. In public sector supply mostly depends on the demand and the marketing is felt expensive and as an additional cost. But utilizing marketing strategies in public sector will benefit by preventing underutilization and inefficiencies common in public sector and increase in return on investment of public money.

Sri Lanka currently experience a rapid epidemiological and demographic transition both directed towards an increase in Non-communicable Diseases (NCD). NCD burden accounts for 63% of the deaths globally. In comparison Sri Lanka accounted 75% deaths due to NCDs from the total deaths of 138 000 for the year of 2012 (WHO, country profile, 2014).

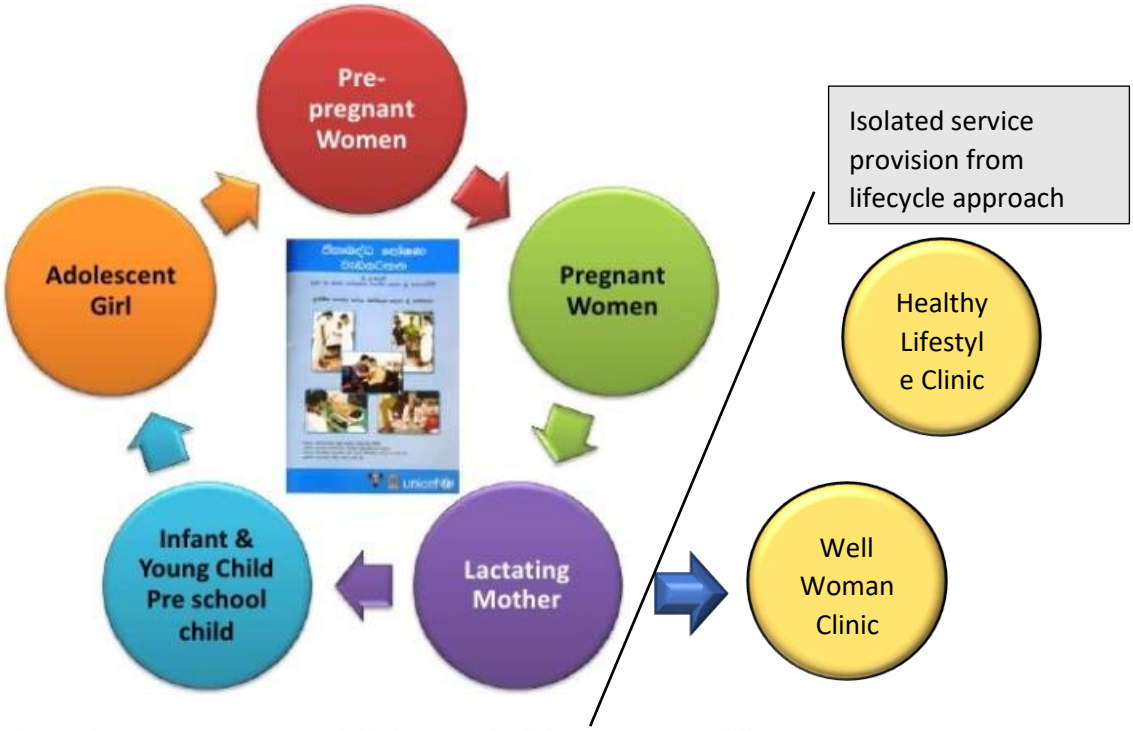
Figure 1: Cause specific mortality in Sri Lanka - 2012




Source: WHO-NCD Country Profile 2014

The focal point of preventive health sector is the Office of Regional Directorate of Health Services in each district. The modified life cycle approach of WHO is adopted in service provision mainly concentrating women and the children. In the latter stages the 'Well Women Clinics' were also included but mainly ignoring the adult male population.

Figure 2: The life approach in preventive care provision




Source: https://www.slideshare.net/damithagunawardane/nutritional-interventions



The challenging task of reduction of preventable and avoidable morbidity and mortality due to NCDs primarily depends on identifying the prevalence of risk factors in the target population. Healthy Life Style Clinic (HLC) is the recommended approach by the World Health Organization (WHO) to combat NCDs. It is the fundamental instrument designed for screening of people between 40-60 years at Primary Healthcare level. The Ministry of Health (MoH) Sri Lanka initiated HLCs in 2011 aiming at reduction of morbidity and mortality due to Cardiovascular Disease (CVD) by detecting risk factors early and increase access to specialized care. The HLCs aims to achieve a 50% of eligible people receive drug therapy, control in glycemic level and counseling to prevent heart attacks and strokes as a target by 2025. (National Multisectoral Action Plan for the Prevention and Control of Noncommunicable Diseases 2016-2020).

The healthcare utilization among Sri Lankans considered high due to health literacy. The free education and advance literacy rate and the government policies on health education and the increase knowledge of diseases, treatments and benefits of treatment are behind this achievement (Netherland report). In contrast the major challenge in HLC is the underutilization specially by men (Mallawarachchi, 2016)

Figure 3: The number and services of Healthy Lifestyle Centres in Sri Lanka, 2011-2016

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 (first quarter) |
|---|---|---|---|---|---|---|
| Total number of HLCs | 126 | 420 | 672 | 760 | 814 | 826 |
| % of MOH areas in a district with two or more HLCs[a] | — | — | 56.0 (187/334) | 69.5 (235/338) | 77.8 (263/338) | 79.6 (269/338) |
| Cumulative % of the target population (aged 40–65 years) screened[b] | 2.5 | 3.8 | 12.7 | 19.9 | 23.1 | 25.5 |
| Ratio of men:women screened[a] | — | — | 2.6:7.3 | 2.9:7.1 | 2.8:7.2 | 2.9:7.1 |

HLC: Healthy Lifestyle Centre; MOH: medical officer of health.
[a]Data not available for 2011 and 2012.
[b]Target population is nearly 25% of the country population.

Source: WHO South-East Asia Journal of Public Health | September 2016 | 5 (2)

## 2. Situational Analysis

To obtain a clear picture of the current functioning and the challenges experienced at HLCs a situational analysis was carried out mainly focusing on internal factors which explains the strengths and weaknesses of the HLCs and the external factors which effects the smooth provision of services to the target population.

### 2.1 Strengths

#### 2.1.1 HLCs functions in collaborating with preventive and curative sector

The HLCs function in curative care hospital set up with a staff specialized on conducting of NCD screening. The surveillance of activities is carried out by the Directorate of NCD through the Regional Directorate of Health Services mainly responsible for preventive care.

Both curative and preventive care resources are available to provide the service mainly the laboratories at the curative care hospitals with referral facilities for consultants and physical resources from the RDHS.

#### 2.1.2 Advance grass root level network of care

The Sri Lankan heath set up has the most efficient globally accepted grass root level network of preventive healthcare delivery system with access to every family in the country through Public

Health Midwives and Public Health Inspectors. These healthcare workers are key agents in health promotional activities.

#### 2.1.3 Mobile Laboratory facilities

NCD screening package introduced at HLCs include blood sugar and cholesterol level investigations free of charge. Mobile clinics conducted by the HLCs offer this facility at the point of care.

#### 2.1.4 Trusted Quality of Care

The service is provided by trained staff consists of Medical Officer and Nursing Officers. The quality of investigations maintained.

#### 2.1.5 The network of clinics of clinics

95% of targeted number of clinics has been established all over the country and functioning.

#### 2.1.6 Free of charge

All the investigations and other facilities are given free of charge at the point of care.

#### 2.1.7 Financially and politically supported

The necessary funds are allocated to clinics from the MoH and MoH and government policies on prevention and reduction of morbidity and mortality due to NCDs are available. Some of the highlighted policies are tobacco, alcohol, nutrition, multisectoral action plan for health and drug policies.

### 2.2 Weaknesses

#### 2.2.1 Significant lower male participation in the clinics

The morbidity and mortality rate are higher among male population as well as the risk factors obesity, hypertension, smoking and alcohol. The analysis has shown the male participation in clinics are 1/3 of the female population in the target population.

#### 2.2.2 Unavailability of demanded services

Common to all public sector health services patient demand is less catered. The recommended package is provided which is technically justified analyzing the cost benefit of the services.

### 2.2.3 Less all-inclusiveness in the package

Compared to private sector similar cardiovascular risk assessment packages less investigations are available at the primary care at screening. Only identified risk groups are referred for specialized investigations such as Echocardiography and Exercise Electro Cardiograph.

### 2.2.4 No promotional activities on the service

HLCs are not promoted with a special promotional campaign and the expected number of participants are enrolled by recommendation of the customers of the clinics.

### 2.2.5 Mal Distribution of Resources and Unavailability of Uniform Services

Maldistribution of resources is a common problem in public sector institutions. The frequent breakdowns of machines and increase downtimes of the medical equipment lead to customer dissatisfaction due to unnecessary delays and need of repeat visits.

### 2.2.6. The Clinic Conducting Time

The routine clinic conducting times are 8am – 4pm on weekdays. But having a more working population in the country and difficulty to take off in the private sector hinder utilization of the clinic manly by the working crowd.

### 2.2.7. Picture of over crowdedness in government clinics

The government health facilities are considered over crowded. But HLCs only expect 20 new comers per day in weekdays.

### 2.2.8 The HLCs are conducting in isolation at curative care sector

The HLCs are conducted in hospitals. The most of the other benefits of conducting the clinics in the main focal point of Medical Officer of Health Office are not gained by these clinics. The lack of observations by Public Health Midwife, Public Health Inspector and the Medical Officer of Health is a crucial factor as they are the link to grass root level healthcare.

## 2.3 Opportunities

### 2.3.1 Highly motivated political arena - presidential task force,

The President and the Minister of Health have already taken several initiatives on reducing NCDs. Promotion of tobacco and alcohol-free society is an important factor as both of the risk

factors are high among male population in Sri Lanka. Long standing need of the country, the Health Master Plan also have been developed currently followed accordingly. All these policies show favorable towards reducing the epidemic of NCDs in the country.

#### 2.3.1 High literacy rate in the country.

Sri Lanka has the highest literacy rate in the South East Asian countries. The good government policies on free health and education are behind this achievement. This has resulted high health literacy rate among Sri Lankans which is beneficial in health promotion activities.

#### 2.3.2 Social Media

Health issues are highly circulated in social media and appreciated by many clienteles.

#### 3.3.3 Government promoting health insurance packages

The state employee health insurance package 'Agrahara' has been upgraded and private insurance schemes are encouraged by the government.

#### 2.2.4 Technological advances

Newer, simpler and cheaper disease screening methods are introduced frequently and health sector is one of highly innovative industry.



#### 2.3.5 Government more towards public private partnerships

Government policies are now becoming more favourable towards public-private partnerships. The proposed health sector restructuring plan encourage the 'Family Doctor' and public private partnership with pharmacies and laboratories in private sector.

#### 2.3.6 High healthcare cost

Escalating high healthcare costs due to NCDs are even highlighted in developed countries and taking every measure to prevent the diseases among population.

### 2.4 Threats

#### 2.4.1 Fast Food culture

Emerging fast food culture among children and young adult population is a threat to increase

NCD in population and the target population to be screened

#### 2.4.2 Multinational companies influence on fast food, tobacco and alcohol

Difficult to combat the risk factors in the population increasing the risk population for NCDs

#### 2.4.3 Male dominance in workforce and sole income in families

The low socio-economic levels in the families prevent taking leave for health checkup in apparently healthy persons.

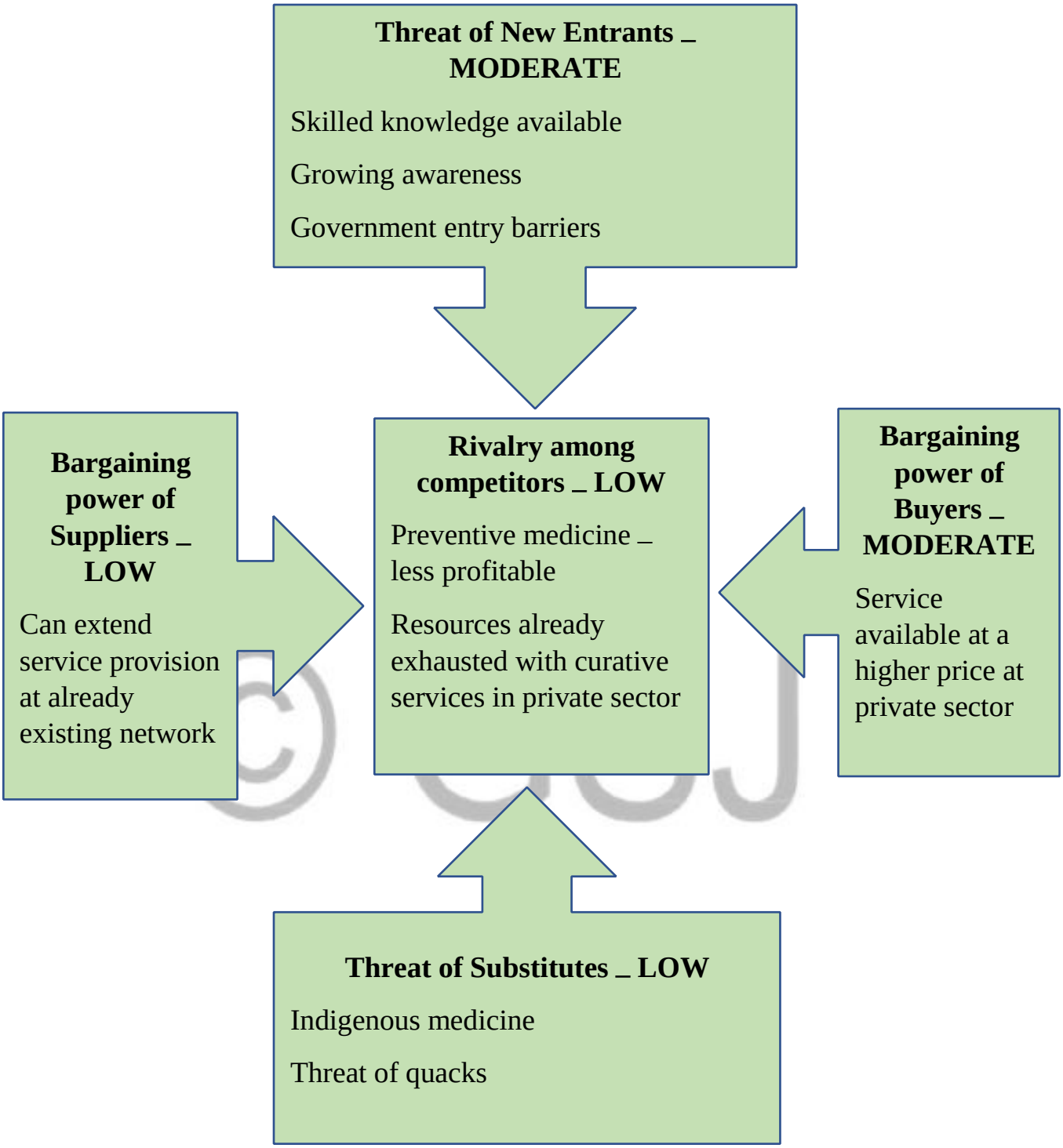
#### 2.4.4 Epidemiological, industrial and demographic transition

Continuously contributing to increase the target population to be screened.



## 3. The Competitor Analysis

Figure 4: The competitor analysis of the NCD screening programme




**4. Marketing Objectives for the next 2 years**

3.1 To increase male participation to HLCs by 50% by 2021. Aggressive Promotions and building of brand awareness expected to carry out during the next two years to help the achieving 50% target population covered by 2025 according to Health Master Plan.

3.2 To expand HLCs to private sector hospitals by 2021. Market penetration into private sector to increase the share of NCD screening in the population through publicprivate partnership and develop an integrated public-private health information system.

3.3 To increase back referrals from physicians to HLCs 90% by 2021 and be the most patient satisfied NCD screening programme in the country.

3.4 To improve the sensitivity and specificity of the screening programme by introducing new diagnostic methods to enhance the quality of NCD screening in the country by 2021.

## 5. Market Segmentation

Demographic and behavioural bases were considered in segmentation of the Sri Lankan population. The high-risk age segment of 40-60 years both male and female adult population was selected where most of the behavioural risk factors obesity, high blood pressure, smoking and alcohol consumption was abundant.

Male population is the main economic work force and towards this segment social and ethical responsibility is high. Prevention of NCD among this segment will benefit families from catastrophic financial insecurities as well as the country as a whole. In addition, evidence has shown the male participation in HLCs is poor compared to female. Also, the risk factors and consequent morbidity and mortality are also high among male population.

## 6. Target Markets

Differentiated target marketing strategy to be adopted on male segment of 40-60 years and following target markets were identified.

5.1 Existing clinic participants who are already on follow up

5.2 Private company employees having corporate medical packages and getting screened at private hospitals.

5.3 Males who knows the risk but do not wish to go for screening since they feel healthy.

5.4 Males who are unaware about NCD screening availability to identify cardiovascular risk.

5.5 Daily paid income earners who do not wish to lose one day income to come to a clinic.

5.6 Males who know about NCD screening but do not wish to give time at a clinic thinking time waste

## 7. Current & Future Positioning of the NCD screening programme at HLCs

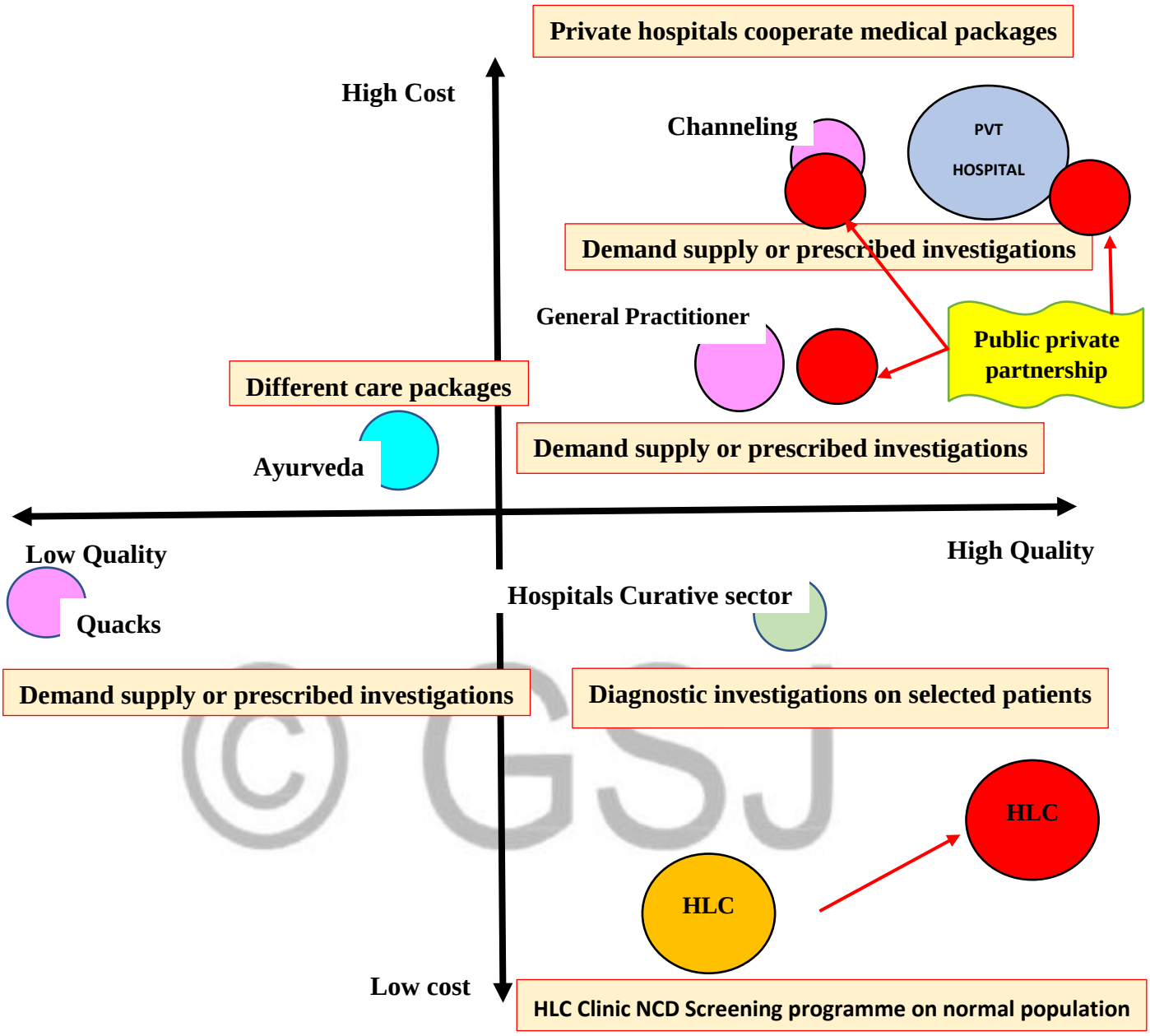
Currently the NCD screening programme is the only designated programme of such conducted by the MoH free of charge at the point of care. It's the cost leader among the other service providers. The quality of care at moderate level being open only 8am to 4pm and the resource maldistribution among the clinics.

The other public sector healthcare curative institutions screen the patients as a part of clinical treatment procedure and its only for in patients.

More demand supply of screening investigation relationship is seen with channeling centers, General Practitioners (GPs) and the quacks. Other than the quacks same public sector medical officers see the patients at these points of care centers and quality of care is maintained.

Corporate insurance packages and medical care packages are available in few companies and these packages are provided by private hospitals including other diagnostic facilities and cost is higher than the other screening programmes.

Figure 5: Current and future positioning of the industry




## 8. Marketing Research

**8.1 Questionnaire:** Interviewer administered by principal investigator (Direct/over the phone)

**8.2 Sample selection:** 60 male and 30 female participants of HLCs selected on convenient sampling.

Group A – 30 randomly selected male participants of the HLCs (to identify the marketing strengths of the programme)

Group B – 30 randomly selected males between 40-60 years in the general population in Kegalle district. (to identify the marketing gaps in the programme)

Group C – 30 women participants of the clinic

### 8.3 Findings of the market research

The majority of the selected population (65%) were in the 50 000 – 100 000 income group.

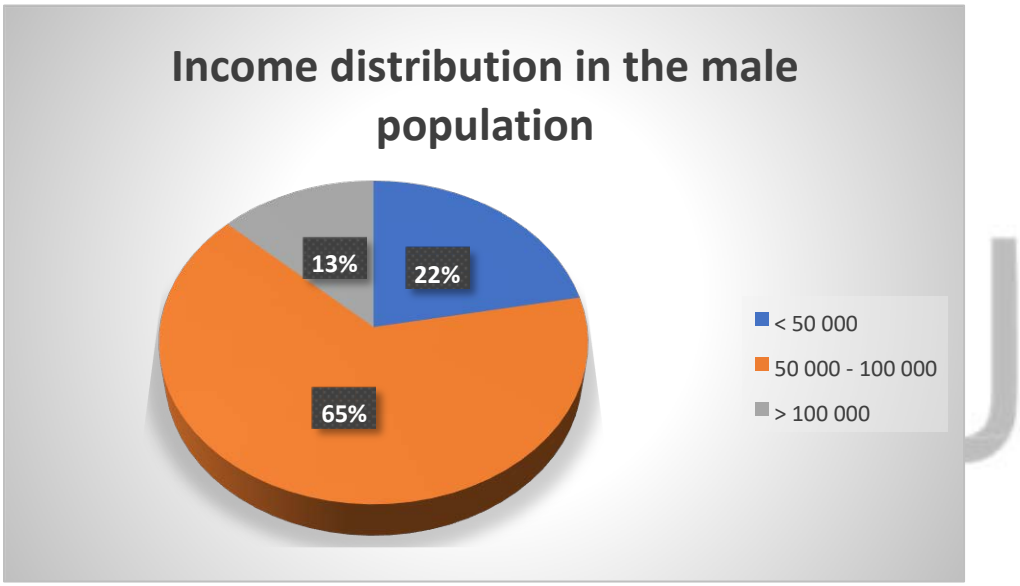



Figure 5: Income distribution in the male population.

Main proportion of the male population were unaware about the HLC clinic in the sample population.

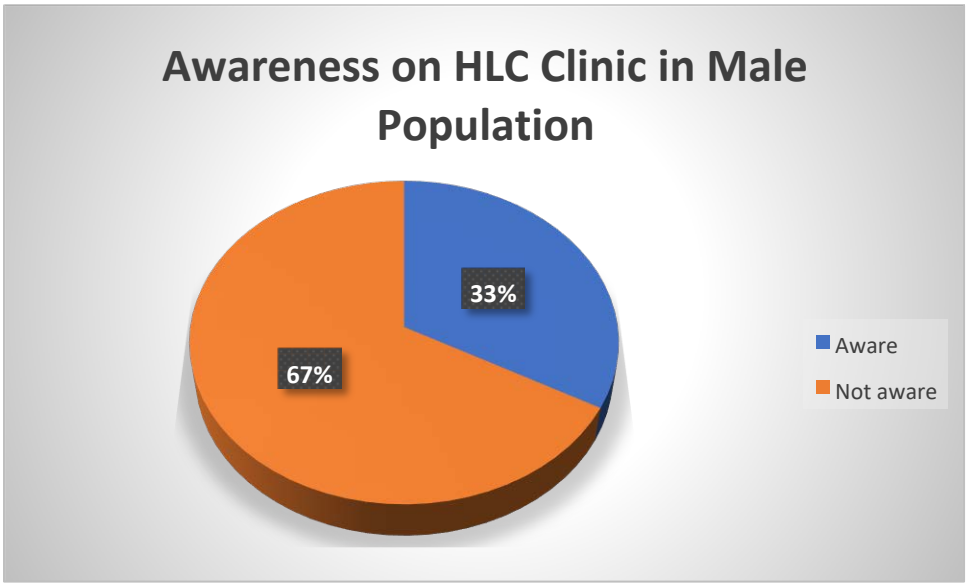



Figure 6: The awareness on HLC in male population

Among the male population who visited the HLC 48% of the people had known about the conduction of clinics by a close friend who had experienced the service and satisfied about the services.

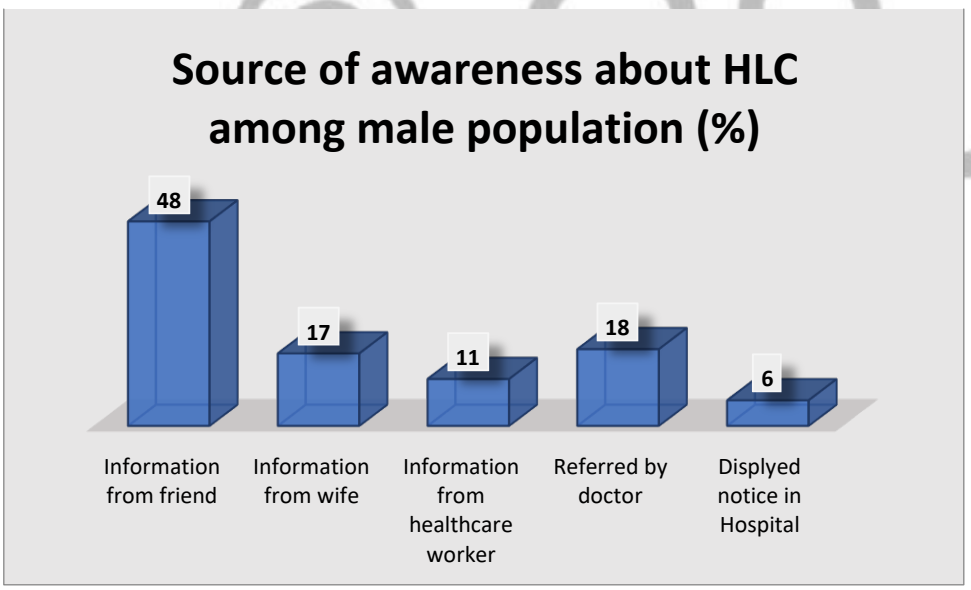



Figure 7: The source of awareness about HLCs among the male population.

The preference of sector for attendance of clinic visits by the male population sample was revealed 82% of the males preferred to visit public sector due to no cost and. The rest of the candidates revealed they prefer private sector as conducting times are more convenient. Difficulty in taking leave, time wasting at long ques and loosing of one wages are some of the highlighted causes.

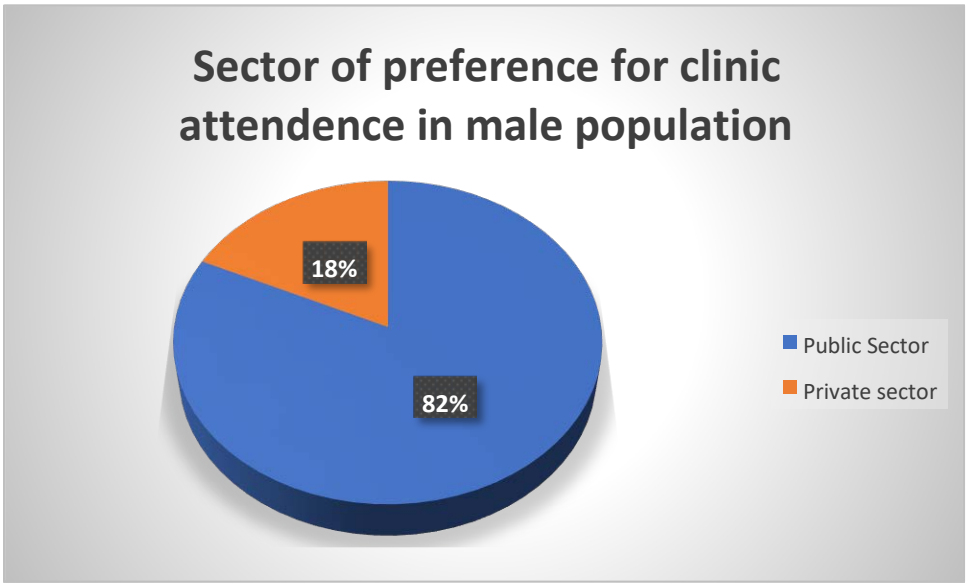



Figure 8: The sector of preference for clinic attend in the male population.

The perception of women on reasons for male less attendance in the clinics revealed majority of male were not attending the HLCs due to difficulty in taking leave from work places.

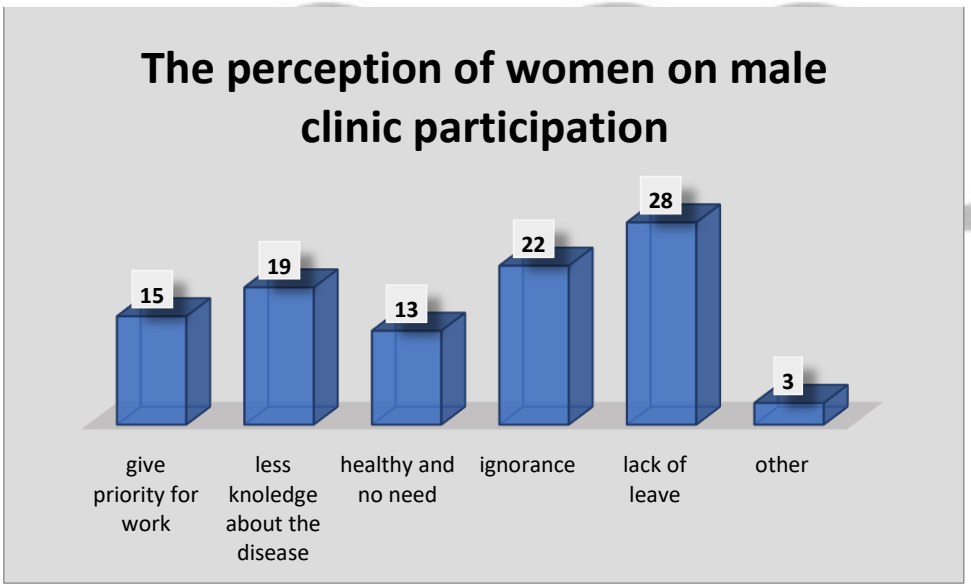


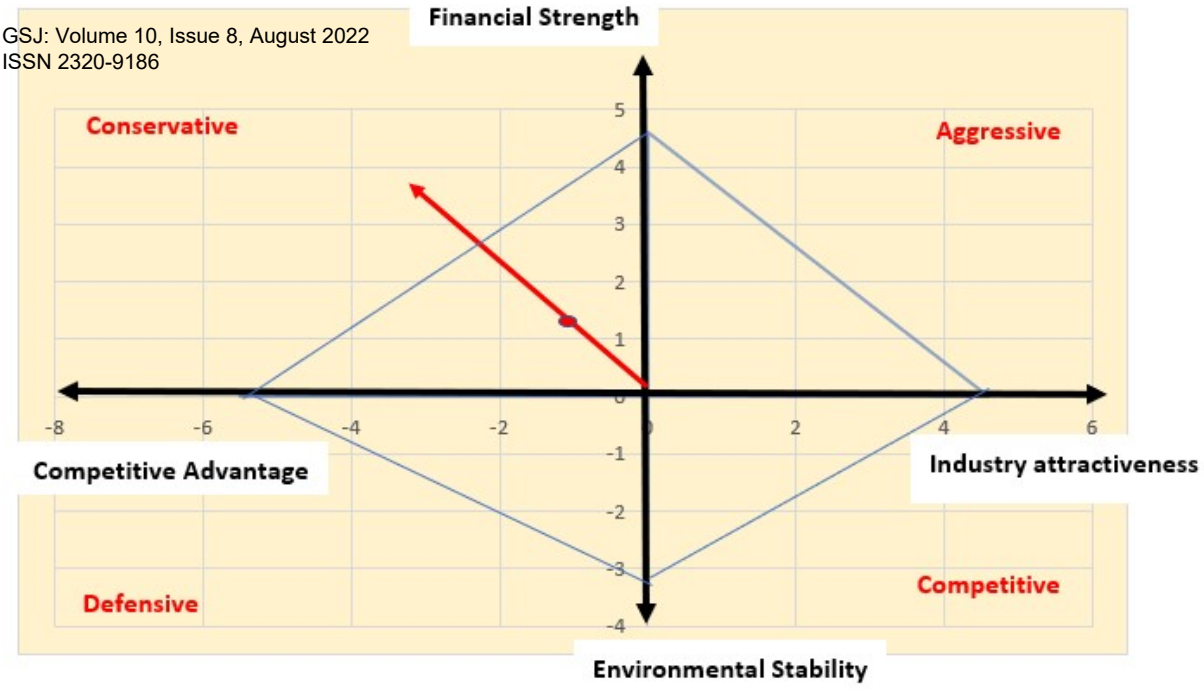

Figure 9: The perception of women on male clinic participation

## 9. Future Marketing Strategies

### 9.1 Space Matrix

To develop the future marketing strategies the space matrix was used as the tool.

| Internal Strategic Position | | External Strategic Position | |
|---|---|---|---|
| **Competitiveness (Worst -6 / Best -1)** | | **Industry (Worst +1 / Best +6)** | |
| Product quality | -2 | Entry Barriers | +6 |
| Market share | -2 | Growth potential | +5 |
| Brand & image | -4 | Resource utilization | +3 |
| Expertise | -1 | Technological assist | +4 |
| Customer loyalty | -2 | Access to financing | +5 |
| **Average** | **-5.5** | **Average** | **4.6** |
| **Total x score: - 0.9** | | | |
| **Financial (Worst +1 / Best +6)** | | **Environment (Worst -6 / Best -1)** | |
| Business Risk | +5 | Demand variability | -6 |
| Return on investment | +6 | Competitive product price | -1 |
| Cash flow | +3 | Inflation rate | -3 |
| **Average** | **+4.6** | **Average** | **-3.3** |
| **Total Y score: +1.3** | | | |




Market penetration
Market development
Product development
Related diversification



### 9.2 Competitiveness

The country has a well-trained workforce who have achieved many successful health achievements with low cost. The highly organized preventive care grass root level network and the well-equipped curative care hospital network is the main competitive advantage over the private sector. The quality of services of the state sector is at higher level. The state sector caters for 80% of inpatient car.

### 9.3 Financial stability

The government expenditure on health as a percentage of GDP have been steady over the years. In 2015 the government expenditure had been 3% of GDP and there had been a 4.79% increase

from the previous year. The health gains are much more compared to the expenditure and well recognized globally for providing quality care at low cost.

### 9.4 Industry strength

The healthcare industry has high entry barrier and have a higher growth potential as well. The healthcare is funded by the government but the resource utilization is limited with maldistributions and inefficiencies common to public sector. The using of technology is at a higher level.

### 9.5 Environmental stability

The political and financial policies are mainly directed towards reducing NCDs in the country. The orientation of healthcare in Sri Lanka is intended to organize the primary level healthcare for combatting NCDs in the country. The demand variability is high with technology and knowledge improvement.



As suggested by the space matrix the enhancing of participation in NCD screening programme will be achieved following adoption of more conservative approach of marketing.

- Market penetration
- Market development
- Product development
- Related diversification

## 10. Marketing strategy for next three years.

Following integrated market strategies are expected to follow to achieve the objective of increase male participation to HLCs by 50% within next 2 years.

### 10.1 Marketing Mix

The principle of marketing mix with 7 P's of controllable variables for the service sector are to be engaged to achieve the highest level of consumer satisfaction and at the same time to meet its organizational goals as Kotler, 2010 explained.

#### 10.1.1 Product Mix

The current product mix of

- Investigation and Health Education Package at HLCs
  This is the routine clinic package offer basic blood investigations of glucose and cholesterol + health education session on diet and lifestyle modification tailored to each individual according their Body Mass Index. Further management include, either to review at 6 months or to refer to specialized care provided cardiovascular risk is high.
- Mobile Health Clinics at work places
  These clinics are conducted in government and private work places with relevant official authorization. All-inclusive HLC package is provided at the point of service.
- Mobile Health Clinics arranged by social networks
  The invitations for mobile clinics by non-governmental organizations also served as above.

These three products will be more diversified into the integrated clinics conducted by the preventive sector for maternal, child and well woman clinics as well. Currently the HLCs are functioning in isolation at curative care institutions with curative care staff. This has led to loss of connection with the grass root preventive care staff who works attached to Medical Officer of Health Offices in the district. The participation for the clinics conducted by the MOH offices exceeds >90% and well appreciated by the public. Therefore, integration of HLCs with other clinics conducted by the MOH and the proposed product mix would be in addition above

New

- HLC combined with well woman clinic
  Well women clinics in life cycle approach intend to screen women for risks of reproductive health mainly directing at Cervical Cancers. The participation for this clinic by women aged > 35 years for screening has been observed high similar to HLCs.

- HLC combined with antenatal clinics.
  The antenatal clinics are conducted for pregnant women. Combine this clinic with HLC would prevent men from taking additional leave and attend to a separate clinic as most of the male population accompany wife to the clinic. The limitation is the age factor of > 40 years which is above the reproductive age limit.

- , Each HLC is expected to function 5 days per week 7am – 6pm.
  The extension of clinic hours will help men to participate without taking leave from work.

### 10.1.2 Packaging

The current package includes fasting blood sugar testing, serum cholesterol testing as blood investigations, BMI analyzing and tailor-made health education session. The selected patients categorized into cardiovascular risk and referred to specialized care or followed up at the clinic.

To increase the quality of the screening programme more advance investigations will be included into the package over the two years of duration.



- Lipid profile
- Eco cardiograph
- Electrocardiography
- Exercise Electrocardiography

Adding these investigations to the package will increase the sensitivity and specificity of analyzing the cardiovascular risk.

### 10.1.3 Promotion

Currently there are very minimun promotional activities for HLCs and limited to health education sessions for internal staff, posters displayed at the HLCs and leaflets given to clinic attendees. The word of mouth is the main stream of communication. The proposed promotional strategies expected to,

1. Increase awareness about the HLCs
2. Increase awareness on health content
3. Improve the perception of preventive care services
4. To promote HLC as a family responsibility

#### 10.1.3 1 Advertising

Aggressive advertising through by a brand ambassador in news papers and television at strategic times. During children programmes, news and teledrama three times per day for 7 days on importance of visit to HLC and make sure you are healthy for your family.

#### 10.1.3.2 Internet, WEB sites, Email and Social Media

Branding NCD screening in Facebook, Instagram and You tube. The availability of the service and the places. Promote health content in other channels through email and web site.

#### 10.1.3.3 Promotions

Use school children as health promotion agents. Special promotions at School Medical Examinations on how to bring fathers to the clinic and awarding of appreciation for bringing fathers to the clinics.

#### 10.1.4 Place

The current places include the clinic premises in the hospitals (95%), work places and public organized clinic at various places (5%). The proposed place mix expect to develop public-private partnerships in conducting clinics. Each district proposed to have 2 HLCs in the private sector in the next two years.

- At private hospitals
- At Private Channeling Centres
- At General Practitioners clin**10.1.5 Price**

As non-profit oriented government service sector no strategies for price were adopted.

#### 10.1.6 People

Highly specialized trained staff are engaged in clinic work. In addition, the private sector staff will be trained to conduct the HLCs at private sector as a part of public private partnership initiative.

### 10.1.7 Processes

The current processes include

- Conducting of clinic session
- Referral system
- Back referral system
- 6 months review

The referral system to specialized care need to be strengths with the back referrals from the specialized doctors to assess the outcome of the screening programme as well as to improve the customer satisfaction.

### 10.1.8 Physical Evidence

Functioning HLCs at every district, the investigation package and the reports, NCD screening booklet issued to every participant are the physical evidences.

The incorporation of this results of screening programme to performance evaluations will increase the proportion of male screen population.



## 11. Action Plan

| **Marketing Activity** | **2020** | | | | **2021** | | | | **Risk level** |
|---|---|---|---|---|---|---|---|---|---|
| | **Q1** | **Q2** | **Q3** | **Q4** | **Q1** | **Q2** | **Q3** | **Q4** | |
| Integration to other clinics | | | | | | | | | Low risk |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Improving back referral system | | | | | | | | | Low risk |
| Improve on resource maldistribution | | | | | | | | | Medium risk |
| Introduction of new two clinics to private sector | | | | | | | | | High risk |
| Introducing of new investigations to the package | | | | | | | | | High risk |
| Mass media advertisement development | | | | | | | | | Low risk |
| Advertising campaign | | | | | | | | | Low risk |
| Using school children as health promotion agents | | | | | | | | | Medium risk |
| Monitoring and evaluation of the progress | | | | | | | | | |



## 12. Marketing Budget

| **Marketing Budget (LKR)** | | |
|---|---|---|
| **Type of Expense** | **Year 01** | **Year 02** |
| Integration to new clinics | 10 million | 10 million |
| Integration to private sector (Training of staff) | 5 million | |

| | | |
|---|---|---|
| Introduction of new investigations (machines and recurrent costs) | 300 million | 50 million |
| Advertisement campaign | 50 million | 50 million |

## 13. Expected Healthcare Gain

Profitability of healthcare is analyzed by healthcare gains since the expected 'profits' exceeds the monetary gains and directly related to the economic gains of the country. The national health accounts 2013 shows that the government had spent 237 532 million on curative healthcare while 11 786 on preventive care, a 20-fold difference.

The much has been debated about spending larger share on preventive care as the health and economic gains are high. For the same year the country has spent,

- 12 304 million Cardiovascular Diseases
- 2913 million Diabetes
- 2201 million hypertensions
- 91 611 million non-communicable diseases as a whole in curative sector.

The preventive care services are carried out at a much lower cost including total lifecycle approach of care.

## 14. Conclusions

The non-communicable disease burden is a growing problem in Sri Lanka mainly due to currently experiencing demographic and epidemiological transitions. The recommended approach to combat the problem of non-communicable diseases by the World Health Organization is the Healthy Lifestyle Centres. The focal point of preventive care, the Medical Officer of Health Offices in every district engage the lifecycle approach to cover the services. Currently HLCs are conducted at curative care hospitals as a clinic for adults of 40-60 years separated from MOH offices. The main problem encountered in these clinics is the low male participation.

The market research revealed that the majority of the male population (65%) selected for the marketing group was belongs to 50 000 – 100 000 income range only 33% were aware about the Healthy Lifestyle Clinics. The main medium of awareness was the word of mouth. Major proportion preferred to attend public sector for medical care due to financial security and the many women clinic participants thought the less male participation in clinics is due to difficulty in taking leave from work.

The analysis of future marketing strategies through 'space matrix' showed conservative approach with market penetration, development, product development and related diversification will help to increase the volume of the customers.

The marketing mix strategies of diversifying the product to new clinics combining with other clinics, improving packaging by introducing new investigations, aggressive promotion campaign through mass media advertising, internet, web, email and social media were included replacing the current policy of word of mouth.

In addition, public-private partnership to be introduced changing the current place of conducting clinic at government hospitals. The current back referral process to be improved to increase quality of care and the customer satisfaction to improve the male participation by 50% to the clinics.



**References**

Adam, T., Evans, D.B., & Murray, C.J.L. (2003), Economic estimation of country-specific hospital costs. *Cost Effectiveness and Resource Allocation*, 1:3

Galdas, P.M., Cheater, F., & Marshall, P., (2005), Men and health help-seeking behaviour: literature review. J Adv Nurs.;49(6):616-23.

Mahowe, M., & Kangoma, S., Men's Participation in Health Care. https://dhsprogram.com/pubs/pdf/FR175/16Chapter16.pdf

Mallawarachchi, D.V.S., wIckramasinghe, S.C., Sonmathunga, L.C., Siriwardena, V.T.S.K., & Gunawardena, N.s., (2016), Healthy Lifestyle Centres: a service for screening noncommunicable diseases through primary health-care institutions in Sri Lanka. *WHO SouthEast Asia Journal of Public Health*, 5 (2)

Narangoda, B.H., & Khathibi, A., (2013), Public Private Partnership in Healthcare Industry in Sri Lanka as an Alternative to Privatization. *Int. J. Manag. Bus. Res.*, 4 (2), 95-106, Spring 2014

Participation in Economy, Women and Men in India. http://www.mospi.gov.in/sites/default/files/reports_and_publication/statistical_publication/social_statistics/Chapter_4.pdf

Sri Lanka National Health Accounts 2013, Health Economic Cell. Ministry of Health, Nutrition & Indigenous Medicine

School Immunization Programme in Sri Lanka. (2008)

Sri Lanka: Healthcare Sector, Sector Update, A JKSB Research Publication. https://www.rvo.nl/sites/default/files/2016

The Health Sector of Sri Lanka, (2014), Embassy of the Kingdom of the Netherlands, https://www.rvo.nl/sites/default/files/2016

Thompson, A.E., Anisimowicz, T., Miedema, B., Hogg, W., Wodchits, W.P., & Bassier, K.A., The influence of gender and other patient characteristics on health care-seeking behaviour: a QUALICOPC study. *BMC Family Practice* (2016) 17:38