"This prospectus is made under the provisions of the Universities Act, the Postgraduate Institute of Medicine Ordinance, and the General By-Laws No. 1 of 2016 and By-Laws No. 2 of 2016 for Degree of Doctor of Medicine(MD) and Board Certification as a Specialist"

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA

PROSPECTUS

Doctor of Medicine (MD)
in
Community Dentistry
2015

Board of Study
in
Community Medicine

Table of Contents

Figures

Tables

Annexes

Prospectus of MD (Community Dentistry) Training

1.0 Background

The BoS in Community Medicine (hereinafter referred to as BoS) *of the Postgraduate Institute of Medicine (PGIM)*, is responsible for conducting the Training Program leading to the degree, MD in Community Dentistry.

Community Dentistry or Dental Public Health is specialty where the focus is on oral health issues of the population rather than individual patients and is firmly rooted in the parent discipline of Public Health. The practice of dentistry is undergoing rapid change due to factors such as changes in oral disease patterns, demographic shifts, social changes and advancements in technology. Therefore like any other specialty in dentistry, the specialty of Community Dentistry too has to keep pace with these changes and advancements. Considering these factors, a curriculum revision was undertaken with a view to produce a specialist in Community Dentistry who would have expertise and also provide leadership in population based dentistry, oral health surveillance, policy development, and implementation, community based prevention and health promotion.

1.1 Effective date

This "Prospectus" will come into effect from 2015 for trainees who will qualify the examination in MSc. Community Dentistry in 2014 and will replace the previous prospectus of 2009.

2.0 Eligibility for entry into training programme

The prerequisite to join the MD programme will be the MSc in Community Dentistry awarded by the Postgraduate Institute of Medicine, University of Colombo and other PGIM general regulations relevant to trainees.

2.1 Selection examination

A selection examination will be held two to three months following the release of the results of the M Sc Community Dentistry examination. It will consist of a one hour paper and include two structured essay/essay questions on aspects related to research methods (including basic epidemiology and statistics). Each question will be independently marked out of 100 by two examiners. To qualify for selection, a candidate has to obtain a minimum of 45% marks for each question with an aggregate of 50%. All who qualify with the specified criteria will be enrolled to the MD Community Dentistry programme

The results of the "Selection Examination" will be valid only for the MD programme that commences immediately after the said "Selection Examination".

Number to be selected for the MD programme

The number to be admitted from the candidates who shall pass the "Selection Examination" will depend on the requirements of the Ministry of Health and the training facilities available, as determined by the BoS / Board of Management. The number to be admitted each year will be indicated in the circular/news paper advertisement calling for applications. The number may vary from year to year. The pre-determined number will be selected based on merit and other relevant regulations.

3.0 Goal and Outcomes

3.1 Goal

To produce a consultant in Community Dentistry with the highest level of competencies to promote and protect population's oral health and well-being

3.2 Outcomes:

To be able to:

01. plan, implement and evaluate health services with emphasis on health promotion, preventive, curative and rehabilitative care

02. manage public health programs

03. apply analytical skills for decision making based on scientific reasoning

04. critically appraise the scientific evidence in order to adopt evidence informed interventions

05. develop positive attitudes towards health promotion

06. empower communities to be responsible and accountable to their own health and mobilize communities against factors which adversely affect the health of populations

07. communicate and collaborate effectively with individuals, groups, communities, and multidisciplinary teams of experts in health and other professions for provision of optimal health care

08. advocate for formulation, implementation and evaluation of public health policy, regulations and legislations to protect and promote populations' health.

09. demonstrate effective leadership and management skills

10. engage in quality research, generate and test innovative solutions for identified health problems and disseminate research findings

11. manage and supervise research projects

12. cultivate the commitment to engage in continuing professional development.

13. safeguard and promote human rights and ethics

4.0 Curriculum overview and master blueprint

Please refer **Annex Nos. I and II**

4.1 Pre- MD programme structure (Table 1/Figure)

The duration of the Pre MD training will be two years and nine months (33 months).
The programme will consist of the following components:

1. Component 1 – Taught Course
2. Component 2 – Field Training in Public Health Management
3. Component 3 – Training in centres recognized by the BoS
4. Strand 1 – Clinical & Management Skills in Hospital and Community Settings
5. Strand 2 – Research Project

Table 1 – Pre MD Program Structure

Module/ Strand	Activity		Attachment/s	Duration Months
Component 1	Course Work		PGIM	4
	End of course theory examination			1
Component 2	Field Training In Public Health Management		Training Unit/NIHS/MOH area	9
Component 3	Training in Public Health		Recognised Training Units	19
Strand 1	Clinical & Management Skills in Hospital & Community Settings		University Unit/ Training Unit	28 study days over 28 months
Strand 2	Research project		Total	33
	a.	Pre-proposal	During taught course	5
	b.	Detailed proposal Ethical clearance	During Module 2	9
	c.	Data collection Data analysis Thesis writing	Training Unit	19

4.2 Training attachment

Field Training in Public Health management (9 months) will be at NIHS, Kalutara (2 weeks) and recognized Regional Dental Surgeon areas (8 ½ months) under supervision of a trainer of the Ministry of Health. After Component two, trainees will be attached to training centers recognized by the Board of Study. All placements will be given according to the order of merit of the MD theory examination.

4.3 Definition of training units

The PGIM accredited specialized Public Health institutions are considered as Training Units **(A List)**

4.4 Definition of a trainer

A specialist with at least 3 years experience after Board Certification as a Consultant in Community Dentistry will be appointed as a trainer

4.5 Number of vacancies per training unit

The generally accepted norm would be 2 trainees per trainer at a given time.

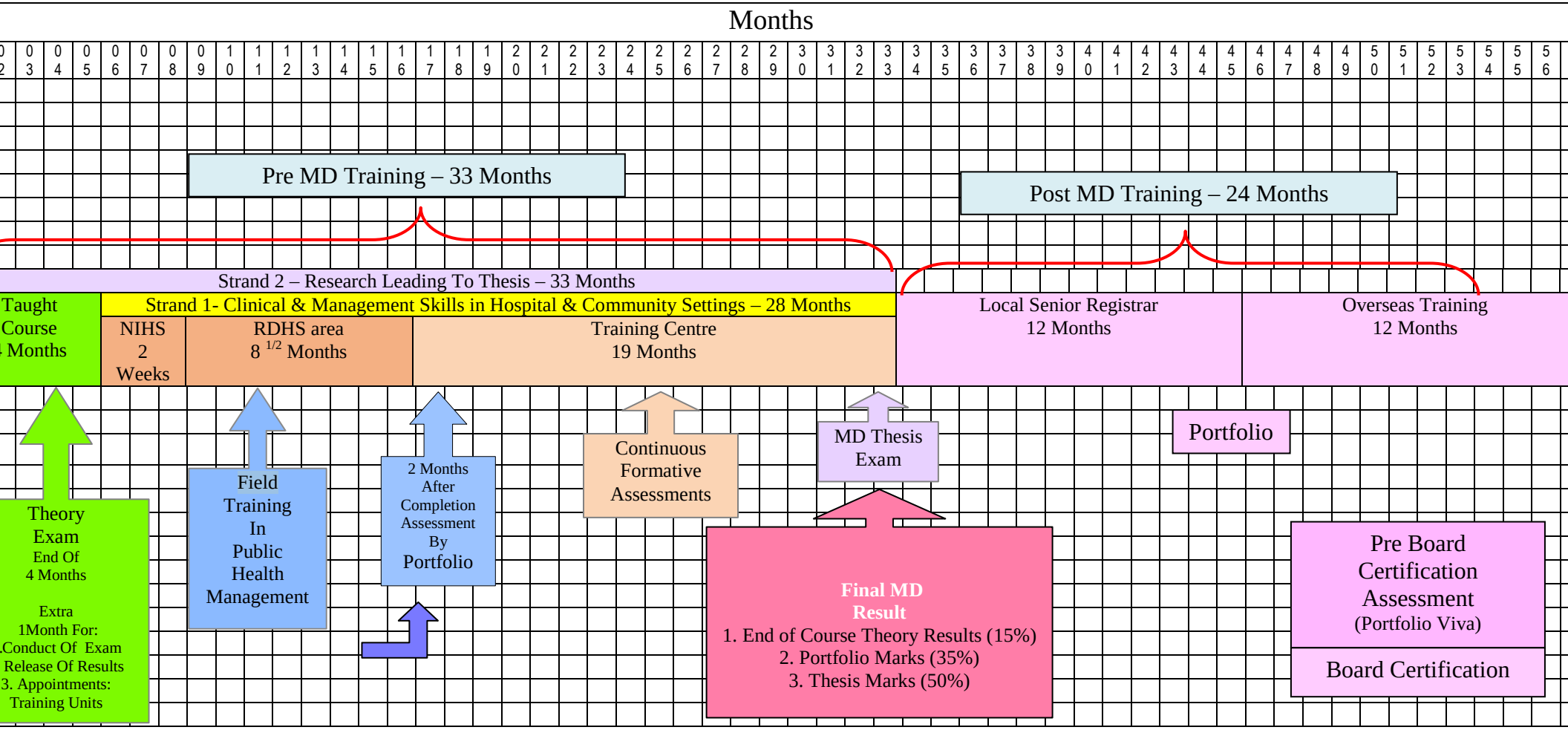

Figure - MD Programme Structure

5.0 Learning activities during pre-MD training programme

5.1

Component 1 - Taught course

Duration: Four Months

The modules covered during the Taught Course include (**Annexes III - IX):**

1. Advanced Epidemiology
2. Advanced Statistics
3. Research Methods
4. Professionalism & Ethical principles
5. General administration & public health management
   - A General Administration
   - B General Management and Planning
   - C Leadership
   - D Policy Development
   - E Program Planning, Monitoring and Evaluation
   - F Human Resources Management
   - G Health Economics and Financial Governance
6. Health Promotion
7. Capacity Building

5.1.1. MD theory examination

The "MD theory examination" will be held two weeks after the completion of the taught course.

Composition:

A. Two Theory Papers
B. Structured Oral Examination (SOE)

A. Theory papers

The two theory papers will consist of four (04) questions in each paper with a duration of two (02) hours per paper. Paper I shall consist of Advanced Statistics and Epidemiology, Ethics and Professionalism. Paper II shall consist of Health Promotion, Capacity Building and General Administration and Public Health Management. Research methods shall be common to both papers.

B. Structured oral examination (SOE)

This will be based on a structured viva (as it implies), encompassing all topics covered during the course. There will be two viva boards, each of 20 minutes duration. Each viva board will consist of two examiners who will award marks independently. The average of the two examiners of a given panel will be the final mark obtained from each examiner of that panel and the average of the marks obtained from the two panels will be the mark taken for the final assessment of the MD theory examination.

Marking scheme

The details of the marking scheme are given below. An overall aggregate of 50% or more with a minimum mark of 50% for each theory paper and an average of 50% for the SOE are required to pass the examination. Those who fail the examination will be allowed to follow the training programme but will have to pass this component before the submission of the thesis. The number of attempts allowed will be based on the General Rules and Regulations issued by the PGIM.

Fifteen percent (15%) of the final marks of the "MD theory examination' will be taken to compute the final marks of the MD Community Medicine examination.

Table 2 Composition of the MD theory examination

Component	Number of Questions	Total Marks	Minimum Marks To Pass	Aggregate For Each Component To Pass
1. Theory Papers				
Paper I	04	100	50%	50%
Paper II	04	100	50%	
2. Structured Oral Examination				
Viva Board I	10	100	Average of 50%	50%
Viva Board II	10	100		
Total Aggregate To Pass				**50%**

5.2 Component 2

Field training in public health management

Duration: Nine months

Learning objectives:

To be able to:

1. acquire skills required to function as a health manager at the divisional level
2. gain knowledge and skills in developing in-service training programmes to meet identified educational needs of the dental and para-dental staff
3. develop skills in commissioning inter-sectoral collaboration and mobilizing community participation in order to improve the health status of the area
4. be able to review progress at the divisional level, take corrective action and communicate to the higher levels
5. gain knowledge and skills in the interpretation and application of public health legislation.
6. develop attitudes and skills required of a change agent for health promotion
7. develop skills in supervising health staff at divisional level

Program structure of field training in public health management (Table 3)

1. Course on Public Health Legislation at NIHS (2 weeks) [**Annex X]**
2. RDS training at a RDHS office (8 1/2 months) under the supervision of the consultant in Community Dentistry of the allocated training unit

Table 3 - Program Structure of Field Training In Public Health Management

Component	Activity	Duration
1.	**Course on public health legislation- National Institute of Health Sciences (NIHS) 2 weeks**	
2.	**Field Training : At an Assigned RDS Area**	8 ½ months
Total		**9 months**

5.2.1 Activities

Details of activities are given in Table 3.

5.2.2 Monitoring of progress

It is the responsibility of the trainees to submit progress reports once in three months (a total of three progress reports for the period of nine months) to the BoS using the prescribed format **(Annex XI**). These have to be submitted through the supervisor/s with their comments. A letter of warning will be issued by the BoS for delays of more than one month from the due date.

Progress will also be assessed by a panel of BoS Members at one (1), four (4), six (6) and nine (9) months during the attachment as per relevance.

In addition the trainee is expected to obtain Peer Team Ratings from peers/members of the health care team (RDS, MOH, Public health midwives, Public health nursing sisters, medical students etc.) The trainee should obtain the Peer Team Rating (PTR) forms from the Academic Ranch/PGIM.

PTR Form A (list of raters) should be completed in duplicate by the trainee in consultation with the trainer. It is recommended to obtain PTR from at least five raters.

PTR Form B (instruction to raters) and **PTR Form C** together with a self addressed envelope (SAE) should be given to each rater by the trainee. Raters are expected to complete the PTR form C and post it to the trainer using the SAE. The trainer should submit these SAE together with PTR Form A to the Medical Education Resource Centre (MERC), PGIM.

PTR Form D and Form E (summary of collated ratings) will be sent by the PGIM to the trainer. The trainer is expected to discuss any areas of concern with the trainee for correction. The trainee may retain a copy of the completed PTR Form E for his/her records and the original will be sent to the Director, PGIM

Table 4 -Field Training in public health management structure: activities & assessments
Duration = 9 Months
Supervised RDS Training at a RDHS office (8 1/2 months)

Table 4 Field Training in Public Health Management structure: Activities & Assessments

Activity			**Minimum number of activities if applicable**	**Evidence to be included in the portfolio**	**Time Schedule**
1	**Course on Public Health legislation (NIHS – 2 week)**			Case discussion[3]	A single entry by 3rd month of training
2	**Field work (In an assigned RDHS area) - 34 weeks**				
I	**Familiarize with the job functions of RDS, Hospital DS, DS (Community DC), DS(Adolescent DC, SSDT and SDT**				
II	**Situation analysis**				
	I	Situational analysis of the district in relation to: a. Population b. MOH areas c. Availability- Healthcare institutions, different categories of PHC staff related to oral health, d. Adequacy of resources to cater to the needs of the population e. Equity -Distribution of institutions f. Different target populations: school children in the target age groups, registered no. of pregnant mothers by MOH area, estate population, and) etc		Case report[2]	A single entry by the end of 1st month
III	Review the oral health component of the 'Annual Action Plan' of the district.				
	I	Review the oral health component of the 'Annual Action Plan' of the district in relation to: a. Objectives and targets of the plan. b. Appropriateness of the strategies in achieving the objectives. c. Feasibility- Availability of resources d. Distribution of resources e. Alternate strategies to address service gaps f. Monitoring and evaluation mechanism is incorporated in the plan		Evaluative discussion[5]	A single entry by the 2nd month

	Activity		Minimum number of activities if applicable	Evidence to be included in the portfolio	Time Schedule
IV	Carrying out the following tasks in a selected MOH area with the concurrence of the supervisor				
	A	Participate in the development of an 'Action Plan related to oral health' in the selected MOH area in concurrence with the action plan of the MOH	1	Case Report[2]	A single entry by the 2nd month
	B	Participate in the implementation of the plan developed		Reflective accounts[4]	A single entry by ninth month of training
	i	Identify training needs of the staff and conduct training programmes	2	Reflective accounts[4]	Two entries – by the end of the 3rd and 6th months of training
	ii	Organize outreach programmes according to service needs- to improve coverage of existing programmes			
		School Dental Services	5	Reflective accounts[4]	Two entries – by the end of the 4th, & 7th months of training
		Outreach clinics for providing oral healthcare during pregnancy	5	Reflective accounts[4]	Two entries – by the end of the 4th, & 7th months of training
	Iii	Participate in School Medical Inspections	2	Reflective accounts[4]	Two entries – by the end of the 3rd and 6th months of training
V	**Supervision**				
		Community Dental Clinic	1	Multi-source feedback[6] **Annex XII**	
		Adolescent Dental Clinic	1		
		School Dental Clinic Evaluate the performance	3		
VI	**MOH Monthly Conference**		2	Conducting a CPD session and its evaluation[7] (1)	
VI	**District Review**				
	1	Organize a district review of oral health services with the RDS	1 Review meeting	Reflective accounts[4]	A single entry by ninth month of training
VIII	**Inter - sectoral coordination activities**			Evaluative discussion[5]	A single entry by ninth month of training
	Participate in progress review meetings conducted by RDHS (Quarterly action plan reviews etc)		2		
	Participate in oral health review meetings conducted at National level		1		

Foot note of superscripts 1 - 7

1	Signature log	Signatures of relevant supervisors for the completion of the desired duration
2	Case report	**Description** of the event / activity (Word count: 500)
3	Case discussion	An account describing how the concepts and principles learned **can be applied** in a relevant scenario (Word count: 800 - 1000)
4	Reflective account	An account highlighting what the candidates **knows and needs to know (learning gaps and learning needs)** regarding the topic / task (Word count: 800 - 1000)
5	Evaluative discussion	An evaluative discussion of **strengths and weakness of the activity / process** as observed by the candidate (Word count: 800 - 1000)
6	Multi-source feedback	Compilation of at least 10 forms of feedback from **different healthcare professionals** and an account on learning points for the future (Word count: 500). The forms will be provided.
7	Conducting a CPD session and evaluation	Conducting a CPD session for a relevant audience and compilation of their feedback on its effectiveness together with an account on learning points for the future (Word count: 500)

Portfolio should be discussed with the mentor/assessor at the end of 3rd, 6th and 9th months of training with respective entries indicated above.

5.2.3 Assessment of Portfolio on Field Training In Public Health Management

A. Signature Log

Maintain separate signature logs for the components described below:

a. Public Health Legislation Course (2 weeks)
b. Regional Dental Surgeon training (8 ½ months)

B. Portfolio Entries

The portfolio (**Annex Nos. XIII, XIV and XV**) comprising of a total of 17 entries should be submitted for assessment, two months after the completion of Component 2. The portfolio should include case reports, case discussion, reflective accounts, evaluative discussions, multi-source feedback and an evaluation of CPD sessions conducted (Table 5). It will be assessed based on the format described in by a panel of two examiners appointed by the BoS.

Table 5 – Portfolio Entries and Marking Scheme

No.	Portfolio Entries Number & Category	Marking Criteria	
		Criterion	**Mark Assigned**
1.	**Case Reports** **Number = 2**	• Inclusion of both • Quality	up to 20% up to 80%
2.	**Case Discussions** **Number = 1**	• Inclusion • Identifying learning needs • Discussed meaningful steps to meet learning needs	up to 5% up to 49% up to 100%

3.	**Reflective Accounts** **Number = 10**	• Inclusion • Identifying learning needs • Discussed meaningful steps to meet learning needs	up to 21% up to 49% up to 100%
4.	**Evaluative Discussion** **Number =2**	• Inclusion • Identifying learning needs • Discussed meaningful steps to meet learning needs	up to 21% up to 49% up to 100%
5.	**Multi-source Feedback** **Number = 1**	• Inclusion • Identifying learning needs • Discussed meaningful steps to meet learning needs	up to 20% up to 49% up to 100%
6.	**Conducting A** **CPD Session & Evaluation** **Number = 1**	• Inclusion • Identifying learning needs • Discussed meaningful steps to meet learning needs	up to 20% up to 49% up to 100%
Total Portfolio Entries = 17			

Outcome of assessment will be as follows:

Portfolio

1.	**Total Portfolio Entries**	17
2.	**Total marks per entry**	100
3.	**Total marks for all entries**	17 × 100 = 1700
4.	**Final mark out of 100**	To be computed as % of total mark obtained out of1700

Overall Criteria for Passing Portfolio

1.	**Signature Log**	**≥80%**	**Pass**
2.	**Overall Portfolio Assessment**	**≥50%**	
		40-49%	**Resubmission of the portfolio within two months**
4.		**<40%**	**Fail**

5.3 <u>Component 3</u>

Duration – 19 months

Attachment to an accredited training Centre

5.3.1 Activities

1. General Training

a. Prepare a brief (750 -1000 words) case report on the functions and activities of the training institution to which the candidate is attached to.
b. Contribute to all service, academic and research activities conducted in the "Training Unit" and maintain a signature log for all the activities conducted/participated during the training period (submit signature log)
c. Conduct at least two journal clubs (submit evidence)
d. Presentation (oral/poster) of at least one research paper at a scientific forum (submit evidence)
e. Participation in at least four continuing professional development programmes (submit evidence)
    - All the above documents should be certified by the supervisor
    - The progress made with regard to above activities should be indicated in the Progress Report (Training), which should be certified by the supervisor and submitted to the Board of Study as stated below:
        i. First four reports to be submitted regularly on four monthly basis. **[Annex XV]**
        ii. Final report to cover the last three months.

2. Research - During this training, a minimum of 30 hours per week should be allocated to the MD research project.

5.3.2 Monitoring of progress
It is the responsibility of the trainees to submit progress reports once in four months to the BoS.

5.4 <u>Strand 1</u>
Clinical and Management Skills in Hospital & Community Settings
Duration: 28 study days over 28 months

Goal
To develop clinical & management skills in relation to practice of Community Dentistry through exposure to clinical conditions/situations in hospital/community settings

Competencies:
The trainee should be able to demonstrate the following competencies on completion of the training:

1. Management and follow up of common clinical conditions of public health significance using the knowledge on individual, family and community level determinants of health and disease.

2. Knowledge on application of current clinical management guidelines for managing common clinical conditions which are public health problems.

3. Collaborating in a multi-disciplinary specialist team in the development of management guidelines for clinical conditions and public health programmes.

4. Synthesis of available evidence for hospital policy development and practice.

5. Implementation of processes with public health significance in hospital settings related to health information management process, infection control practices and occupational safety procedures.

6. Planning, implementation, monitoring and evaluation of inter-disciplinary (clinical and public health) programs in hospital settings.

7. Critical review and analysis of scientific evidence pertaining to clinical and public health problems available in published/ unpublished literature

8. Synthesis of evidence for hospital policy development and practice

9. Skills in conflict resolution and negotiation for working effectively in a multi-disciplinary and multi-stakeholder environment

10. Skills in team building and teamwork for working effectively in a multi-disciplinary and multi-stakeholder environment

Activities:

This activity will be coordinated by a Trainer appointed by the BoS. A study day will be organized once a month from the 6th to the 30th month of the pre-MD programme to achieve the objectives included. Refer Table 5 for details.

Table 6 – Clinical and Management Skills in Hospital & Community Settings (Strand 1)

Content		Teaching/ Learning Activities
01	Individual, family and community level determinants of health and disease	• Hospital visits • Field visits • Institutional visits • Seminars • Workshops • Journal clubs **Duration:** 28 "study days" extending over 28 months
02	Clinical management guidelines and the guideline development process	
03	Addressing public health emergencies	
04	Planning and management of inter-disciplinary programs on: • lifestyle modification • early childhood development • safe motherhood	
05	Hospital processes with public health significance	
06	Critical review and analysis of scientific literature	
07	Communicating with the public and media in local language/s and English	
08	Communicating with colleagues of other specialties	
09	Advocacy communication	
10	Preparation of a • concept paper • project proposal • evaluation report	
11	Use of information management (IT)	
12	Use of statistical software for advanced data analysis	

5.4.1 Attendance and active participation in teaching/learning activities:

Attendance is compulsory and it is the responsibility of the trainee to maintain the signature log. It is also essential that the trainees actively participate in at least two seminars and two journal clubs which need to be certified by the tutor.

5.4.2 Assessments:

Formative assessments with immediate feedback on strengths and weaknesses will be given to the trainee concurrently during the teaching/ learning activities indicated in Table 6.

5.5 <u>Strand 2</u>

Research project

Duration: 33 months

A. General Objective

To be able to generate and test innovative solutions to health related problems that afflict the wellbeing of populations through conceptualization and development of empirical methods needed to conduct research, and contribute to advancement of knowledge on program evaluation, policy analysis and health systems development.

B. Specific Objectives:

To be able to:

1. gain skills in conceptualizing and articulating distinct research questions or generating innovative solutions or testable hypotheses on a chosen research problem through a thorough literature review

2. critically review available research to appraise the appropriateness of the study design, methodological tools and statistical techniques and synthesize and generate novel/modified methodological approaches to research the problem identified and resolve existing gaps in knowledge

3. develop a comprehensive research protocol covering relevant aspects of research methodology using appropriate study designs, study population/s, sampling techniques, study tools, robust statistical analysis and budgeting

4. respect and value ethical principles applicable to research participants in terms of autonomy, justice, non malfeasance and beneficence at all times

5. be skillful in collecting data with application of quality assurance measures and in managing and ensuring data security

6. analyse data using appropriate epidemiological, statistical, qualitative and economical techniques

7. be competent in appropriate interpretation and discussion of research findings in the light of limitations, public health significance, policy implications and short and long term recommendations which are practical and sustainable with suggestions for future research

8. be skillful in reporting and communicating the research findings clearly and succinctly through numerous formats available such as abstracts, posters, oral presentations and manuscripts published in local and international journals

5.5.1 Details of research project

A. Scope: research material adequate to generate three journal articles

B. Type of Research:

- **a.** Analytical: Observational or Experimental
- **b.** Descriptive: In depth descriptive study on a novel topic not researched locally before

Procedure:

	Stage	**Time Scale**
01	Identification of a suitable topic	At the commencement of Pre MD training
02	Identification of supervisor/s	Before submission of the pre-proposal
03	Pre proposal development & obtaining approval*	During 6^{th} – 8^{th} month of the training programme

04	Detailed proposal development & approval	From 8th month onwards (at the earliest possibility)
05	Commencement of data collection	Ideally 14 months onwards
06	Data analysis	19 months onwards
07	Commencement of thesis writing	
08	Submission	At the end of 33 months of Pre MD training

5.5.2 Research proposals

a. Pre-proposal

b. Detailed proposal

a. Pre-proposal

The pre-proposal should be submitted anytime during 6th - 8th month. The word count should not exceed 2500. Refer guidelines (**Annex XVI**)) for details. It will be evaluated by the "Pre-Proposal Committee" appointed by the BoS.

The areas evaluated are:

1. Title - appropriateness (whether it reflects the general objective of the proposed study)
2. Literature - on studies conducted locally up to date on the same/similar topics
3. Objectives – appropriateness (relevance to research problem; written using relevant action verbs)
4. Methods - whether methods described enables achievement of objectives
5. Scope of the study - research material adequate to generate three journal articles.

b. Detailed proposal

The detailed proposal should be developed during the 8th month onwards (during the period of Module 2), after obtaining approval from the BoS for the pre proposal. The word count should not exceed 6000 (excluding the references and annexes). A separate section on literature is not required and the relevant details extracted from previous studies (eg: study instruments) should be included in the section on Introduction. Refer **Annex XVI** for the guidelines for the development of detailed proposal.

The proposal will be evaluated by two reviewers appointed by the BoS who will submit their observations (in general) within one month of submission of the proposal. The trainee will then have to make a presentation on the proposed study to a panel consisting of Consultant Community Physicians, experts in the field of study and the two reviewers. The duration of the power point presentation should not exceed 30 minutes. It should cover all relevant aspects of the detailed proposal.

Based on the comments of the reviewers and panel members the proposal will be either:

i. Approved with no modifications
ii. Approved subject to revisions
iii. Resubmitted. The proposal at this stage will be reviewed by the same two reviewers and considered for approval.
iv. Same cycle will take place if the resubmitted version is not approved

Maximum number of resubmissions will be limited to three within a period of 12 months.

Subsequent revisions to the approved "Detailed Proposal"

Revisions to the initially approved detailed proposal are permitted and should be considered if such revisions are likely to improve the quality of the proposed research methods. However, such revisions should be adopted in consultation with the supervisor/s with a valid justification for doing so. Once, finalized, it is important to seek permission from the BoS to adopt the revisions.

The letter of request should contain the proposed revisions and the sections that are deleted/revised clearly stated. All correspondence related to research should be forwarded to the Director/PGIM through the supervisor/s with a copy to the BoS.

Once approval is granted by the BoS, the trainee should incorporate the revisions into the original detailed proposal which has to be submitted for the MD examination along with the thesis. It is the responsibility of the trainee to get the final detailed proposal (all the revisions approved by the BoS should be incorporated as annexes in the detailed proposal) date stamped by the Academic Branch/PGIM before submission.

5.5.3 Progress reports

It is the responsibility of the trainee to submit progress reports on his/her research every four months from the 9th month of the Pre-MD programme. It has to be completed using the prescribed format (**Annex XVII)** by the trainee and submitted through the supervisor/s with their comments. A letter of warning will be issued by the BoS for delays of more than two months from the due date. Once the training period is over the trainee should continue to submit the progress reports on the research project on a four monthly basis until the final submission of the thesis

5.5.4 Thesis writing

Please refer **Annex XVIII**

6.0 MD examination

The MD examination will be scheduled for each batch after 32 months from the commencement of the course. This will be considered as the first attempt.

6.1 Eligibility to register for the MD examination

In order to be eligible to sit for the MD in Community Medicine examination, trainees must have

a. Satisfactory completion of MD theory examination (Component 1).
b. Satisfactory completion of the portfolio (Component 2).
c. Satisfactory completion of Component 3
d. Satisfactory completion Strand 1 and 2
e. At least 80% attendance in each of the Components and Strands.
f. Satisfactory progress reports.
g. Satisfactory Peer team rating reports.

6.2 Examination format

The MD examination will be based on a viva voce examination where the candidate will have to successfully defend the thesis.

6.2.1 Evaluation of thesis:

1.1 There shall be a panel of examiners (one internal and one external examiner), recommended by the BOS, approved by the BOM and appointed by the Senate to evaluate the thesis.

1.2 After reading the thesis each examiner shall prepare a report based on the "Examiner's Report: Thesis Evaluation Form" (**Annex XIX**). In assessing/evaluating and correcting the thesis, the approved detailed research proposal must be used as a reference.

1.3 Before the viva voce examination the internal and external examiner shall have a formal meeting to discuss the issues related to the report prepared by each of them and decide how the viva voce examination should be conducted and on the issues to be discussed.

1.4 Candidates are required to present themselves for the viva voce examination at such time and place as the PGIM may direct.

1.5. The viva voce examination shall be chaired by the Director / PGIM or the Chairperson of the BOS or the Chief Examiner (subject to availability). The supervisor/s shall function only as observer/s and not make any comments or participate in the viva voce examination at any stage.

1.6 After the oral examination the two examiners in the presence of the Chairperson should discuss further, the issues that arose during the defense of the thesis and then arrive at the final decision with regard to the results to be awarded.

1.7 After consideration of the reports of the two examiners on the thesis and the performance of the candidate at the viva voce examination, the duly constituted Results Board shall decide on the result of the candidate as described below, based on the scheme described in the Prospectus.

1.8. The marking scheme for assessment of the thesis and criteria for passing the examination (Table 6): The details of pass/fail status and re evaluation of the thesis are given in Table 7.

6.2.2 Award of the degree in MD Community Medicine (Table 8)

Will be based on all three components namely:

a. MD theory examination (Component 1)
b. Portfolio assessment (Component 2)
c. Thesis assessment

Table 7 - Thesis assessment

Component		Marks	
		Total Mark Per Section	**Minimum To Pass Each Section**
A.	**Title**	10	-
B.	**Abstract**	30	15
C.	**Introduction**	40	20
D.	**Objectives**	20	10
E.	**Literature Review**	30	15
F.	**Methods**	70	35
G.	**Results**	70	35
H.	**Discussion**	70	35
I.	**Conclusions**	10	05
J.	**Recommendations**	20	10
K.	**Reference List**	10	05
L.	**Overall Presentation**	20	10
Total		400	195
Total expressed as percentage		100%	48.7%

Table 8 - Pass/Fail Status

No.	Decision	Overall Total	Individual Sections	
			Section	Marks Obtained
1.	**Pass**	≥50%	B – L	≥50%
2.	**Resubmission in six weeks**	≥50%	B- K L	≥50% <50%
3.	**Resubmission in three months**	≥50%	C,D,F - H ≥Two from B,E, I-L	≥50% <50%
4.	**Resubmission in one year/fresh evaluation**	< 50%	F – H	<50%
5.	**Fail – Submit a thesis on a new topic**	<30%	B – L	<50%

Table 9 - Overall Criteria for Passing MD examination

Final Mark Weighting		Minimum Mark for Each Component
MD theory (Component 1)	**15%**	**50%**
Portfolio (Component 2)	**35%**	
Thesis	**50%**	

7.0 Post MD training

On successful completion of the MD, the trainee will undergo two years of supervised local and overseas training as indicated below:

1. **Senior Registrar - Local Training**
2. **Senior Registrar – Overseas Training**

The trainees should maintain a/the portfolio during this period and is required to submit it at the PBCA.

7.1 Senior registrar – Local training (SR local training)

The duration of the local SR appointment will be for one year. During this period the trainee will be attached to a training unit in the Ministry of Health of the trainee's choice based on the merit at the final MD Examination. The list of training units will be decided and approved by the BoS. Trainees are not allowed to select the same training institution for Component 3 and SR local training. Trainees are required to maintain 80% attendance for approval of the training.

a. Monitoring and Evaluation (M&E) of a National Public Health Programme of the Training Unit where the trainee is attached to. Only one trainee will be attached to given a public health programme. The first six months of this training period should be fully devoted to this activity. (refer A**nnex XX** for details).

   Assessment: M&E Report has to be prepared and complied in the Portfolio for assessment.

b. Preparation of concept papers, project proposals, grant applications, project reports quarterly, biannual and annual reports and other documents prepared/published by the training unit.

   The candidate should give detailed information regarding the contribution in a document containing not less than 500 words for four of the above. The percentage of contribution should be certified by the head of the institution.

c. Public Health Management Training Programme (Short term rotational attachments) **–**This program will commence during the latter six months of the training period. The institutions, duration of the attachment at each institution and the objectives are included in **Annex XXI**.

   It is compulsory that all the institutions listed are covered during this period. A signature log has to be maintained for all rotations and the signature of the resource person/tutor who does the lecture/demonstration has to certify the attendance.

Assessments:
Select five public health institutions of trainee's choice and prepare:

a. Descriptive logs addressing the specific objectives of four institutions
b. An audit on the remaining institution.

7.2 Senior registrar – Overseas training (SR overseas training)

During the second year of post MD training, the trainees will undergo a period of one year supervised training abroad.

Procedure

During this period the trainee will be attached to one or more "Centers of Excellence" approved by the BoS. The trainees should submit the learning objectives **(Annex XXII**), of the overseas training programme for prior approval of the BoS. The Head of the overseas training unit is expected to furnish relevant information to the Director/PGIM, about the training institution including the facilities that will be made available to the trainee.

If the attachment is for more than one center, the period of attachment to any one center should be for a minimum of six months. The BoS may however, approve a shorter period, which shall not be less than three months.

In the exceptional circumstances, the BoS may consider exemption of a candidate from supervised training abroad and permit this component of the training to be undertaken in one or more Centers of Excellence in Sri Lanka (Refer PGIM General Regulations & Guidelines, 2013, page 28 for further details).

The trainee is expected to submit quarterly (once in three months) progress reports through the overseas supervisor. At the end of the training period the trainee has to submit a final report using the prescribed format (**Annex XXIII**) and the supervisor is required to certify that the trainee has satisfactorily completed the training.

The BoS will take the above into consideration in deciding whether the candidate has successfully completed the post MD overseas component.

8.0 Pre- Board Certification

E**ligibility for Pre-Board certification assessment (PBCA)**

a. Satisfactory completion of the MD in Community Dentistry examination
b. Satisfactory completion of one year of local SR training
c. Satisfactory completion of one year of foreign SR training
d. Satisfactory progress reports of both local and foreign supervisors
e. Publication of two journal articles in peer reviewed journals from the MD thesis
f. Making a presentation and submission of a brief report to the Board of Study on the Post MD overseas training
g. Submission of completed portfolio

Format of the PBCA (Annex XXIV)
The PBCA shall be based on the assessment of the portfolio maintained by the trainee during the post MD period. It will be conducted by a panel of three examiners recommended by the BoS and approved by the Board of Management.

Contents of Portfolio
The contents of the portfolio should be divided into sections according to the outcomes stated above, followed by a final section that contains evidence of reflective practice.

The main components and the type of evidence that is relevant to each component are as follows:

A. Subject expertise:
- a. progress reports from supervisors (essential, should be according to prescribed format)
- b. Supervisor feedback on communication skills
- c. Log of procedures carried out
- d. Results of any work-place assessments conducted
    - i. Monitoring and evaluation (M&E) of a National Public Health programme
    - ii. Short term rotational attachment reports

B. Teaching
- a. Undergraduates - Power point presentation or Summary of Lecture
- b. Postgraduates - Power point presentation or Summary of Lecture
- c. Ancillary health staff - - Power point presentation or Summary of Lecture

Communication skills: to be assessed by the supervisor during this period.

C. Research and Audits
- a. Research papers published – Copies of the published articles
- b. Research papers accepted for publication - Manuscript accepted for publication
- c. Oral presentations at scientific conferences – A copy of the power point presentation
- d. Audits - Refer Section 7.1/c

D. Ethics
The "certificate of attendance" received from the "Professionalism" workshop to be complied. As evidence of participation

E. Information Technology
- a. Participation in training programmes / workshops
- b. Evidence of searching for information and application of findings in practice

F. Life-long learning
Participation in conferences and meetings- **training workshops**

G. Reflective practice
Narration of at least one learning event experienced by the trainee, in relation to each of the above outcomes, with reflection on what and how the trainee learned from this experience

9.0 Board certification

A trainee who has successfully completed the PBCA is eligible to for Board Certification as a specialist in Community dentistry on the recommendation of the BoS in Community Dentistry.

Requirements for board certification

The following criteria should be fulfilled for Board Certification.

- Satisfactory completion of the MD in Community Dentistry examination
- Satisfactorily completed the post-MD training period of 1 year local training and 1 year overseas training
- Satisfactory progress reports from both local and foreign supervisors
- Publication of two journal articles and a third manuscript submitted and currently being peer reviewed in peer reviewed journals from the MD thesis
- Making a presentation and submission of a brief report to the Board of Study on the Post MD overseas training
- Passed the Pre-Board Certification Assessment (Post MD portfolio)

The effective date of Board certification for those who have successfully completed the pre and post MD training, will be two calendar years from **the date of successful completion of MD examination.**

10.0 General regulations

Candidates should also follow the General Regulations of the PGIM in addition to the rules and regulations specified by the prospectus.

Annexes

Annex I
Curriculum – Overview

Table – Curriculum Overview

Goal – To produce a consultant in Community Dentistry capable of managing National Public Health Programmes effectively & efficiently				
No	**Subject Area**	**Competency**	**Learning Outcomes**	**Broad Content Area**
01	General Administration	Be an effective General Administrator	Demonstrate knowledge and skills on general administration of Health Care Institutions/ Organizations	a. Rules & Regulations b. Budget & Fiscal c. Personnel d. Public Relations e. Quality Improvement
02	Health Economics and Financial Governance	Be competent in application of health economic concepts in efficient financial management	Demonstrate knowledge on health economics and skills in financial governance	a. Supply b. Demand c. Market structure & imperfections d. Challenges in costing health &healthcare e. Evaluation: cost benefits, effectiveness & efficiency
03	Management Skills: General	Be an effective health institutional manager	Demonstrate knowledge, positive attitudes and skills of an effective & efficient manager	a. Organizational dynamics b. Strategic planning c. Human resource management d. Information management e. Risk management f. Quality
04	Leadership Skills	Possess leadership qualities	Demonstrate knowledge, positive attitudes and skills of an efficient leader Describe different types of leadership that exist.	a. Types of leadership b. Leadership qualities c. Communication skills d. Team building and mentorship e. Conflict resolution and negotiation f. Practical aspects of leading in the public health sector
05	Program Planning, Management & Evaluation	Be an efficient program manager	Demonstrate knowledge and skills in the planning, implementation, management and evaluation of health care programmes	a. Needs assessment b. Prioritisation c. Planning d. Implementation e. Monitoring & Evaluation
06	Capacity Building	Possess capacity building capabilities	To gain knowledge and skills relevant to capacity building of all categories of public health staff To gain skills in relevant clinical aspects applicable to field practise	a. Teaching & Learning methods b. Evaluation / Assessment techniques c. Clinical training : procedural aspects

Continuation of Table – Curriculum Overview

No	Subject Area	Competency	Learning Outcomes	Broad Content Area
07	Communication Skills	Possess effective communication skills	To gain knowledge, positive attitudes and skills on effective communication	a. Oral communication b. Written communication c. Non verbal communication d. Public speaking and e. Communication via mass media
08	Policy Development/Analysis	Be an effective contributor to policy formulation	To gain knowledge, positive attitudes and skills in health related policy analysis and development	a. Policy development aspects b. Policy analysis
09	Advocacy	Be an effective health advocate	To demonstrate knowledge and skills of an effective advocate to political leaders and higher authorities	a. Basics of advocacy
10	Research Skills	Be a high quality researcher	a. Demonstrate knowledge on basic and advanced epidemiology and statistical applications relevant to health care related problem solving b. Demonstrate skills in application of epidemiological methods and appropriate statistical analysis in interpreting health related data and drawing appropriate inferences c. Disseminate research evidence	a. Advanced Epidemiology b. Advanced Statistics c. Quantitative research d. Qualitative research e. Operational research f. Health systems research g. Scientific writing
11	Evidence Based Decision Making	Possess capabilities of applying evidence based decisions	Demonstrate ability on critical appraisal of literature and adoption and execution of evidence based decisions	a. Basics of evidence based medicine b. Systematic reviews c. Meta analysis
12	Professionalism	Be a professional of high ethical conduct	Demonstrate knowledge positive attitudes and skills to practice and inculcate ethical and professional standards at individual and organizational level in the provision of healthcare services Demonstrate commitment towards continuing medical education to keep abreast with the medical advances	a. Research ethics – general b. Good Clinical Practice c. Ethics: Public Health Practice d. Practise ethics e. Ethical standards for researchers f. Personal development
13	Health Promotion, Social participation & empowerment	Possess skills in conducting health promotion activities	Demonstrate knowledge and skills of conducting health promotion activities	a. Theories related to health promotion b. Skills in planning appropriate health promotion activities

Annex II
Master Blueprint of Assessment for MD Community Dentistry

No.	**Competencies**	Written Exam	Viva	Field Training	Research Project	Local SR	Portfolio
01	Plan, implement and evaluate health services with emphasis on promotive, preventive, curative and rehabilitative care	X	X	XXX			XX
02	Manage public health programs	X	X	X		XX	XXX
03	Apply analytical skills for decision making based on scientific reasoning	X	X	XX	XXX	XX	XXX
04	Critically appraise the scientific evidence in order to adopt evidence informed interventions	X	X		XX		XXX
05	Develop positive attitudes towards health promotion		X	XXX			XXX
06	Empower communities to be responsible and accountable to their own health and mobilize communities against factors which adversely affect the health of populations	X		XX			XXX
07	Communicate and collaborate effectively with individuals, groups, communities, and multidisciplinary teams of experts in health and other professions for provision of optimal health care			XXX			XXX
08	Advocate for formulation, implementation and evaluation of public health policy, regulations and legislations to protect and promote populations' health	X	X	XX		XX	XXX
09	Demonstrate effective leadership and management skills			XX		XX	XXX
10	Engage in quality research, generate and test innovative solutions for identified health problems and disseminate research findings				XXX		
11	Manage and supervise research projects		X				XXX
12	Cultivate the commitment to engage in continuing professional development	X	XX				XXX
13	Safeguard and promote human rights and ethics		X	XX	XXX	X	XXX

Component 1
Taught Course

Annex III
1.1 Module 1 Advanced Epidemiology

Aim

To provide knowledge on advanced epidemiology and skills in application of epidemiological principles and procedures in conducting health research

Objectives

Be able to:

1. Describe application of advanced epidemiological principles in relation to medical research
2. Apply this knowledge in the development of research protocols
3. Develop skills in appropriate analysis and interpretation of epidemiological data
4. Critically appraise and evaluate the methods, analysis and interpretation of relevant literature

Topic	Content	Teaching/ Learning Method	Time Hours
Basic Epidemiology – Revision I & II	• Measures of morbidity and mortality, • Study designs: • Cross sectional studies – descriptive & analytical Cohort studies: retrospective and prospective	Lecture/ Discussion	1.5
Basic Epidemiology – Revision III & IV	• Case control studies • Controls – Prevalence, Case Cohort & Incidence Density • Nested Case Control & Case –Cohort Studies • Bias – Selection/Information & Confounding	Lecture/ Discussion	1.5
Bias/Measurement Errors I & II	• External/Internal Validity • Selection & Information Bias	Lecture	3.0
Bias/Measurement Errors III & IV	• Confounding – Directed Acyclic Graphs (DAG Concept) • Methods of minimizing bias	Lecture	3.0
Cross Sectional Studies I & II	• Descriptive Studies • Analytical Studies • Bias	Lecture	3.0
Analysis of Case Control Studies I & II	• Odds Ratio • Calculation of 95% Confidence Intervals a. Mantel-Hanzel Method b. Test-based Method • Interpretation	Lecture/ Assignments	3.0

Topic	Content	Teaching/ Learning Method	Time Hours
Analysis of Case Control Studies III & IV	• Confounding & Effect Modification • Stratified Analysis • Calculation of Pooled Odds Ratio & 95% CI • Mantel- Hanzel Method • Test for Homogeneity	Lecture/ Assignments	3.0
Assessing Reliability &Validity I & II	• Random & Systematic Errors • Types of reliability: a. Inter & Intra Rater b. Test-Retest c. Parallel Forms d. Internal Consistency	Lecture/ Assignments	3.0
Assessing Reliability & Validity III & IV	• Types of Validity: Face, Content, Consensual, Criterion & Construct. • Statistical Tests for Validity: a. Construct validity : Convergent & Discriminant b. Factor analysis (basics) • Statistical Tests For Reliability: a. Cronbach's Alpha, b. Kappa, Intra-Class Correlation c. Limits Of Agreement	Lecture/ Assignments	3.0
Analysis of Cohort Studies I & II	• Relative Risk (RR) • Attributable Risk (AR) • Incidence Rate Ratio (IRR) • Incidence Rate Difference (IRD) Attributable Risk % (AR%) • Population Attributable Risk (PAR) Population Attributable Risk Percent (PAR%) • Preventable fraction • Calculation of 95% CIs: a. Mantel-Hanzel method, b. Test-based method • Calculation of AR & PAR% in case-control studies	Lecture	3.0
Analysis of Cohort Studies III & IV	• Confounding & Effect modification • Stratified analysis: calculation of pooled RR, IRR & 95% CI • Mantel Hanzel method, Test for homogeneity		3.0

Topic	Content	Teaching/ Learning Method	Time Hours
Qualitative Research I & II	• Purpose of qualitative research • Focus group discussion • In depth interviews • Unobtrusive methods • Delphi technique • Nominal group technique • Assessing validity, Sampling & Sample size	Lecture Discussion	3.0
Qualitative Research III & IV	• Inductive and deductive theory building • Content analysis • Thematic analysis • Reporting guidelines for qualitative research	Lecture Discussion	3.0
Clinical Trials I & II	• Interventional studies classification • Phases of RCTs • Types of Controls • Methods & types of randomization • Cluster randomization • Advantages & disadvantages of each method & type • Methods of concealment of an allocation Advantages & disadvantages • Single, double & triple blinding & benefits to participants, investigators & assessors • Types of bias: a. Selection bias b. Performance bias c. Attrition bias d. Detection bias • Threats to validity in experimental designs	Lecture	3.0
Clinical Trials III & IV	• Intention to treat analysis, Per-protocol analysis • Effect measures: RR, ARR, RRR, NNT, NNH • Interim analysis • Subgroup analysis • Cross-over trials: advantages disadvantages, analysis • Factorial designs: Advantages & disadvantages • Explanatory trials & Pragmatic trials • Trial registration	Lecture	3.0

Topic	Content	Teaching/ Learning Method	Time Hours
Evaluation of Screening Tests I & II	• Disease characteristics • Test characteristics • Criteria for screening • Combination of two screening test Evaluation criteria of screening program • Bias : a. Lead time bias, b. Length bias & other bias	Lecture Discussion	3.0
Evaluation of Diagnostic Tests I & II	• Reference standard • Pre-test probability • Post-test probability • Sensitivity, Specificity • Positive & Negative Predictive Values (PV) • Factors that determine PV • Diagnostic test accuracy, • Likelihood Ratios (LR), 95% CI • Diagnostic OR, Application & interpretation, Multilevel LRs • ROC curves, constriction, interpretation & advantages • Diagnostic research designs: • Sampling methods • Sample size calculations • Bias in diagnostic accuracy studies • Critical appraisal of diagnostic accuracy study	Lecture	3.0
Prognostic Models I & II	• Prognostic factor research & models development: a. Validation, b. Impact studies, c. Applicability	Lecture	3.0
Complex Public Health Interventions I & II	• Cluster randomized trials • Definition-complex design • Challenges of complex interventions • Medical Research Council models for complex interventions • Other designs: a. Stepped-wedge design b. Preference trial design c. Zelen's design	Lecture	3.0

Topic	Content	Teaching/ Learning Method	Time Hours
Systematic Review I & II	• Difference between traditional review & systematic review • Steps in conducting a systematic review • Meta analysis: Interpretation of forest plot • Heterogeneity, Random effect & Fixed effect models	Lecture	3.0
Systematic Review III & IV	• Sensitivity analysis • Subgroup analysis • Bias in systematic reviews: a. Publication bias b. funnel plots c. GRADE & advantages • Quality of evidence & levels of recommendation • Interpretation of risk of bias table • Summary of findings table & evidence profile • EBM & steps • Strength of evidence • Evidence based public health • Evidence based health care • Reporting of SR: PRISMA, • Cochrane library & reviews • Critical appraisal of SR	Lecture	3.0
Environmental & Occupational Epidemiology I & II	• Study Designs For Occupational & Environmental Studies: a. Hybrid Studies & Special Features b. Bias	Lecture	3.0
Nutrition Epidemiology I & II	• Study designs for assessing nutrition related problems, • special features • Bias	Lecture	3.0
Genetic and Family studies I & II	• Study designs for genetically related problems: a. Migrant studies b. Twin studies c. Bias	Lecture	3.0
Introduction to GIS	• Basic principles • Demonstration • Applications	Lecture	3.0
Total = 72 hrs (4.8 credits)			

Reading Material:

1. Hennekens, C.H., Buring, J.E. (2006). *Epidemiology In Medicine*, Brown and Company, Boston.
2. Rothman, K.J. *Epidemiology-An introduction*. Oxford University Press.
3. Beaglehole, D.R., Lasang, M.A., Gulliford , M.(Eds.). *Oxford Text Book of Public Health. Volume 2.*
4. Grimes, D. A., Schulz, K.F. (2002). Epidemiology Series An overview of clinical research: the lay of the land. *Lancet, 359*, 57-61.
5. Lucas, R. M., McMicheal, A. J. (2005 October). Association of causation: evaluating links between "environment and disease". Public Health Classics. *Bulletin of the World Health Organization*, 83(10), 792-795.
6. Sackett, D. L. (1979). Bias in Analytical Research. J. *Chron. Dis., 32*, 51-63.
7. Gregg, M.B. (Ed). Field Epidemiology. Oxford University Press.
8. Cochrane Hand Book, Cochrane Collaboration.
9. Miguel Delgado-Rodrı´guez, Javier Llorca. Bias. *J Epidemiol Community Health* 2004; 58: 635–641. doi: 10.1136/jech.2003.008466
10. Field Epidemiology Manual.Selection bias and case-control studies https://wiki.ecdc.europa.eu/fem/w/wiki/survival-bias.aspx.
11. L.Rodrigues, L. Kirkwood B.R. Case-control designs in the study of common diseases: Updates on the demise of the rare disease assumption and the choice of sampling scheme for controls. International Journalof Epidemiology 1990, Vol. 19 No.1. 205 -213.
12. Galbraith et al.2010. A study of clustered data and approaches to the study of clustered data. J. Neurosci., August 11, 30(32):10601–10608.
13. Marion K Campbella et al. Analysis of cluster randomized trials in primary care: a practical approach. Family Practice Vol. 17, No. 2. 192 -196 Downloaded from http://fampra.oxfordjournals.org/ on March 29, 2014.

Annex IV
1.2 Module 2 Advanced Statistics

Aim:
To enable students to comprehend, apply and interpret the results of a range of advanced techniques for the design and analysis of epidemiological studies.

Objectives
Be able to:
1. describe the basis of relevant statistical tests with underlying assumptions in the analysis of epidemiological data
2. develop skill of applying appropriate statistical and computational methods in the current scientific applications
3. interpret and critique the statistical applications used in relevant literature

Topic	Content	Teaching/ Learning Method	Time (Hrs)
Basic Statistics Revision I & II	• Parametric tests: a. T-test: paired & independent t-test, b. Chi-squired test c. Z-test for means and proportions d. Estimation of population parameters e. Assessing normal distribution	Lecture Discussion	3.0
Basic Statistics Revision III & IV-	• Probability and features: a. Joint probability b. Conditional Probability c. Binomial distribution d. Poisson distribution	Lecture Discussion	3.0
Sample size Calculations I & II	• Issues in sample size calculation for: descriptive studies a. cross sectional analytical studies, b. case control studies, c. cohort studies d. clinical trials	Lecture Discussion	3.0
Sampling I & II	• Simple random sampling: Estimation of population mean, proportion & total • Probabilities proportional to size (PPS) • Stratified sampling: Estimation of population mean, proportion & optimal rule for choosing strata • Systematic sampling: Estimation of population mean, proportion & total • Cluster sampling: Estimation of population mean, proportion & total a. Equal & unequal cluster size b. PPS • Two stage cluster sampling • Cluster sampling combined with stratification	Lecture Discussion	3.0

Topic	• Content	Teaching/ Learning Method	Time (Hrs)
ANOVA I & II	• One way ANOVA: a. applications b. calculations c. interpretation of ANOVA table d. application & interpretation of post-hoc tests e. Bonferroni adjustment	Lecture	3.0
ANOVA III & IV	• Factorial ANOVA • Main effects & interaction • Calculation • Interpretation of two way ANOVA table • Completely randomized design • Randomised block design	Lecture	3.0
ANOVA V & VI	• Balance incomplete block design, • Latin square design, • Repeated measure ANOVA, MANOVA, ANCOVA	Lecture	3.0
Correlation I & II	• Pearson correlation coefficient: a. calculations b. interpretation c. hypothesis test for r d. partial correlation, correlation & covariance	Lecture	3.0
Regression I & II	• Simple linear regression: a. calculations b. interpretation of regression coefficient c. Standard error & confidence interval	Lecture	3.0
Regression III & IV	• Point prediction • Prediction interval, • Regression & ANOVA • Model assumptions, • Coefficient of determination • Residual analysis	Lecture	3.0
Regression V & VI	• Multiple linear regression: a. Interpretation b. Standardize & un-standardize coefficients c. Model building strategies, d. Adjusted R^2 e. Dummy variables f. Interaction term, g. Multi-co linearity h. Model assumptions i. Residual analysis j. Polynomial models	Lecture	3.0

Topic	• Content	Teaching/ Learning Method	Time (Hrs)
Logistic Regression I & II	• Logistic regression model • interpretation of coefficients for dichotomous & continuous variables	Lecture	3.0
Logistic Regression III & IV	• Multiple logistic regression: a. Wald test b. Likelihood ratio test c. Dummy variables d. Model building strategies e. Goodness of fit tests	Lecture	3.0
Non Parametric Methods I & II	• Differences between parametric & non parametric tests • Calculation & Interpretation: a. Mann-Whitney U test b. Wilcoxon rank sum test c. Wilcoxon signed rank test d. Sign test e. Kruskal-Wallis H test f. Friedman ANOVA g. Spearman's rank correlation	Lecture	3.0
Survival Analysis I & II	• Survival data • Type of censoring • Survival function • Hazard function • Life table methods • Kaplan Meier survival curves • Log rank test, Hazard ratio, Proportional hazard assumption • Cocks proportional hazard model: a. model building strategies b. interpretation of regression output	Lecture	3.0
Lot quality sampling I & II	• Description of LQAS: a. ROC curves b. Producers' risk c. Consumers' risk d. Sample size calculation	Lecture	3.0
Poisson Regression I & II	• Applications • Model building strategies • Interpretation of regression output	Lecture	3.0

Topic	• Content	Teaching/ Learning Method	Time (Hrs)
Factor analysis I & II	• Exploratory factor analysis: a. Assumptions, factor loading, b. Eigen values, c. Communalities, d. Factor extraction, e. Interpretation of factor analysis output. • Confirmatory factor analysis: a. Assumptions and interpretation	Lecture	3.0
Total = 54 hrs (3.7 credits)			

Reading Material:

1. Hill, A.B., Hill, I.D. (1991.) *Bradford Hill's Principles of Medical Statistics* (12th ed.). London, Edward Arnold.
2. Basic Statistical Analysis. Rischard C. Sprinthall
3. Medical Statistics. Betty R Kirkwood and Jonathan A. C. Sterne
4. Using and Understanding Medical Statistics. David E. Matthews and Vernon T. Farewell
5. Biostatistical Analysis. J.H. Zar
6. BMJ Statistical Notes Series
7. The EPI coverage survey. WHO/VB/08.07
8. Bennett S, Woods T, Liyanage MW, Smith DL.A simplified general method for cluster-sample surveys of health in developing countries. World Health Statistics Quarterly 1991. 44 (3); 98-106

Annex V
1.3 Module 3 Research Methods

Aims:
To revive knowledge and applications related to scientifically designed quantitative and qualitative research methods which provide solutions essential to influence public health policy and interventions

Objectives:
To be able to
1. Gain skills in conceptualizing and articulating distinct research questions or testable hypotheses or generating innovative solutions
2. Retrieve relevant literature in relation to problem identification and refining or generating novel methodological approaches
3. Manage references
4. Design appropriate quantitative/qualitative epidemiological study methods
5. Develop/identify valid and reliable data collection tools which are culturally suitable and applicable
6. Recognize problems involved in data collection and management
7. Plan the appropriate statistical analysis
8. Familiarize and improve skills in data entry and analysis using relevant statistical packages
9. Gain skills in managing research projects
10. Increase awareness on ethics related to research on human subjects

Topic	**Content**	**Teaching/ Learning Method**	**Time Hours**
Advanced Literature Survey	• Performing advanced computerized literature search: • Accessing journals a. From developing countries b. Open access journal c. High wire multiple journals d. Priced journals e. Review articles • Performing a sample search	Hands On Sessions I & II	4.0
Development & Validation Of Tools & Assessing Validity & Reliability Of Research Data	• Use of internationally validated tools in local research. • Methods to assessing validity and reliability of tools • Process of developing research tools to assess concepts/conditions • Assessing validity and reliability of data • Presenting validity and reliability information in research report	Lecture	3.0

Topic	Content	Teaching/ Learning Method	Time Hours
Conceptualizing, Conducting And Analysing Qualitative Research	• Conceptualizing the need of qualitative information in research • Conducting qualitative research • Different mechanisms to analyze and present qualitative research findings	Lecture	3.0
Presenting Research	• Visual aids for oral presentations • Delivering an oral presentation • Developing a poster • Handling questions etc.	Student Presentations	3.0
Writing Research Articles	• Selecting a journal • preparing manuscript based on journal guidelines • Responding to reviewer comments	Student Presentations	3.0
Managing References	• Methods of managing references • Hands on session on managing references using End note	Hands on Training	4.0
Health Systems Research	• Definition • Methods	Lecture	3.0
Managing Research Projects	• Key elements	Lecture	3.0
Critical Appraisal of Research Papers	• Need for appraisal • Method of appraising a paper • Guidelines for writing articles	Lecture Discussion	3.0
Total = 32 hrs (2 credits)			

Reading material:

1. Epidemiology in Medicine, CH Henneken, JE Buring. 1987
2. Designing clinical research: an epidemiological approach, SB Hulley, SR Cummings. 1988
3. Basic epidemiology, R Bonita, R Beagkehole, T Kjellstrom 2nd edition, 2006. World Health Organization
4. Essentials of Epidemiology in public health 2 nd edition, 2008. Ann Aschengrau, George
5. Modern Epidemiology, 3rd edition, 2008. KR Rothman, S. Greenland, TL lash
6. Epidemiology, 3rd edition, 2004. Leon Gordis

Annex VI
1.4 Professionalism & Ethical Principles

1.4.1 Ethical Principles

Aims

To be aware of ethical issues related to different circumstances and be skilled in the application of measures to minimize harm while enhancing benefits at all levels to all concerned

Learning Objectives

To be able to:

1. recapitulate foundation of ethical principles
2. identify ethical issues specific to different situations
3. be skilled in application of measures to mitigate ethics related issues

Topic	Content	Teaching/ Learning Method	Time Hours
Research Ethics	• Principles of research ethics	Lecture	3.0
Organizational/ Management Ethics	• Ethical principles for managers • Good Management Practice • Working with colleagues • Relating to patients • Quality and safety issues • Employee rights and responsibilities • Partnerships, sponsors • Role in the community • Charitable fund raising • Access to care • Disclosure of risk • Business and professional integrity (Financial and commercial dealings)	Lecture	3.0
Bioethics	• Ethics of modern medicine, new technologies and health care • Assisted Reproductive Technology • Abortion • Genetic diagnosis and therapy; • Cloning • Stem cell research	Lecture/ Discussion	3.0
Ethics Of Health Care Systems	• Resource allocation and public policy (Macro and micro allocation) • Public accountability		3.0
Public Health Ethics	• Individual vs. Community • Ethical issues in epidemics, disasters, refugee camps • Epidemiological ethics		3.0
Total = 15.0 hrs (1 credit)			

Reading Material:

1. Stanford Encyclopedia of Philosophy. (2010). Public Health Ethics. http://plato.stanford.edu/entries/publichealth-ethics/

1.4.2 Professionalism

Aim:

To produce a community physician with high standards of professional and personal skills with patience, perseverance, excellent decision making skills, compassion and other soft skills.

Learning Objectives

To be able to:

1. be aware of the basics of functioning of the body, mind and consciousness in relation to soft skills in professional life
2. acquire professional and personal skills through mind training
3. apply the learnt soft skills to professional and personal life

Topic	Content	Teaching/ Learning Method	Time (hrs)
Composition & Functions of Mind	• Composition and function of mind • Basis for development of soft skills	Lecture/ Discussion Mind skills training	1.5
	Applying skills of mind in professional and personal life	Lecture discussion Response paper	1.5
Professional Etiquette	• Definition of professional etiquette • Professional qualities in : a. communication b. self conduct c. decision making d. managing ego e. living stress free	Life scenario based response paper discussion	1.5
	• Professional ethics: a. Competence b. Honesty and Integrity as a professional, c. Non-discrimination d. Other issues in professional ethics	Lecture discussion	1.5
Total = 6.0 hrs (0.4 credits)			

Reading: **Material:**

1. Wasantha Gunathunga Perfect Mental Health. Department of Community Medicine, University of Colombo 2010.
2. http://www.perfectmentalhealth.org/index.php/research-on-mind
3. www.mindtools.com
4. Andrew J. Hoffman. Recognizing personal and professional value system: the spiritually motivated manager as organizational entrepreneur. In Giacalone RA and Jurkiewicz CL (editors) Handbook of Workplace Spirituality and organizational performance M.E. Sharpe New York.2003.
5. Lallan Prasad & AM Banerjee. Emotional and Social Intelligence in Managing Human Resource, Texts, Perspectives and Challenges. Sterling. 2012 India

Annex VII
1.5 General Administration & Public Health Management

Aim

To provide advanced knowledge and enhance skills in general administration and designing, implementation and evaluation of public health programs/projects

Consists of six components

A. General Administration
B. General Management & Planning
C. Leadership
D. Policy Development
E. Public Health Program Planning, Monitoring and Evaluation
F. Human Resource Management
G. Health Economics & Financial Governance

1.6/A General Administration

Learning objectives

To be able to: apply principles of general administration using different tools and methods

1.5/A General Administration			
Lesson Topic	**Content**	**Mode of Delivery**	**Time (Hrs)**
Overview of general Administration	• Reflect and recapitulate on the scope of general administration	Lecture Discussion	1.5
Good governance	• Critically appraisal of the governance mechanisms within the system	Group presentations: Refer to the relevant administration circular and present decisions/action to be taken	3.0
	Application of public health administration related circulars on: • Lines of communication • File and inventory management • Decentralization of administration • Human resource development • Supervision • Disciplinary inquiry	Group presentations: *Case studies to be given	4.5
Total =9.0hrs (0.6 credits)			

1.5/B General Management and Planning

Learning Objectives

To be able to:

1. apply principles of management into public health program management
2. apply principles, methods and tools of planning into addressing public health issues
3. gain competencies in processes that lead to effective planning

1.5/B General Management and Planning			
Lesson Topic	**Content**	**Mode of Delivery**	**Time (Hrs)**
Management in practice	Application of management theories in the relevant areas: • Staff motivation • Conflict resolution • Negotiation • Productivity & quality improvement in public health • Change management	Group presentations using case study approach	4.5
	• Creation of an organizational culture for quality improvement	Student presentations Best practices for quality improvement and case studies on change and organization culture	3.0
Management in practice - effective meetings & converting planning in to practice	• Organization of effective meetings	Group discussions based on scenarios on • planning • organization • conduct • follow up on meetings	4.5
Converting planning in to practice			
Total = 12 hrs (0.8 credits)			

1.5/C Leadership

Overall objective: To be able to demonstrate leadership skills and provide leadership to public health programmes

Learning outcomes

To be able to:

1. practice desirable styles and qualities of leadership
2. demonstrate excellent written and verbal communication skills
3. work as a leader of a team in a multi-disciplinary environment
4. provide leadership to national public health programmes
5. provide mentorship to professional colleagues

1.5/C Leadership			
Lesson Topic	**Content**	**Mode of Delivery**	**Time (Hrs)**
Overview on leadership	• Leadership styles • Qualities of leaders	Lecture discussion	1.5
Communication skills	• Personal communication • Public speaking • Advocacy • Negotiation	Workshop	6.0
Experiences of leaders	• Team building • Team work • Collaboration • Conflict resolution	Lecture discussion	3.0
Public Health Leadership	• Role of leaders in public health arena	Lecture discussion	3.0
Personal development	• Work-life balance • Time management • Improving efficiency	Lecture discussion	3.0
Mentorship	• Mentoring in the public health sector	Lecture discussion	1.5
Management in practice	•		4.5
Total = 22.5 hrs (1.5 credits)			

1.5/D Policy Development

Learning Objectives
To be able to:

1. consolidate (existing knowledge) on evidence based policy development in public health
2. review /identify policy gaps and policy tools
3. describe policy processes and their effects on policy implementation
4. identify/analyse influence of national government policy and international agendas on health sector policy
5. gain skills in policy advocacy

1.5/D. Policy Development			
Topic	**Content**	**Mode of Delivery**	**Time (hrs)**
Overview of policy process	Policy process	Lecture Discussion	1.5
Policy tools	Policy tools- relevant to different policy areas	Lecture/ Discussion	1.5
Legal framework and gap analysis	Analysis of strengths and gaps in legal framework on selected public health areas such as: • Nutrition & NCDs • Chronic Kidney Disease • Reproductive Health • Environmental Health	Group presentations	1.5
Policy process and stakeholder role and engagement	• Identification of challenges and critical review of stakeholder involvement in the policy process	Group presentation Based on case studies	1.5
		Group presentation A reflection on policy process for developing occupational safety and health policy	1.5
Policy analysis	• Understanding policy environment • Underlying policy assumptions in existing National Policy Statement/s • Connecting policy content, policy actors to process of implementation"	Group presentations on: selected policy statements extracted from existing National Policy Statement/s Discussion using same examples	3.0

1.*5/D Policy Development Continuation*			
Topic	**Content**	**Mode of Delivery**	**Time (hrs)**
Policy implementation	Importance of integrated approaches in policy implementation Greater understanding of needs for strengthening primary health care for universal health access and coverage	Group presentation on: A case study on policy	1.5
Policy Advocacy	• Conceptualization of a design for advocacy tool in negotiating policy option/ policy change	Group presentation on development of a advocacy tool, policy brief	1.5
Policy Formalization	• Recapitulation of policy formalization Ability to prepare a cabinet memorandum	Individual assignment & presentation	3.0
Influences for Policy Change	• Follow up on progress of change brought about by "World Health Resolutions"	Student presentation on analysis of four resolutions	1.5
Tracking Policy Outcomes	• Review national health performance frameworks in other developed countries • Sri Lankan situation on the framework in development.	Student presentation on: • Measurement of health performance in developed countries • Comparison of " Sri Lanka National Health Performance Framework "	1.5
Total = 16.5 hrs (1 credit)			

1.5/E Program Planning, Monitoring and Evaluation

Learning Objectives

To be able to:

4.1 consolidate (existing knowledge) on evidence based program planning, monitoring and evaluation in public health

4.2 apply planning tools in reviewing, constructing program/ project plans

4.3 review strategic plans of public health programs to develop monitoring and evaluation methods

1.5/E Program Planning, Monitoring and Evaluation			
Topic	**Content**	**Mode of Delivery**	**Time (hrs)**
Review of Program Strategies	• Critical review of strategies identified in selected public health programs	Student presentation on: Review of literature for rationale on identified strategies on: Malaria control leprosy control NCD control **Pre requisite* Trainees are expected to know the basics of situation analysis and identifying gaps	1.5
Application of Planning Tools –Logical Framework Analysis (LFA) Development of Results Framework	• Review of public health programs through application of LFA • Development of "Result Framework"	Student presentation on: current tissues Eg: Elderly care & NCD *Pre requisite Basics in LFA	6.0
Program planning	• Developing an action plan	Student presentations on action plans- case studies to be given	3.0
	• Critical review of plans for achievement of Universal Health Coverage (UHC)	Discussion based on literature review and application to Sri Lanka *Pre requisite Basic understanding of UHC	3.0

1.5/E Program Planning, Monitoring And Evaluation Continuation			
Topic	**Content**	**Mode of Delivery**	**Time (hrs)**
Program Evaluation	• Apply methods of evaluation • Commissioned research in program review and option analysis	Lecture /Discussion on current examples	1.5
Program Evaluation: Developing A Proposal	• Recapitulation of proposal writing • Development of a proposal for evaluation of health programs	Individual student presentation	1.5
Appraising Monitoring & Evaluation Framework	• Appraisal of public health programs and institutions on the availability and use of program indicators for monitoring and evaluation	Lecture /Discussion on program indicators in relation to selected programs **Prerequisite* Basic understanding of program indicators , and its applications	1.5
Information Support For Planning, Monitoring & Evaluation	• Critical review Information support systems for program planning and review	Lecture/Discussion on Information support for selected public health programs *Prerequisite Basic understanding of Information Systems	3.0
Total = 10.5 hrs (0.7 credits)			

1.5/F Human Resources Management

Aim:
To produce a community physicians capable of analysing Human resources in health and contribute to overall management of the organization

Learning Objectives
To be able to:
1. demonstrate knowledge on HRH in relation to performance measurement, work load analysis, work force projection,
2. contribute to development of job descriptions, training need assessment, staff quality improvement

1.5/F .Human Resources Management (HRM)			
Topic	**Content**	**Teaching/ Learning Method**	**Time**
Scope of HRM	• Recapitulating HRM key functional areas	Lecture	1.5
Dynamics of work force demand and supply	• Factors affecting workforce demand and supply • HRH Strategies of matching supply with need • Principles of workforce projection	Lecture	3.0
HRH performance	• Methods of performance assessment • Use of performance indicators for HRH • Performance appraisal • Managing good and bad performance	Lecture	3.0
Determining job functions	• Understanding need, (new cadre, change of existing) • Work load analysis -using examples • Writing a job description	Case study and discussion/ Group work	4.5
Human resource capacity development	• Identification of training needs - carrying out an assessment	Group work with case material	3.0
Improving staff quality	Importance of training, use of protocols, audits, quality assurance, accreditation, team building, performance measurement on quality	Lecture discussion with case material	3.0
Total = 18 hrs (1.2 credits)			

1.5/G Health Economics and Financial Governance

Aim:
To produce a community physician capable of applying principles of health economic in efficient financial governance

Learning Objectives:
To be able to:
1. Demonstrate knowledge on health economics
2. Demonstrate application of principles of health economics in financial governance

165/G .Health Economics			
Topic	**Content**	**Teaching/ Learning Method**	**Time (hrs)**
Healthcare Market in Sri Lanka today	Demand • Scarcity, utility and choice • Demand for Health and Healthcare • Defining demand • Determinants of demand for Healthcare • Elasticity of demand	Lecture/Discussion	1.5
	Supply • Factors of production • Cost of production • Supply of Healthcare • Defining supply • Determinants of supply of healthcare • Elasticity of supply • Equilibrium, shortage and surplus	Lecture/Discussion	1.5
Market structures and Market Imperfections	• Perfect competition • Monopoly • Consultant Market: Oligopoly • Segmented Markets • Trade Unions • Efficiency wages	Lecture/Discussion	1.5

Health Economics Continuation			
Topic	**Content**	**Teaching/ Learning Method**	**Time (hrs)**
Role of the State	Government objectives • Efficiency • Equity	Lecture/Discussion	
	Government as a provider • Public goods • Monopoly • Subsidization		1.5
	Government as a regulator • Controlling Market structures • Controlling prices • Controlling quantities • Quality		3.0
	Government as a facilitator		
Challenges in costing health and healthcare	Purposes of costing Types of cost Costing Institutions • Step-down costing • Scenario building Costing interventions Costing ill-health • Cost of treatment • Cost of care • Lost earnings	Lecture/Discussion	1.5
Decision making using cost criteria	Evaluation • Cost Minimization • Cost Effectiveness • Cost-benefit analysis • Socio-economic and administrative determinants of cost • Planning for cost containment	Lecture/Discussion	1.5
Funding healthcare costs Sources of funding healthcare costs	State sector • Level of expenditure • Distribution of expenditure • Tax funding versus alternative funding sources Private sector • Private out of pocket expenditure • Private insurance • Role of employers • Community financing	Lecture/Discussion	1.5

Health Economics Continuation			
Topic	• **Content**	**Teaching/ Learning Method**	**Time (hrs)**
Relating financing to current provision issues	• Health Transition • Catastrophic health expenditure • Public/private provision • Importance of access to state Primary Healthcare • Need for risk pooling • Rationing and Rationalizing care • Prioritizing prevention	Lecture/Discussion	1.5
Total = 15 hrs (1.0 credits)			

Reading material:

1. The National Health Policy Sri Lanka , Abridged version of The report of the Presidential Task Force on formulation of a National Health Policy for Sri Lanka 1992
2. National Health Policy Sri Lanka. Report of the Presidential Task Force on formulation of a National Health Policy for Sri Lanka, 07 July, 1992 Colombo
3. National Health Policy Sri Lanka 1996
4. Health Policy and systems development. An Agenda for research. Edited by Katja Janovsky, @ WHO 1996
5. Health Policy An Introduction to process and power, @ Gill Walt1996
6. Health policy process by Carol Barker
7. On Being in Charge : A guide to management in Primary Health Care by R Mc Mahon, Elizabeth Barton & Maurice Piot, 1992
8. Health care quality, an international perspective, Edited by A.F. A;-Assaf, MD, CQA, @ WHO 2001. ISBN 92 9022 225 5
9. Quality Assurance for Nurses and Other members of the Health Care Team, Diana Sale ISBN 0-333-66917-7
10. Total Quality and Human Resources an Executive Guide, Barrie Dale and Cary Cooper. ISBN 0-631-187162
11. Developing Human Resources. Rosemary Thomason & Christopher Mabey ISBN 0 7506 1824 8
12. Sri Lanka the emerging wonder of Asia, A vision for future development Mahinda Chinthana, Ministry of National planning 2010
13. Health Master Plan Summary 2007- 2016 , Ministry of Health Sri Lanka
14. HIV AIDS Policy, Sri Lanka
15. National NCD policy , Sri Lanka
16. National Migration Health Policy Sri Lanka
17. Health Policy Analysis Checklist for the Development, Selection, and Assessment of Program Policies within Health care Organizations. *Johns Hopkins Bloomberg School of Public Health HPM-300.600 - Introduction to Health Policy.* Unit on Medical Care Policy—Dr. Jonathan Weiner. Copyright 2005—J. Weiner and the Johns Hopkins University. Version—8/8/05
18. Tips and Template for Writing a Policy Brief - given in classroom

19. Health Economics for Developing Countries A practical guide, S.Witter, T.Ensor, M.Jowett and R.Thompson ISBN 0-333-75205-8
20. National Health Accounts Sri Lanka 2005- 2009 , IPS
21. Study reports - National commission on Macro economics and health, Sri Lanka
22. Health financing Strategy for the Asia Pacific Region (2010- 2015) (C) WHO 2009 - available online
23. World Health Assembly resolutions (specific resolutions to be referred will be mentioned in class)
24. Developing Health Management Information System - A practical guide for developing countries, WHO Regional office for Western Pacific, (c) WHO 2004 - available online
25. Handbook on planning, monitoring and evaluation for development results , (C) UNDP 2009 - available online

Annex VIII
1.6 Module 6 Health Promotion

Aim:
To produce a community physician with advanced knowledge, positive attitudes and improved skills on health promotion and application of health promotion principles at all levels in the delivery of health care services

Learning Objectives
To be able to:
1. demonstrate knowledge on principles of human behavior and behavior change
2. demonstrate knowledge on principles in community empowerment
3. analyse health promotion interventions to practice evidence informed public health
4. analyse health promotion policy
5. improve skills in designing a "Behaviour Change Communication" (BCC) programmes at national level
6. improve skills in developing information, education and communication (IEC) material for use at national level
7. improve skills in designing advocacy programmes
8. improve skills in providing health promotion interventions at hospital settings

Topic	Content	Teaching/ Learning Method	Time (hrs)
Theoretical principles, constructs, and models to understand the behavioral aspects of health and illness	• Factors affecting human behavior; Explaining human behavior: human behviour through other social sciences; models in health promotion; approaches in health promotion (medical, behavior change, educational, empowerment, social change); • Behavior change theories at individual, interpersonal and community level (Health Belief Model, Stages of Change Model, Social Learning Theory, Diffusion of Innovations Theory, Community Mobilization, Organizational Change, Precede-proceed model)	Lecture Discussion Practical session on Analysis of individual research projects through other social sciences	4.5
Health Promotion in the Community: Community Empowerment	• Health promotion as empowerment • Challenges in empowering individuals determinants of health at different levels • Success stories in health promotion in the community • The way forward in empowering communities • Health promoting villages and cities	Lecture Discussion Analysis of individual research projects from health promotion perspective	3.0

Topic	Content	Teaching/ Learning Method	Time (hrs)
Sharing experiences in conducting effective health promotion programmes	• Presentation of health promotion programmes by community health promoters (field health staff) • Analyzing the successes of these programmes from a theoretical point of view	Student presentations: Presentation of health promotion programmes, analysis	3.0
Health promotion: from policy to action	• Health Promotion Policy: introduction, strengths and weaknesses; Applications and challenges for its implementation	Lecture Discussion Student presentations: analysis of health promotion policy	3.0
Planning a BCC programme at national level	• Definition; the process of BCC • Planning a BCC programme	Hands on training on designing a BCC programme	18.0
Development of IEC material for use at national level	• IEC Materials: definition, types, strengths and weaknesses • Development at national level	Lecture discussion Hands on training	18.0
Hospital Health Promotion	• Definition of health promotion • Health promoting hospital guidelines (Budapest Declaration) • Activities of a health promoting hospital, the • CCPs role in ensuring Quality in patient care, • Clinical Governance	Lecture discussion Evaluation of a curative institution using hospital health promotion guidelines	9.0
Advocacy	• Definition of advocacy • Skills in designing an advocacy programme	Hands on training on designing an advocacy programme	18.0
Total = 76.5 hrs (5.0 credits)			

Reading Material:

1. The Ottawa Charter for Health Promotion. Retrieved from http://www.who.int/healthpromotion/conferences/previous/ottawa/en/2.
2. Draft Sri Lanka National Health Promotion Policy. Retrieved from http://whosrilanka.healthrepository.org/bitstream/123456789/290/1/Sri%20Lanka%20National%20Health%20Promotion%20Policy-%20final%20draft-.pdf3.
3. Client-centered therapy. Retrieved from http://en.wikipedia.org/wiki/Person-centered_therapy4.
4. Health Education Bureau Services. Retrieved from http://www.healthedu.gov.lk/web/index.php?option=com_content&view=article&id=43&Itemid=34&lang=en5.

Reading Material (Continued_

5. Beisler, F. Scheeres, H. Pinner, D. Communication Skills. Available at the NIHS Library.
6. Health Promotion Booklet Series - Competencies in Health Promotion, Health Education Bureau.
7. Ewles and Simnett. (1999). Promoting Health.(4th ed.).
8. McKenzie, Neiger and Thackeray (2005). Planning, implementing and evaluating health promotion programs.
9. WHO. Evaluation in Health Promotion.

Annex IX
1.7 Module 7 Capacity Building

Aim:
To produce a community physician capable of continuing education and skill and professional development to function as a competent and responsive trainer

Learning Objectives
To be able to:
1. demonstrate knowledge on basic educational principles required of a trainer
2. demonstrate ability to plan and implement an in-service training programme
3. demonstrate knowledge on research methods related to health manpower training
4. demonstrate improved clinical, professional & personal communication skills
5. demonstrate improved Information & Technology skills
6. demonstrate improved self-management skills

Topic	Content	Teaching/ Learning Method	Time Hours
Role of CCP as a Trainer	• Terms of Reference of the CCP developed by the Ministry (CCP Job functions) and Essential Public Health Functions and its relationship with training and human resource development • Public health as team work led by a medical persona in Sri Lankan context and the need for the CCP for Health Manpower Training • Definition of training, Types of training, • Theories in teaching and learning, • Adult learning principles, • How to plan an in-service training programme • How to write a proposal for funding, WHO budget template, • Practical issues in training, planning for training • Annual training calendar, Issues in preparing a brochure and a prospectus, • Sri Lanka Qualifications Framework, • Implications of training for service	Lecture discussion Practical session on writing a funding application for an in-service training programme Analysis of the Ministry of Health, Terms of Reference	4.5
Research and evaluation related to health manpower training	• Training need analysis –Hennessy-Hicks training needs analysis and other methods • Evaluation of training programmes (Kirkpatrick model)	Group work on planning the evaluation of a training programme	3.0

Topic	• Content	Teaching/ Learning Method	Time
Communication skills	• Concept of communication, communication barriers and models • Doctor-patient communication, components of communication • Objectives of doctor patient communication, • Skills in Communication for Medical Officers – Active Listening, Non-verbal communication skills, Communicating to patients and not to diseases: the patient as a holistic entity, Breaking bad news, Improving learning through better communication skills, • Counselling, Public Relations, Team work, Emotional Intelligence, Time Management, Negotiation skills, Communication skills for better interpersonal relationships, Doctors and Media, Medical Documentation, • Maintaining a Portfolio, Scientific communication, Using internet for networking, CPD, Collegiality, Diplomacy, Study and knowledge-seeking skills, Diplomacy, Presentation skills, Public speaking, Public Communication: speaking to many, Conducting and participating in meetings, Reading skills (SQR4 Method), Checking one's reading speed and ways of improving reading speed, Study skills, knowledge seeking skills, • Skills in delivering a health education talk, Checklist for assessing a health education session / communication skill, Technical writing, • Use of pronunciation marks, Effective note taking, Conducting a group discussion, Checklist to assess the effectiveness of a group discussion	Lecture Discussion Hands on training	6.0

Topic	Content	Teaching/ Learning Method	Time
Self-Management	• Goal setting • Decision making • Focusing • Planning • Scheduling • Time management • Task tracking • Self-monitoring • Self-evaluation • Self-intervention • Self-development • Self-motivation • Anger management • Self-learning and development	Lecture Discussion	1.5
Improving skills in general computer applications	• MS Word skills: Autocorrect, Auto complete, Format Painter, Using headings, Document Map, Table of Contents, Tract changes, Find and Replace, Split, Comparing documents, Using Macros for repetitive work, Keyboard shortcuts in common applications • MS PowerPoint Skills: Designs, Layouts, Backgrounds, Inserting pictures, Sounds, Animation, Charts and graphs, Taking printouts from PowerPoint presentations • MS Excel: Working with equations, sort and filter, Pivot tables and pivot charts, Importing and exporting data, Split • Managing files and folders in MS Windows • Gmail: managing email accounts, calendar, sending free SMS in gmail • Yahoo: yahoo groups, yahoo mail • Using search engines effectively • Social networking, Blogging, Web publishing, tweeting	Lecture Discussion Hands on training on making better PowerPoint presentations	3.5
Total = 18.5 hrs (1.2 credits)			

Annex X

Public Health Legislation for MD trainees in Community Dentistry

Duration: Two weeks

General Objective:

To improve the competency of the trainees in Community Medicine / Community Dentistry to officiate his / her duties as an expert in public health legislation in order to improve the health of people

Specific Objectives:

At the end of the training participants should be able to,

1. Describe the nature of law and the judicial system in Sri Lanka.
2. Recognize the principles of law of evidence, criminal law and criminal procedure.
3. Describe analyse the applications of different public health legislations.
4. Formulate plaint forms, charge sheets, affidavits and the other court documents.
5. Carry out the steps in enforcement of law and different methods of prosecution.
6. Familiarize with the court procedure.
7. Undertake food raids, pharmacy raids, factory inspections and other relevant legal procedures.

Course content:

- Nature of Law, Judicial System in Sri Lanka, Principles of Criminal Law & Criminal Procedure, Law of Evidence
- Formulation of Plaint Forms & Charge Sheets
- Visit to the courts
- Regulations Related to food and related products
- Regulations related to Environmental and Occupational Health
- Regulations related to Infectious Diseases and Other General Acts and Ordinances
- Regulations related to tobacco control
- Food raid, Raid of a pharmacy and Factory inspection
- Discussion of the field experiences with a panel of legal experts

Course Methodology:

- Lectures/Lecture Discussions
- Group Work
- Group Discussions
- Presentations
- Moot Court
- Hands on experience in applications of public health legislation during food raids, pharmacy raids, factory visits and engagement with court procedures

Annex XI
Progress Report
Field Training in Public Health Management

Name: ……

Module: ……

Period Reported: …….

Report No.: ……..

Activities Conducted (May attach a separate sheet of paper)

……

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Trainee's Opinion on Progress:

……..

Reasons for Delay ……

……

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Corrective Measures Taken:……

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Signature of Trainee: ……. Date: ……/……/…….

Supervisor's Observations:

Progress:

Satisfactory	
Not Satisfactory	

Comments:

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Signature of Supervisor: …….

Date: ……/……/…….

Annex XII
Multi-Source Assessment Forms

IIIA – Sinhala Version

IIIB – Tamil Version

IIIC –English Version: 360 Degree Assessment Form

Instructions to the participant: This rating form is about the supervision conducted by Dr…… on,,,,,,,,,,,,,,,,.
Please circle the most appropriate score out of 10 for the statement and send under confidential cover in the provided envelope. Please do not write your name on this form.

No.	Tested Attribute	Score										
		Fully Disagree									Fully agree	Total Score
Knowledge												
1.1	The doctor seemed to have a good practical knowledge about my services	1	2	3	4	5	6	7	8	9	10	
Skills												
2.1.	**Verbal Communication**											
	Instructions given by the doctor were clear	1	2	3	4	5	6	7	8	9	10	
	Feedback given by the doctor was relevant	1	2	3	4	5	6	7	8	9	10	
	The doctor had good command of the language	1	2	3	4	5	6	7	8	9	10	
2.2.	**Leadership**											
	The doctor's feedback was constructive	1	2	3	4	5	6	7	8	9	10	
	The doctor motivated me to improve my performance	1	2	3	4	5	6	7	8	9	10	
	The doctor had good listening skills	1	2	3	4	5	6	7	8	9	10	
2.3.	**Team work**											
	The doctor was impartial	1	2	3	4	5	6	7	8	9	10	
	The doctor's conduct was courteous	1	2	3	4	5	6	7	8	9	10	
	The doctor valued `my contribution to the public health team	1	2	3	4	5	6	7	8	9	10	
Attitudes/Behaviour												
3.1.	**Empathy**											
	The doctor understood the reasons for my shortcomings	1	2	3	4	5	6	7	8	9	10	
3.2	**Trustworthiness**											
	I am certain that this doctor will **not** discuss my shortcomings in public	1	2	3	4	5	6	7	8	9	10	
3.3.	**Accessibility**											
	The doctor is available for further clarifications	1	2	3	4	5	6	7	8	9	10	
3.4.	**Professionalism**											
	The doctor is a role model for his profession	1	2	3	4	5	6	7	8	9	10	
Overall Total												

Annex XIII
Introduction to Portfolio

Introduction

A portfolio is a compilation of material organized in a meaningful way to demonstrates various forms of evidence of achievement of learning outcomes through progressive acquisition of knowledge, attitudes and skills and academic accomplishment, (awards, honors, certifications, and recommendations). In practical terms, a student portfolio for assessment purposes is a compendium of reports, papers, and other material, together with the student's reflection on his or her learning and on strengths and weaknesses.

Goals:

1. Increase self-directed learning among students and promote habits that foster life-long learning.
2. Encourage reflection on your own level of competence, your educational needs, and the medical and psychosocial needs of your patients
3. Allow the student more flexibility and creativity to demonstrate the achievement of knowledge, skills, and attitudes necessary for public health practice

General

Evidence Related To Specific Training

The trainee should maintain a Portfolio to document and reflect on his training experience and identify and correct any weaknesses in the competencies expected of him/her, and also to recognize and analyze any significant clinical and field events experienced, so that appropriate changes in management could be adopted in order to reduce the risks arising from such situations in the future.

Reflection of you as a professional should include:

- A record of your professional development
- Proof of performance on the job or in class
- What you have accomplished (i.e., tangible artifacts/evidence)
- Evidence of your learning new skills: paper, computer, or web-based

Evidence Related Continuing Professional Development (CPD)

a. Certificates in participating in CPD Sessions
b. Certificate of attendance in other clinical and professional meetings such as workshops and academic sessions.

Specific to MD programme in Community Dentistry:

The Portfolio should be maintained from the time of entry to the training programme to record different activities listed below in each component during the training period.

It should contain a collection of papers and other forms of evidence to demonstrate that learning has taken place in terms of the learning outcomes of the community based clinical and practical training. It should be a collection of trainee's work that exhibits his/her efforts, progress and achievements in the modules. The trainees are free to include any material in the Portfolio which demonstrates the achievement of learning goals.

Mentorship
Each trainee will be allocated a mentor (the Trainer/Supervisor of the training attachment to provide guidance to complete develop and maintain the Portfolio. They are expected to review the candidate's progress at regular intervals. It is the responsibility of the trainee to obtain the signature of the trainer.

The final Portfolio should contain the following documents:
Field training in Public Health Management

1. Signature Logs
2. Descriptive Logs
3. Reflective Logs
4. Printouts of Power Point presentations
5. Reports on presentations made at journal clubs, lectures etc. and feedback received from peers or supervisors on such presentations.

Submission
The trainees should submit the portfolio for assessments as specified under each module.

Annex XIV
Portfolio
Field Training in Public Health Management

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA

ASSESSMENT PORTFOLIO

DOCTOR OF MEDICINE (MD)
IN
COMMUNITY DENTISTRY

(Year of Submission)

BOARD OF STUDY
IN
COMMUNITY DENTISTRY

Content Page

Personal Details

Family Name (Surname): .....

Fore names: .....

Address: .....

Contact telephone No: .....

Sex: .....

Date of Birth: .....

Date and University of Graduation: .....

Pre-Registration Appointments (Grade/Specialty/Hospital:
……
……
……

Post-Registration Appointments (Grade/Specialty/Hospital):
……
……
……

Date Of Passing Selection Examination:.....

Date Of Entry To Training Programme:.....

Date submitted to the PGIM: ……./……../……..

Date submitted to the BOS: ……./……../……..

Date accepted by the BOS: ……./……../……..

Signature of the Chairperson/Secretary

…….

Annex XV
Portfolio Assessment Format
Field training in Public Health Management

Given below are the rubrics for assessment of different components included under Field Training in Public Health Management.

1. Reflective Logs

Eg: Supervision (Table 4 – Section V)

Areas Assessed	Point Scheme			
	0	1-49	50-75	75-100
	Not Included	Included/ Lacks Understanding	Demonstrates Some Understanding	Demonstrates Clear Understanding
Learning Outcome				
Case History/Description of Situation				
Procedures Conducted/ Observations Made				
Reflection				
Analysis of Process/Event				
Evidence				
Practical Alternatives				
Reflection				

2. Log Entry /Descriptive Logs and Evaluative Discussions:

Eg: Inter-sectoral Coordination activities (Table 4 – Section VIII)

Areas Assessed	Point Scheme			
	0	1-49	50-75	75-100
	Not Included	Included/ Lacks Understanding	Demonstrates Some Understanding	Demonstrates Clear Understanding
Learning Outcome				
Case History/Description of Situation				
Procedures Conducted/ Observations Made				
Critique of Process/Event (If applicable)				
Evidence				
Suggestions of Practical Alternatives				

Annex XVI
Progress Report/General Training (Component III)

Name: ……..

Period Reported: …….

Report No.: ……..

Activities:

No.	Activity	Progress	Supervisor's Signature
Case Report			
Activities/Training Unit			
Service functions			
1.			
2.			
Academic functions			
1.			
2.			
Research activities			
1.			
2.			
Journal clubs			
1.			
2.			
Presentation Made in a Scientific Forum			
1.			
Participation in Continuing professional development			
1.			
2.			
3.			
4.			

Trainee's Opinion on Progress:

Satisfactory	
Not Satisfactory	

Reasons for Delay (if applicable/May attach a separate sheet of paper):

……

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……

Corrective Measures Taken (If applicable /May attach a separate sheet of paper):

……

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……

Signature of Trainee: ……. Date: ……/……/…….

Annex XVII
Guidelines: Preparation of Research Proposals

Pre-proposal:
The pre-proposal should be submitted during the 6^{th} – 8^{th} month period after commencement of the Pre- MD course. The trainee should obtain assistance from the supervisor/s when developing the pre proposal. The word count of the pre-proposal should not exceed 2500.

It should comprise the following components:

1. **Title** –
   Should reflect the general objective of the study, be self explanatory and specific to a certain degree but concise. The key words for classification and indexing of the research project should be derived from the title.

   It should not contain:
   a. A full stop, unless it is an informative title
   b. Contain phrases such as "Some notes on..... ""An investigation into.....".
   c. Abbreviations, formulas and acronyms
   d. Promise more than is in the paper (Title should reflect only what is described in the paper)

2. **Introduction** –
   Background - A brief statement of the research problem:
   Definition, magnitude of the problem and consequences, risk factors, solutions tried to mitigate the problem

   Justification -
   a. The need to do the study
   b. The probable benefits of the findings and how it would help to solve the problem researched

   Objectives-
   General and Specific
   All objectives should be written using action verbs and clearly phrased in operational terms –what is done, where and for what purpose.
   The specific objectives should be written in a logical sequence and cover all areas included in the general objective and other relevant aspects not necessarily included in the general objective. The specific objectives should distinctly refer to the three broad components related to the scope of the study.

3. Literature -
A short description with special reference to the studies conducted in Sri Lanka should be included in the "Introduction". *No separate chapter on "Literature Review" is required*.

4. Methods –

Describe briefly the methods required to achieve all the specific objectives and the practicality and feasibility of the methods proposed.

It should be described under the sub headings of: Study design, setting and population (with exclusion/inclusion criteria as per relevance), sample size calculations (briefly refer tit he formulae used giving references), sampling technique, data collection, statistical analysis, administrative and ethical requirements and definitions.

Generally sample size calculations are required for all specific objectives.

Detailed proposal:

Introduction:

Detailed proposal has to be submitted after obtaining approval for the pre-proposal. It has to be developed in consultation with the supervisor/s. Detailed proposal, as the name implies should include every single detail of the research project unlike in the pre-proposal which gives a brief account of the planned research project. However, the word count should not exceed 6000 excluding the reference list and the annexes.

When to submit for approval?

By the end of 8 months at completion of the university attachment

Features of a well written detailed proposal:

1. Ability to answer the research questions and achieve the study objectives
2. Feasible – in terms of time, funds, other resources & ethical considerations
3. Contain adequate details for another investigator to replicate the study

Format:

1. Title of research project
2. Brief account of statement of the problem incorporating the most relevant literature
3. Justification/ Rationale
4. Objectives: General & Specific
5. Methods
6. References
7. Timetable
8. Budget
9. Annexes

1. Title of the research project:

a. A good title should be accurate and descriptive but concise.
b. Should reflect the essence of the study.
c. It should impart a clear idea about the general objective to the reader.
d. It is important to specify what population or universe will be investigated: study setting & population.
e. It provides the "key words" for the classification and indexing of the project.

The title should not contain the following:

a. A full stop
b. Contain phrases such as:
i. "Some notes on ..... "
ii. “An investigation into ……”
iii. “A study on .....”
c. Abbreviations, formulae and acronyms

2. Introduction (brief account of the “statement of the problem”):

It is the equivalent of the “introduction” in a research paper.

Unlike in the thesis the most relevant literature (eg: related most recent literature) should briefly be described under the Introduction. If no local research is available (justified by stating the search engines referred to), few selected articles from regional/non regional countries which are directly relevant to the research problem should be included.

Introduction should comprise a description of background to the problem chosen in terms of:

A. Definition of the condition studied
B. Nature of the problem
C. Probable causes of the problem
D. Possible solutions
E. Unanswered questions

A. *Definition of the condition studied*

Example: If the research is on “Intimate Partner Violence” define what it is

B. *Nature of the problem: in terms of*

a. Magnitude of the problem: Incidence, Prevalence
b. Distribution of the problem in terms of where, when and who (3Ws)
c. Consequences for those affected
d. Consequences for the services

C. *Probable causes of the problem*

a. Current knowledge of the problem
b. Its probable causes?
c. Is there consensus?
d. Is there controversy?
e. Is there conclusive evidence?
f. Factors that need to be investigated further for the problem to be fully understood

D. *Possible solutions*

a. What has been proposed?
b. In what ways have solutions to the problem been attempted?
c. What are the results? To what extent it had been effective

E. *Unanswered questions*

a. What remains to be answered?
b. Areas that have not been possible to understand, determine, verify, or test?

3. Justification/ Rationale

This is a very important component of a research proposal. It addresses two aspects.

A. Need to do the study
B. Proposed benefits of the study

A. *Need to do the study*
a. The extent to which information is available
b. Description of any solutions to the problem tried in the past
c. How well they have worked and need for further research

B. *Proposed benefits of the study*
a. Description of information expected to result from the project
b. How this information will be useful to solve the problem and who will be the beneficiaries: local, regional, specific groups

Introduction – statement of the problem including only the salient aspects under the above mentioned headings, to be confined to a single page with 2 -3 paragraphs of well focused Justification (altogether two pages).

4. Objectives

Both General and Specific Objectives should cover research material adequate to publish three journal articles. They should be:

a. Clearly phrased in operational terms –what would be done, where and on whom?
b. Using **action verbs** that are specific enough to be evaluated
c. Realistic considering feasibility
d. Specific objectives should be arranged according to a rational sequence

1. Methods

Should include all relevant details.

Consist of 13 sub components:

A. Study design
B. Study setting (place of study)
C. Study period
D. Study population
E. Sample size calculations
F. Sampling technique
G. Study Instruments
H. Data collection
I. Quality of assurance/ Quality control
J. Data processing & Statistical analysis
K. Administrative requirements
L. Ethical requirements/ clearance
M. Definitions

A. Study design:

The proposal may consist of one or more study designs based on the objectives, and under each study design, several phases / stages. Therefore the objectives need to be phrased to reflect the respective study designs.

B. Study setting (place of study):

Need to mention all study settings according to the objectives with a brief description of each setting according to its relevance to the study.

C. Study period:

The calendar time during which data collection is to take place needs to be mentioned. It is of relevance especially when planning for same

a. when the health condition studied has seasonal variations (eg: dengue fever)
b. when it affects accessibility to study population (eg: school children)

D. Study population:

The study / sampling population should be clearly defined.

Note: The sample consists of a subset of the study/sampling population. The latter is derived from the "Target" population which is the wider universe, based on an operational definition and eligibility criteria (Inclusion /exclusion / both / None) applied according to the relevance.

Following are not considered as Inclusion/ Exclusion criteria:

a. Opposite of inclusion/exclusion criteria are not considered as exclusion/ inclusion criteria
b. Those who consent/do not consent

E. Sample size calculations:

Above should be based on the specific objectives/ study designs of the research proposed. The sample size for each of the study designs need to be worked out using the appropriate formulae. It is also important to cite the reference/s for the selected formula/ formulae.

When applying cluster sampling the rationale for selecting a given "design effect" should be described (Bennett et al, 1991).

F. Sampling technique/s

Sampling technique should be described fully for each study design. For analytical study designs the sampling technique should be described separately for study / control groups.

Cluster sampling – if carried out using the technique of "probability proportionate to size" all details regarding sampling (WHO, 2008) should, be described in an Annex.

G. Study instruments:

All relevant aspects related to study instruments should be described in detail

a. Questionnaire:
   Type: Interviewer/ Self administered; Open/Close ended or mixed
   Broad components – personal data, socioeconomic status and study related components
   Scales used – eg: Assessment of Attitude (Likert scale)
   Composite scales: assessment of socio economic status

b. Screening instruments:
Eg: GHQ- criteria for diagnosis/cut off points

c. Biochemical tests:
Details of how blood is drawn (aseptic techniques), amount drawn, frequency as per relevance

d. Other clinical investigations/ measurements:
Details of standardized techniques should be described or make reference to a document/s containing standard techniques

e. Measuring anthropometric variables:
Detailed account of the method, frequency of calibration of instruments and other relevant information

H. Data collection

a. Details of Data Collectors;
Field staff/ pre–interns,
General public –educational level (O/L, A/L qualified students) etc.
b. Brief description of training of data collectors
c. Supervision of data collectors
d. Pre testing – all relevant details should be mentioned briefly. Eg: the study population, sample size and the aspects assed
e. Pilot study – presence of several data collecting methods would make it essential to conduct a miniature form of the main study. A brief of description of all aspects need to be included.

I. Quality assurance/ Quality control

This is very important and refers to the validity and reliability of study instruments and data
Given below are the commonly used study instruments/tools:

a. Questionnaires
b. Laboratory equipment/ methods (eg: spirometers, haemoglobin estimation testing,, testing for fasting blood sugar etc.)
c. Other equipment (eg: weighing machines, measuring tapes)

J. Data processing & Statistical analysis

Data processing:
The protocol should provide information on how the data will be managed

a. data coding for computer analysis
b. monitoring
c. verification

Statistical analysis:
Has to be decided in accordance with the proposed objectives.

Descriptive statistics – of the key variables and how they are summarized should be described including derivation of scoring systems and the cut off scores.

Inferential statistics: statistical tests used need to be described based on the type of data used. Both bivariate and multivariate analysis should be described in detail.

Multivariate analysis:
Multiple logistic regression - basis for selection of variables for the model, the type of regression used and other relevant details such as method of determining "goodness of fit" of the model need to be included.

K. Administrative requirements
A brief description of the above needs to be included.

L. Ethical requirements/ clearance
General aspects related to informed consent and confidentiality should be included. In addition describe the specific ethical issues identified related to the study and how they are addressed/ minimized. Lastly mention the institution from which ethical clearance is to be obtained.

M. Definitions
A list of operational definitions of the key variables relevant to the study needs to be included.

7. References
   APA (American Psychological Association) style (6th Edition), which is one of the many variants of the Harvard style is recommended (UMUC Library, 2012)

8. Timetable
   A Gant chart need to be included giving the proposed time scale.

9. Budget – a brief account of the broad areas for which funding is needed.

10. Annexes
All relevant annexes need to be included:
a. Questionnaires/Screening instruments – submit the English version and the Sinhala Tamil versions according to relevance.
b. Sampling details – especially if cluster sampling with probability proportionate to size is the selected sampling technique (including all the secondary sampling units)
c. Details of all standard techniques, formulae etc.
d. Any other relevant documents in relation to "Methods" which is essential for a proper evaluation of the proposal.

In summary a research proposal is all about
1. The need to do the study (why)
2. Explanation of what is to be achieved from the study (what)
3. The methods to be used (how)

11. Formatting instructions

The proposal should be word-processed and printed on A4-size paper on both sides.

Margins - 1 inch / 2.5 cm on all four sides
Font Style – Calibri 11
Line Spacing - Single
Number of Pages – Not exceeding 5000 words excluding the reference list and annexes
Number of Copies – Three (3)

References

Bennett, S., Woods, T., Liyanage, W.M., & Smith D.L. (1991). A simplified general method for cluster-sample surveys of health in developing countries. World Health Statistics Quarterly 44(3), 98 -106. Retrieved November 15, 2013 from http://www.ph.ucla.edu/epi/rapidsurveys/RScourse/whostatquarterly44_98_106_1991.pdf

UMUC (University of Maryland University College) Library. (2012.) APA Citation Examples. Retrieved November 27, 2013 from http://www.umuc.edu/library/libhow/apa_examples.cfm#intext

WHO (2008). Training for mid-level managers (MLM) Module 7.EPI Coverage Survey. Retrieved November 15, 2013 from http://www.who.int/immunization_delivery/systems_policy/MLM_module7.pdf

Annex XVIII
Progress Report/Research Project (Component III)

Name: …….

Period Reported: …….

Report No.: ……..

Title of Research Project:

……

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……

……

……..

Activities Conducted (May attach a separate sheet of paper)

……

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Trainee's Opinion on Progress:

……..

Progress:

Satisfactory	
Not Satisfactory	

Reasons for Delay (May attach a separate sheet of paper):

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Corrective Measures Taken (May attach a separate sheet of paper):

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Signature of Trainee: ……. Date: ……/……/…….

Co-Supervisors" Observations:

Co-Supervisor 1

Progress:

Satisfactory	
Not Satisfactory	

Comments:

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Signature of supervisor: …….

Date: ……/……/…….

Co-Supervisor 2

Progress:

Satisfactory	
Not Satisfactory	

Comments:

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Signature of supervisor: …….

Date: ……/……/…….

Annex XIX
Guidelines for Thesis Writing

The following are general guidelines developed with regard to the writing of a thesis. However, it is important to note that the final product of an individual thesis should conform to the requirements of the research project concerned.

1. General

The thesis should be written in the past tense, in a readable manner with no grammatical errors or spelling mistakes. The minimum word count should be at least 40 000, It needs to be formatted according to instructions issued by the PGIM (refer Annex XVI, Section 10). The same font should be used throughout the thesis. Care should be taken not to repeat the same statements over and over again. It should be free from any evidence of plagiarism.

Plagiarism means indication of ideas or words of another person as one's own.
It is avoided by adopting any one of the following three methods:

a. Quoting: using quotation marks to indicate exactly what someone else wrote and referencing the original source.
b. Paraphrasing (acceptable): Formulating a passage from source material into your own words by changing the wording, sentence structure, and the order of ideas (which may be of the same length as the original) with a reference to the original source.
c. Summarizing: in your own words the ideas written by someone else and referencing the original source (what is summarized is shorter than the original statement).

All relevant citations to be written conforming to the Harvard APA style (6th Edition) [refer Annex XVI, Section 7].

If a sentence is begun with a numerical value, it should be written as a word and not as a numeral (Eg: "Ten percent of the population were asthmatics" and not as "10% of the population were asthmatics"). All numbers below 10 (1-9) should be written as a word (eg: numeral 9 as "nine").

Only standard abbreviations can be used without a description as to what it refers to. All the other abbreviations should be fully described and the abbreviation proposed should be given with in parentheses when it appears for the first time in the text. An acronym at the beginning of a sentence should be fully written. All abbreviations included have to be presented as a list.

2. Title

The title should be short and concise. It should reflect the essence of the study and make the general objective clear and specify what study population or the universe is studied.

The title should not contain the following:

a. A full stop, unless it is an informative title
b. Contain phrases such as "Some notes on....." "An investigation into....." "A study on ....."
c. Abbreviations, formulas and acronyms

3. Abstract

Should be structured under the following headings:
Introduction/ Background, Objectives (to include the general objective only), Methods (a concise version of study design, study population, sample size, sampling technique, study instruments and statistical analysis) Results (pertaining to the specific objectives in a concise form) and Conclusions and Recommendations. It should not exceed 500 words.

Key words: Should be derived from the title and minimum of two key words and a maximum of five key words to be included at the end of the abstract.

4. Chapter 1- Introduction

Refers to the statement of the problem and consists of three main components:

A. Background information: in relation to the research problem chosen
B. Justification
C. Objectives

A. Background information

a. The section could begin by defining the research problem (central concept of the study or the dependent variable)
   eg. if the study is on "intimate partner violence" define what is meant by it.
b. A description of the nature of the problem (the discrepancy between what it is and what it should be) and of the size and severity (magnitude) and distribution of the problem (who is affected, where, since when, and what are the consequences for those affected and for the services).
c. An analysis of the major factors that may influence the problem (probable risk factors) and the unknown factors and a discussion of why certain factors need more investigation if the problem is to be fully understood.
d. A description of any solutions to the problem that have been tried in the past, how well they have worked, and why further research is needed (justification for your study).
e. A description of socio-economic and cultural characteristics and an overview of health status and the health-care system in the country/district in as far as these are relevant to the problem. Include a few illustrative statistics, if available, to help describe the context in which the problem occurs.

B. Justification (Sub heading)

Should consist of a convincing argument on the need for the study based on the gaps identified and how the knowledge generated will be useful and generally applicable to solve the research problem identified.

C. Objectives: "General" and "Specific".

All objectives should be clearly phrased in operational terms using action verbs and indicating what is done, where (study area) and on whom (study population).

General objective is a broad statement of what is to be achieved at the end of the study.
Specific objectives should cover all aspects included in the general objective and if required additional areas that may be specifically needed to cover areas related to the general objective. It should be logically sequenced.

2. Chapter 2 - Literature review

Literature review organizes the previous research in relation to the research topic you have chosen. However**, it is not a descriptive summary of the historical background to your study** but a

i. Summary - recapitulation of the important information from the sources
ii. Synthesis - re-organization of that information

It should be structured in an orderly manner according to the specific objectives as far as feasible in terms of 1) ideas or themes which connect together 2) areas with controversy 3) solutions proposed, 4)inconclusive evidence, missing areas and gaps with 5) formulation of questions that need further research

a. begin the chapter by describing the search strategies.
b. Include global, regional and local studies as per relevance to the research project embarked upon.
c. For each article reviewed, include core data/information giving a brief description of the objectives, methods (study design, inclusion/exclusion criteria as per relevance, sample size, sampling, data collection, data analysis and essential results (eg: prevalence, Odds Ratios with Confidence Intervals, P values) and conclusions of the given study. Providing this information is important for you as well as the examiner/reader to judge the validity of what has been reported and the conclusions derived by the author/s of the article. Based on latter, each article may be critiqued.
d. It is also necessary to compare and contrast the findings reported in different studies included.
e. Finally a critical assessment of all the studies should be included: your opinion on how persuasive the conclusions are in reference to the information provided in the articles
f. Include in-text citations to the articles
g. Avoid being repetitive and verbose
h. Do not repeat what has already being described in the Introduction

6. Chapter 3 - Methods

Should consist of the following:

A. Study design – the chosen study design to be stated.

B. Study setting – details of the study area and the specific location at which the study was conducted.

C. Study period – the time period during which the study was conducted.

D. Study population/s - should be clearly defined

a. Descriptive studies – generally one study population
Analytical studies – minimum of two study populations in terms of study and control groups

b. Application of “Inclusion” and “Exclusion” criteria or both as per relevance to select the sample from the study population/s should be clearly stated.

E. Sample size calculations - The appropriate formula based on the study design should be described in detail. Provide reference (authors/ statistical package). Indicate step by step how the final sample size was computed (eg: substitution of the formula with relevant values).

In case of a descriptive study:

a. The variable selected to compute the sample size with relevant proportions (the SD if the variable selected is quantitative) should be specified with rationale for selection of the given proportions.
b. The required precision
c. The confidence level

Following should be described in case of an analytical study:

a. Proportions relevant to the two groups
b. The power
c. The ratio of study: control

Following should be described if cluster sampling was used

a. The design effect
b. Number of clusters and number of study units /cluster

All study designs

i. Minimum sample size computed
ii. Allowance added for non response
iii. Final sample size

Intervention Studies – describe all steps of the intervention applied to the study group and the measures applied/not applied to the control group and definitions of outcome variables (applicable only for intervention studies)

F. Sampling technique
General - describe the technique used, step by step in detail.
eg: Probability sampling (simple random sampling):
Refer to the source of the sampling frame, application of inclusion/ exclusion criteria, the final sampling frame and its size, source of random numbers

Analytical studies – describe the sampling technique used for the study/ control groups separately

G. Study instruments – All instruments including their English translations should be annexed.

1. **Questionnaire –**

1.1 Construction of questionnaire: should be described in detail to provide information on:
   a. Source of questions – borrowed from similar questionnaires or designed by the trainee or a combination of both
   b. Language - the language it was originally designed and the method adopted to translate it to either English or the language in which it was administered as applicable.

1.2 Type of questionnaire - interviewer /self-administered,

1.3 Type of questions open/close ended or mixed

1.4 Main components of the questionnaire should be described broadly:
eg:
Section 1 - Personal data,
Section 2 - Socio-demographic characteristics,
Section 3 - Knowledge, Attitudes and Practices

1.5 Scaling of questionnaires – if the questions were assessed using a scale (eg: Likert Scale) describe in detail how the scores were assigned, what the minimum and maximum possible overall scores were and the basis for the cutoff levels selected.

2. Anthropometric Measurements, Laboratory Methods and Clinical Diagnosis

a. Anthropometric Measurements:

Type of instrument, method of calibration and the frequency, the degree of accuracy specified for the measurement (eg: measurement of weight: to the nearest 0.01 kg), the technique of measurement step by step either described in the text under Methods or included as an appendix or making reference to a standard protocol and replication of measurements and the basis for the final value used for the analysis should be stated clearly.

b. Laboratory methods:

The manufacturer and model of the equipment used, calibration procedures, quality control measures (internal and external through a reference laboratory if feasible]) with the analysis used and details of how the measurements were made should be stated under Methods or by making reference to relevant protocol/s.

c. Clinical diagnosis:

Clinical diagnosis for research purposes should be based on standardized diagnostic criteria described in recognized manuals such as International Classification of Diseases (ICD10) for all health conditions and Diagnostic and Statistical Manual of Mental Disorders (DSM IV) for psychiatric disorders.

3. Screening for diseases

a. use of validated instrument with description of the psychometric properties when screening for diseases already validated instruments (eg; GHQ 30) should be utilized. I

b. if protocols are used for above – reference to the protocol should be given.

H Pilot study / Pre testing

Pre testing (has to be conducted) and pilot study (if conducted) need to be described in relation to the following aspects:

The sample size, study setting, degree of similarity between the pre-test population and the proposed study participants of the main study, and the relevant administrative procedures. (Please note that the trainee is expected to do pretesting by him/her).

I. Study implementation

J. Quality of data –

Validity

Methods adopted to ensure/assess validity in terms of face, content and consensual validity (judgmental validity) should be described. if the tool used is a validated one (eg: GHQ-30) a description regarding validation to be included. if it has not been validated, discuss the implications of using a non validated tool under “limitations” in the chapter on Discussion.

Reliability
Measures taken to assess different types of reliability as per relevance to the study and statistical tests carried out should be described.

K. Data analysis –
"Descriptive" and "Inferential" statistics appropriate to the type of data collected should be applied. The analysis required to achieve each specific objective with the statistical tests that were used should be described, Statistical software that was used and the P value that was taken as the significance level need to be indicated.
.
L. Ethical issues –
Describe ethical issues specific to the study and the measures taken to overcome them (if relevant) and the general ethical aspects such as written informed consent, maintenance of confidentiality, assurance of non discrimination if declined to participate and referral for further management (if required). The institution from which ethical clearance was obtained to conduct the study should be included as the final statement only.

M. Definitions of relevant variables

7. Chapter 4 - Results
General
Present the data that have been gathered during the investigation. This section provides answers to the problem, stated in the introduction/ objectives.

Commence the chapter by including a general statement about the total sample size and the response rate. It should be followed by description of the sample in terms of relevant socio demographic characteristics. The rest of the chapter should be organized as far as feasible according to the sequence of the specific objectives.
Each relevant variable has to be described in the text under a separate paragraph carrying a subheading. The detailed results should be presented mostly as table form. Figures/charts may be used sparingly according to the need. Only one type of illustrative forms (table or figure and not both) should be used to describe an individual variable. Despite the use of tables/ figures , the salient points relevant to the variable must be written in the text always (the narrative) and it should stand alone where the reader is able to get a clear idea just by referring to the narrative text.

Tables and figures should be numbered according to the order in which it appears in the text. Reference should be made to the tables/figures in the text and such reference should precede the relevant table/ figure. Text which describes the data in the table/ figure may be placed either before or after the relevant illustrative form.

Presenting results
All variables should be described in the text. Binary data need not be presented using tables/ charts. When the results of a study are presented do not include more than one decimal point unless it has some relevance in relation to the interpretation. Always the percentages should be supported by the relevant raw data and vice versa.

Descriptive statistics

Quantitative data: should be summarized as mean (standard deviation) or median (inter-quartile range) depending on the distribution

Qualitative data: should be expressed as percentages

Rates: incidence / prevalence described with relevant 95% Confidence Intervals

Inferential statistics

a. Quantitative data: describe in detail the type of statistical test used including the P Value
b. Qualitative data:

Associations between variables - cross tabulations of data to be presented with results of the statistical test that was applied including the P value and the 95% confidence interval for the effect measure computed.

Features common to Tables:

Should be presented clearly with the following:

a. Tables should be self explanatory (the reader should be able to read and understand the information provided in the tables without referring to the text).
b. Tables should be numbered according to the order in which it appears in the text, using Arabic numerals.
c. Title should be simple and in a concise, with a clear description of the type of results included (Keep it short and simple/ specific [KISS]).
d. Title has to be placed above the table and space left between the last line of the title and the table
e. The captions of columns / rows should be clearly labeled with the relevant units.
f. The font size may be reduced to 10 if required, but maintain consistency throughout the document with regard to the font size of the text in the tables.
g. The results reported may be center or right aligned, having selected one, maintain consistency throughout the document
h. If totals do not add up to the original value (missing data) indicate the frequency of missing data.
i. Column wise totals and percentages are considered better than row wise totals and percentages.
j. Give the exact percentage value for the totals computed (eg: 99.9%).
k. Try to have the tables as close as possible to the text.
l. Confine tables to one page as far as feasible.
m. Abbreviations may be used in the table, but the full description of it should be included as a footnote.
n. All vertical lines in the tables should be removed but horizontal lines may be left when necessary to separate major sections of the table.
o. If the data are not original, their source should be given in a footnote.
p. Reference to the statistical test used should be included in the text/ table, along with the other relevant features of the test which is necessary to interpret the data.(eg: chi square test: degrees of freedom, chi square value and the P value).

Features common to both Figures & Charts:
The figure/chart titles have to be placed below the figure.

Units:
SI units (le Systeme international d'Unites) to be used except for blood pressure measurements (mm Hg).

Avoid doing the following:
a. Do not discuss or interpret your results
b. Do not present the same data more than once.
c. Text should complement any figures or tables, not repeat the same information.

8. Chapter 5 - Discussion
Should comprise the following:
a. Summary of the main findings: should contain minimal data
b. Explain the findings: whether the results were anticipated or not and if not explain in terms of sampling, measurements, procedural issues, confounding variables
c. Discussion on unexpected findings
d. Public health relevance of the findings
e. Relate the findings to other studies: consistency / inconsistency of findings
f. Explanation, interpretation and implications of the findings
g. Discussion on the limitations / possible limits to reliability/ validity of the work in terms of
h. Problems related designing of the study: sampling, assessment, procedures, and choice of research design
i. Problems during implementation: sampling issues, non response
j. Discussion on recommendation
k. Discuss suggestions for future research impact on practice)
l. In summary discuss everything but be brief and specific

Note: Discussion should not be a repetition of results.

9. Chapter 6 - Conclusions and Recommendations
Conclusions:
Conclusions should be the answers to the specific objectives written in summary form.
Recommendations:
Recommendations should be relevant and arising out of the study.
They should be practical and clearly stated in terms of implementation:
a. Remedial action to solve the problem
b. Further research to fill in gaps in our understanding

10. Citations and Reference list
The Harvard APA style (sixth edition) should be used.
Reference: Enquire Guide to Harvard APA Style Bibliographic Referencing

11. Annexes
Should be numbered using Roman numerals according to the order in which it appears in the text and referred to in the text in the appropriate place.

Note: All documents which contain the identity of the trainee should be removed including the ethical clearance certificate.

12. **Structure of a Research Report**

A. Front Matter
B. Body
C. End material

A. Front Matter

a. Cover
b. Title page
c. Declaration (Refer Section No. 14)
d. Abstract
e. Acknowledgements
f. Table of contents
g. List of tables
h. List of figures & illustrations
i. List of annexes & appendices
j. List of abbreviations & symbols

B. Body

a. Introduction: background statement, Justification and Objectives
b. Literature review
c. Methods
d. Results
e. Discussion: Including Limitations,
f. Conclusions and Recommendations

C. End Material

a. List of references
b. Annexes / Appendices

12.1 Page Numbering

Front Matter: In Roman numerals (using low case) starting from the Title Page (i, ii, iii, iv…….). The number (i) is not inserted on the Title Page.

Body and End material: Arabic numerals (1, 2, 3, 4…….)

Numbering of Annexes: In Roman numerals (Annex I, II, III, IV……)

13. Formatting of the Thesis

The thesis should be word processed on both sides of the page on good quality A4 size paper using font style Calibri with a font size of 11. Line spacing should be 1.5. A margin of not less than 40 mm should be left on the left hand side to facilitate binding and margins of not less than 20 mm should be left on the top, right hand side and at the bottom.

The thesis should be prepared conforming to the correct formats prescribed, using simple English language with correct grammar and spellings, **with no repetition of same text**.

Chapter headings should be capitalized and centered and the subdivision headings should be placed at the left hand margin in lower case bold type lettering.

13. Submission of thesis for the examination

It is compulsory to submit on or before the stipulated date of submission as decided by the PGIM.

Both the supervisor and the candidate have to sign the "Declaration" (three copies) which should be handed over (but not attached to the thesis) to the Examination Branch/ PGIM along with three copies of the thesis (Refer Section No. 14).

All details relevant to identification of the Candidate/ Supervisors should be removed from the thesis. These include:

a. Ethical Clearance Certificate (one copy of the original certificate with all names intact to be handed over to the PGIM with the 3 copies of thesis).
b. Letters granting permission issued by the relevant authorities
c. Acknowledgements

Final Submission:

a. Three copies of the thesis
b. Three letters of declaration signed by the supervisor
c. Ethical clearance certificate

Three copies of the thesis should be submitted in loose bound form in the first instance. Only the index number of the candidate should be included, but not the candidate's name and degrees.

14. Declaration

Both supervisor and the candidate have to sign the declarations stated as below which should appear together on a separate page.

A. Candidate

"I declare that the work presented here is my original work, and generated from the research conducted by me to fulfill the part requirement of the degree of MSc Community dentistry.

Signature of Candidate:
Name of Candidate:
Date:

B. Supervisor

"I confirm that I supervised the above indicated work of the candidate".

Signature of Supervisor:
Name of Supervisor:
Date:

15. Submission of the final thesis

Once the corrections suggested by the examiner/s have been attended to and certified by the supervisor, it should be bound in hard cover with the author's name, the degree and year printed in

gold on the spine (bottom upwards). The cover should be in black. The front cover should carry the title on top, the author's name in the centre and the year at the bottom (all center aligned) printed in gold. Three copies of the thesis should be submitted to the Director, PGIM within the specified period after the release of results. Two copies shall be the property of the PGIM while the third copy will be returned to the trainee.

Important – All of the above mentioned documents should be attached to the hard bound copy of the thesis handed over to the PGIM when the candidate passes.

a. Ethical Clearance Certificate (one copy of the original certificate with all names intact to be handed over to the PGIM with the 3 copies of thesis).
b. Letters granting permission issued by the relevant authorities
c. Acknowledgements (placed after the Abstract)

Annex XX
Examiner's Report: Thesis Evaluation Form

Index Number: ……..

Title / Running Title of Thesis:

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Instructions to Examiners:

This evaluation form consists of separate sections under the main headings of the components that comprise the Dissertation. Each section has a maximum mark assigned. A minimum of 50% has to be obtained to pass all sections. For the candidate to be eligible to pass the thesis, he/she should have an overall total of ≥50% and obtained a minimum of 50% from the compulsory sections.

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A. Title		**Total Marks Assigned = 10**	**Minimum Mark Required = 0**	
1.	Makes the general objective clear	Yes	Partially	Not at all
2.	Refers to the study population		Yes	No
3.	Refers to the study setting		Yes	No
4.	Concise	Yes	Partially	Not at all
5.	**Allocated marks** =			

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B. Abstract	**Total Marks Assigned = 30**		**Minimum Mark Required (50%) = 05**	
1.	Structured		Yes	No
2.	General objective clearly stated	Yes	Partially	Not at all
3.	Methods: brief account on study design & population, computed sample size, sampling technique, study tools and statistical analysis included	Yes	Partially	Not at all
4.	Results: provide answers to specific objectives – incidence, prevalence, effect measures etc. with respective 95% CI, P values (as per relevance)	Yes	Partially	Not at all
5.	Conclusions & Recommendations: arising from results	Yes	Partially	Not at all
6.	**Allocated marks** =			

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C. Introduction	**Total Marks Assigned = 30**		**Minimum Mark Required (50%) = 15**	
Background = 22			**Minimum Mark Required (50%) = 11**	
1.	Defines research problem clearly	Yes	Partially	Not at all
2.	Describes research problem adequately	Yes	Partially	Not at all
3.	Relevant statistical information are provided	Yes	Partially	Not at all
Justification = 08			**Minimum Mark Required (50%) = 04**	
4.	Justification: Focused	Yes	Partially	Not at all
5.	Justification: describes need for the study	Yes	Partially	Not at all
6.	Justification: describes potential benefits of study findings	Yes	Partially	Not at all
7.	**Allocated marks** =			

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D. Objectives	Total Marks Assigned = 20	Minimum Mark Required (50%) = 10		
1.	General Objective: covers the scope of study	Yes	Partially	Not at all
2.	Specific objectives: covers general objective	Yes	Partially	Not at all
3.	Objectives: stated in measurable terms using action verbs	Yes	Partially	Not at all
4.	Objectives: refer to study population and study setting	Yes	Partially	Not at all
5.	Logically sequenced		Yes	No
6.	**Allocated marks =**			

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E. Literature Review	Total Marks Assigned = 30	Minimum Mark Required (50%) = 15		
1.	Well organized	Yes	Partially	Not at all
2.	Key studies relevant to the field of research (addressing All specific objectives) are included	Yes	Partially	Not at all
3.	Core information provided in relation to each article is what is relevant to the research study/objectives	Yes	Partially	Not at all
4.	Has provided adequate core information to arrive at an independent conclusion regarding research findings cited In relation to each article	Yes	Partially	Not at all
5.	Articles related to methodological aspects relevant to the study included (eg: study instruments)	Yes	Partially	Not at all
6.	Psychometric properties of relevant instruments described	Yes	No	Not applicable
7.	Critical analysis of the literature included as applicable	Yes	Partially	Not at all
8.	Demonstrates a thorough knowledge of the subject area	Yes	Partially	Not at all
9.	In- text citations have been done according to the Harvard system/APA style (6th Edition)	Yes	Partially	Not at all
10.	Evidence of plagiarism	Yes	Partially	Not at all
11.	**Allocated marks**=			

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F. Methods	Total Marks Assigned = 70		Minimum Mark Required (50%) = 35		
01.	**Study design/s appropriate to achieve objectives**		Yes	Partially	Not at all
02.	**Study population:**				
	Defined clearly and adequately		Yes	Partially	Not at all
	Inclusion criteria: relevant	Not applicable	Yes	Partially	Not at all
	Exclusion criteria: relevant	Not applicable	Yes	Partially	Not at all
03.	**Sample size calculation:**				
	Sample size has been computed for each component as per Relevance			Yes	No
	Correct formula/Formulae used		Yes	Partially	Not at all
	Formula/Formulae described adequately		Yes	Partially	Not at all
	Selected the variable/s related to the research problem for sample size calculation (eg;P in the single proportion Estimation formula)		Yes	Partially	Not at all
	Demonstrates a clear understanding of principle/s related to sample size calculations		Yes	Partially	Not at all
04.	**Sampling technique:**				
	Applicable to the study		Yes	Partially	Not at all
	All steps described in detail as applicable		Yes	Partially	Not at all
	Cluster sampling: selection of clusters described in detail		Yes	Partially	Not at all
05.	**Study Instruments/Tools:**				
	All relevant instruments required to achieve objectives have been mentioned		Yes	Partially	Not at all
	Techniques are described in detail		Yes	Partially	Not at all
	Techniques/methods of standardization of data collection procedures described as per relevance		Yes	Partially	Not at all
	Calibration method/s mentioned as per relevance		Yes	Partially	Not at all
	Questionnaires:				
	Translation procedure described		Yes	Partially	Not at all
	Translations are correctly done		Yes	Partially	Not at all
	Broad components described adequately & clearly		Yes	Partially	Not at all
	Describes the scoring system adopted clearly (eg: KAP studies, screening for diseases)		Yes	Partially	Not at all

F. Methods	Total Marks Assigned = 70	Minimum Mark Required (50%) = 35		
06.	**Data collectors/ collection:**			
	Profile of data collectors described	Yes	Partially	Not at all
	Training of data collectors described adequately	Yes	Partially	Not at all
	Data collection procedure/s described adequately	Yes	Partially	Not at all
07.	**Pre testing:**			
	Pre testing has been conducted	Yes	Partially	Not at all
	Appropriate study population chosen for pre testing	Yes	Partially	Not at all
	Revisions carried out after pre test are described	Yes	Partially	Not at all
08	**Assessment of validity of Instruments/Tools :**			
	Judgmental validity described in detail	Yes	Partially	Not at all
	Assessment of construct validity described (as per relevance) In detail	Yes	No	Not applicable
	Assessment of criterion validity described (as per relevance) In detail	Yes	No	Not applicable
09.	**Assessment of reliability of Instruments /Tools (as per relevance) :**			
	Internal consistency described - eg: Chronbach's alpha,	Yes	Partially	Not at all
	Intra class correlation as per relevance	Yes	Partially	Not at all
	Test re-test described - eg: Kappa coefficient	Yes	Partially	Not at all
	Inter observer variation	Yes	Partially	Not at all
10.	**Statistical analysis:**			
	Scores (knowledge, attitudes etc) as applicable:			
	Details of scoring each item in the tool described clearly	Yes	Partially	Not at all
	Details of deriving overall score described clearly	Yes	Partially	Not at all
	Cut off values to categorize sample (eg; good/poor knowledge) In to appropriate sub groups described clearly	Yes	Partially	Not at all
	Descriptive statistics:			
	Distribution of relevant quantitative data assessed	Yes	Partially	Not at all
	Quantitative data – summarized as mean, SD & range or 95% CI /median, IQR & range as per relevance	Yes	Partially	Not at all
	Qualitative data – incidence/ prevalence and other relevant percentages described with 95% CI	Yes	Partially	Not at all
	Inferential statistics:			
	Bivariate analysis:			
	Variables tested for bivariate analysis described clearly Amalgamated (pooled data) levels indicated (if applicable)	Yes	Partially	Not at all
	Multivariate analysis:			
	Described the basis of selecting variables that are included inthe Model	Yes	Partially	Not at all
	Stated the method chosen to develop the model	Yes	Partially	Not at all
	Sated the basis of checking for adequacy of goodness of fit	Yes	Partially	Not at all
	Stated how results will be expressed (eg: P value and odds ratio and the 95% confidence limits)	Yes	Partially	Not at all
11.	**Demonstrates a clear idea about statistical tests chosen**	Yes	Partially	Not at all
12.	**Administrative requirements** – described	Yes	Partially	Not at all

13.	**Ethical clearance:**			
	Generics described: Informed consent, confidentiality etc.	Yes	Partially	Not at all
	Specific measures addressed as per relevance	Yes	Partially	Not at all
	Ethical clearance obtained		Yes	Not mentioned
F. Methods	**Total Marks Assigned = 70**	**Minimum Mark Required (50%) = 35**		
14.	**Variables:**			
	Defined	Yes	Partially	Not at all
	Operationalized appropriately	Yes	Partially	Not at all
15.	**Methods described covers all specific objectives**	Yes	Partially	Not at all
16.	**Methods described are verifiable:**			
	All details required to duplicate study is given	Yes	Partially	Not at all
17.	**Allocated marks**=			

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G. Results	**Total Marks Assigned = 70**	**Minimum Mark Required (50%) = 35**		
01	Commences describing response rate			
02.	Sample- socio-demographic data described adequately	Yes	Partially	Not at all
03	**Text:**			
	Well organized according to major components/specific objectives with relevant subheadings	Yes	Partially	Not at all
	Text referring to individual table precedes relevant table	Yes	Partially	Not at all
	Text referring to individual chart precedes relevant figure	Yes	Partially	Not at all
	Individual variables under broad components are described under subheadings	Yes	Partially	Not at all
	Salient data in tables/figures described in text is self Explanatory	Yes	Partially	Not at all
	Association of variables described in text with a clear/correct interpretation based on effect measures, 95% CI & P values	Yes	Partially	Not at all

04.	**Tables:**			
	Properly formatted	Yes	Partially	Not at all
	Numbered according to sequence of tables	Yes	No	
	Titles placed above the table	Yes	No	
	Titles reflect the essence of data included in table	Yes	Partially	Not at all
	Column titles are clearly stated	Yes	Partially	Not at all
	Row titles are clearly stated	Yes	Partially	Not at all
	Data presented with relevant percentages	Yes	Partially	Not at all
	Denominators to compute percentages are clearly stated	Yes	Partially	Not at all
	Findings are based on appropriate statistical analysis	Yes	Partially	Not at all
	Odds ratios/effect measures are described according to the manner data have been presented in 2 by 2 tables	Yes	Partially	Not at all
	Statistical tests mentioned with relevant details (eg: test statistic, P values, degrees of freedom, pooled data etc.)	Yes	Partially	Not at all
	Self explanatory - needs no reference to text to understand	Yes	Partially	Not at all
05.	**Charts/Figures (Not essential)**			
	Used sparingly		Yes	No
	Numbered according to sequence of figures		Yes	No
	Titles placed below the chart		Yes	No
	Titles reflect the essence of data included in chart/figure	Yes	Partially	Not at all
	Key/legend includes a clear description of variables	Yes	Partially	Not at all
	No duplication of data by presenting both a table & a chart		Yes	No
06.	Has provided answers to the research objectives	Yes	Partially	Not at all
07.	Well structured and unfolds a clear sequence	Yes	Partially	Not at all
08.	**Allocated marks**=			

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H. Discussion	**Total Marks Assigned = 70**	**Minimum Mark Required (50%) = 35**		
01.	Commencing paragraph summarizes research findings	Yes	Partially	Not at all
02.	Quality of data discussed adequately:			
	Validity: Judgmental validity	Yes	Partially	Not at all
	Validity: Construct/Criterion validity as per relevance	Yes	Partially	Not at all
	Reliability: Intra-class/ Internal consistency as per relevance	Yes	Partially	Not at all
	Reliability: Inter/Intra rater reliability	Yes	Partially	Not at all
	Reliability: Test Re-Test	Yes	Partially	Not at all
	Reliability: Other relevant test	Yes	Partially	Not at all
03.	Refers to both positive & negative results	Yes	Partially	Not at all
04.	Provides scientifically plausible explanations to the findings of the study results	Yes	Partially	Not at all
05.	Compared and contrasted results adequately with similar studies reported	Yes	Partially	Not at all
06.	Research methods chosen have been justified adequately (study design, sample size, sampling, tools, data collection etc.)	Yes	Partially	Not at all
07.	Control for confounding effect described adequately			
08.	Statistical analysis justified as per relevance	Yes	Partially	Not at all
09.	Analysed individual effect measures/outcomes and discussed In terms of strength of association, precision & measures to Improve	Yes	Partially	Not at all
10.	Bias identified by type (eg: selection/information bias)	Yes	Partially	Not at all
11.	Bias described (eg: how non response leads to selection bias)	Yes	Partially	Not at all
12.	Described type of bias correctly & clearly	Yes	Partially	Not at all
13.	Described measures taken to minimize relevant bias	Yes	Partially	Not at all
14.	Limitations described in terms of bias & other relevant factors	Yes	Partially	Not at all
15.	Internal validity: described in terms of controlling bias	Yes	Partially	Not at all
16.	Refers to strengths of the study (optional)	Yes	Partially	Not at all
17.	Describes the public health relevance of findings	Yes	Partially	Not at all
18.	Describes the implications of the findings if any	Yes	Partially	Not at all
19.	Described types of bias correctly & clearly	Yes	Partially	Not at all
20.	Described measures taken to minimize relevant bias	Yes	Partially	Not at all
21.	Recommendations are discussed in terms of practicality	Yes	Partially	Not at all
22.	Refers to literature in terms of recommendations proposed	Yes	No	Not applicable
23.	Explicitly stated the criteria used when making critical judgments (when a critical review of what is reported in the literature is included)	Yes	Partially	Not at all
24.	literature is included)	Yes	Partially	Not at all
25.	In text citations included (Harvard/APA style, 6th Edition)	Yes	Partially	Not at all
26.	**Allocated marks**=			

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I. Conclusions	**Total Marks Assigned = 10**	**Minimum Mark Required (50%)= 5**		
1.	Research findings described in summary form	Yes	Partially	Not at all
2.	Internal validity mentioned	Yes	Partially	Not at all
3.	External validity/generalizability mentioned	Yes	Partially	Not at all
4.	**Allocated marks =**			

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J. Recommendations		Total Marks Assigned = 20	Minimum Mark Required (50%) = 10		
1.	Arises from study findings		Yes	Partially	Not at all
2.	Described each recommendation adequately		Yes	Partially	Not at all
3.	Discussed each recommendation with advantages and practical implications		Yes	Partially	Not at all
4.	Proposed future research		Yes	Partially	Not at all
5.	**Allocated marks**=				

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K. Reference List		Total Marks Assigned = 20	Minimum Mark Required (50%) = 10		
1.	Conforms to Harvard system/APA style (6th Edition)				
	Organized according to alphabetical order		Yes	No	
	The source material (journals, books etc) has been *Italicized*		Yes/All	Yes/Some	None
	References are indented		Yes/All	Yes/Some	None
2.	**Allocated marks** =				

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L. Overall Presentation	**Marks Assigned = 20**	**Minimum Mark Required = 10**		
01.	Front matter (eg: Table of contents etc.) satisfactory	Yes	Partially	Not at all
02.	Reader friendly – easy location of information	Yes	Partially	Not at all
03.	No duplication/repetition of text	Yes	Partially	Not at all
04.	No grammatical mistakes	Yes	Partially	Not at all
05.	No spellings mistakes	Yes	Partially	Not at all
06.	There is a logical and rational link between the component parts of the thesis	Yes	Partially	Not at all
07.	Annexes are numbered according to sequence the annexes appear in text		Yes	No
08.	Tables are numbered according to sequence the tables appear in text		Yes	No
09.	Charts are numbered according to sequence the charts appear in text		Yes	No
11.	**Allocated marks**=			

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Overall Comments:

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Final Marks

Component		Marks			
		Total Mark Per Section	Minimum To Pass Each Section (50%)	Mark Assigned	Each Section Pass/Fail Status
A.	**Title**	10	-		
B.	**Abstract**	30	15		
C.	**Introduction**	30	15		
D.	**Objectives**	20	10		
E.	**Literature Review**	30	15		
F.	**Methods**	70	35		
G.	**Results**	70	35		
H.	**Discussion**	70	35		
I.	**Conclusions**	10	05		
J.	**Recommendations**	20	10		
K.	**Reference List**	20	10		
L.	**Overall**	20	10		
Total		400	195		
Total expressed as percentage		100%	48.8%		
Total aggregate required to pass = ≥50%					

N	Decision	Overall Total	Individual Sections	
			Section	Marks Obtained
1.	**Pass**	≥50%	B - L	≥50%
2.	**Resubmission in six weeks**	≥50%	B- K L	≥50% <50%
3.	**Resubmission in three months**	≥50%	C,D,F - H ≥Two of other sections	≥50% <50%
4.	**Resubmission in one year/ fresh evaluation**	< 50%	F – H	<50%
5.	**Fail – Submit a thesis on new topic**	<30%	B - L	<50%

Final Decision:

1.	**Pass**	
2.	**Resubmission with revisions in six weeks**	
3.	**Resubmission with revisions in three months**	
4.	**Rewrite the thesis and submit for fresh evaluation**	
5.	**Fail - Submit a thesis on a new topic**	

Please Note:
Individual examiner is expected to make a separate detailed document including all the corrections that need to be attended to by the candidate in addition to completion of this "Examiner's Report: Thesis Evaluation Form".

Signature of examiner:…….

Name of Examiner:……..

Date: ……/……../……

Annex XXI
Monitoring and Evaluation of a Public Health Programme

Goal

To produce a consultant in Community Dentistry with knowledge and skills on monitoring and evaluation of public health programmes and ability to communicate required changes if any

Objectives

To be able to:

1. describe the processes available within the national program for monitoring public health programmes
2. describe processes available/planned within an identified national public health programmes for evaluation
3. develop/analyse the available information in the results framework for monitoring and evaluation of an identified public health programme*

*Objective No.3:

If a results framework does not exist currently, construct a part of the framework using one key impact/outcome area. The latter should be discussed and verified for relevance with the CCP in the National program

Activities to Be Performed By Trainee

Monitoring

1. Using available results framework or based on the part of the results framework constructed (as instructed above), identify practices for monitoring that currently exist.
2. Discuss strengths and weaknesses in the current methods for monitoring.
3. Observe one such practice (eg. review meeting to monitor) and document usefulness in terms of monitoring resource utilization and achievement of program outputs

Evaluation:

1. Document ongoing efforts for program evaluation.
2. Critique how this corresponds to the existing result framework or what is constructed by you.

Monitoring and Evaluation:

1. Using objective measurements describe how the program is currently monitored and evaluated
2. Describe how your proposal for improving the results framework could be operationalized.
3. Analyse the organization ability in terms of personnel, finances and other resources available to monitor and evaluate the program.

Your assessment should include indicators, data sources, methods of collecting and reviewing. In the case of improvements suggested the feasibility for these should be discussed.

Assessment:

A case report should be developed addressing all the areas described above and compiled in the portfolio for assessment.

Annex XXII
Post MD - Public Health Management Training Programme

Component II - Component II - Public Health Management Training Programme (Second six months of Local SR period

Learning Outcomes:

By the end of this programme, a trainee should be able to:

1. outline the structure, organization and functions of the units that deliver Public Health (PH) programmes
2. enumerate the organizations with whom the units are collaborating and discuss the collaborative strategies between the units and the organizations
3. develop basic skills to manage a PH programme
4. perform a SWOT analysis of the functionality of these units and recommend improvements

Component II/A

Seminar to update knowledge on current strategies practiced by the Public Health Institutions:

A seminar will be organized during the second half of the SR period

Duration - one week (5 working days)

An update on the following Public Health programmes will be done with 4 sessions (each session 1.5 hrs) per day (4×5=20 institutions will be covered)

List of Public Health Institutions selected for the seminar during the SR period:

Institution		**Duration**
1.	Epidemiological Unit	1.5 hrs
2.	Family Health Bureau	1.5 hrs
3.	Health Education Bureau	1.5 hrs
4.	Anti Malaria Campaign	1.5 hrs
5.	Public Health Veterinary Service	1.5 hrs
6.	National Program for Tuberculosis Control and Chest Diseases	1.5 hrs
7.	Dengue Control Unit, Narahenpita	1.5 hrs
8.	Anti Leprosy Campaign	1.5 hrs
9.	Anti Filariasis Campaign	1.5 hrs
10.	National STD/AIDS Control Programme	1.5 hrs
11.	Non-Communicable Disease Unit, Ministry of Health	1.5 hrs
12.	Mental Health Unit, Ministry of Health	1.5 hrs
13.	National Cancer Control Programme	1.5 hrs
14.	Environment and Occupational Health Unit, Ministry of Health	1.5 hrs
15.	Management Development and Planning Unit, Ministry of Health	1.5 hrs
16.	Directorate for EDD, Ministry of Health	1.5 hrs
17.	Disaster Management Unit, Ministry of Health	1.5 hrs
18.	Drug Regulatory Authority	1.5 hrs
19.	Medical Supplies Division	1.5 hrs
20.	Directorate for Healthcare Quality and safety	1.5 hrs
Total		**30 hrs**

Component II/B

Once the seminar is over the trainees will visit the following public health institutions to gain knowledge on how these institutions function and address the objectives specific to the individual institution listed.

List of Public Health Institutions selected for field visits during the SR period:

No.	Institution
	Non Communicable Disease Unit, Ministry of Health -a visit to a healthy lifestyle centre
	Mental Health Unit, Ministry of Health-field visit to a Community Mental Health Programme
	Environment and Occupational Health Unit, Ministry of Health - field visit
	Non Communicable Disease Unit, Ministry of Health - visit to a healthy lifestyle centre
	Disaster Management Unit, Ministry of Health - disaster simulation
	Directorate for Quarantine - field visit to BIA, and Colombo Harbour focusing a Public Health Emergencies of international Concern (PHEIC)
	Medical Research Institute
	National Institute for Occupational Health & safety (NIOSH)
	Directorate for Healthcare Quality and safety -visit to a hospital
	National Cancer Control Programme - field visit
	Child protection Authority
	Family Planning Association -visit to a field project
	Sarvodhaya -visit to a field project
	UN agencies-WHO, UNICEF, UNFPA, WB, UNAIDS, IOM
	UN agencies-WHO, UNICEF, UNFPA, WB, UNAIDS, IOM
Total	

Method of Evaluation

1. Reflective logs on 5 selected institutions (of student's choice)

Learning Objectives for Individual Public Health Institutions

1. Epidemiological Unit

Specific Objectives

To be able to:

- **a** describe the organizational structure of the Epidemiology Unit, functions and responsibilities of the Chief Epidemiologist and Consultant Epidemiologists.
- **b** discuss the trend of incidence of communicable diseases and the role of the Epidemiology Unit in the control of communicable diseases.
- **c** describe the Disease Surveillance system, National Immunization programme and Adverse Events Following Immunization (AEFI) surveillance system in Sri Lanka.
- **d** describe Special Programs (ie. Diarrheal diseases, Japanese Encephalitis, Dengue, Rubella/Congenital Rubella Syndrome (CRS) , Polio/Acute Flaccid Paralysis (AFP), Leptospirosis, Influenza) implemented by the Epidemiological Unit.
- **e** critically review the weekly epidemiological reports and quarterly epidemiological bulletin.
- **f** understand the practical aspects of investigation of outbreaks, emerging diseases and the need for rapid response.
- **g** describe the role of the Epidemiology Unit in implementing the International Health Regulations (IHR 2005).
- **h** describe the on-going research projects.
- **i** understand the linkages with other agencies within and outside the Ministry of Health including donor agencies such as WHO.

2. Family Health Bureau

Specific Objectives

a. To be able to describe the organizational structure of the Family Health Bureau.
b. To be able to understand the components, objectives, national strategic plan /strategies and activities of the Family Health Programme.
c. To be able to describe functions and responsibilities of each unit within the Family Health Bureau.
d. To be able to describe the process and methods involved in the monitoring and evaluation of the Family Health Programme.
e. To be able to discuss the emerging Reproductive Health issues in Sri Lanka.
f. To be able to understand the linkages with other agencies providing reproductive health services within and outside the Ministry of Health including donor agencies such as WHO, UNFPA, local NGOs.
g. To be able to critically review the Health Information System of the Family Health Programme.

3. Health Education Bureau

Specific Objectives

1. To be able to describe the vision, mission, objectives and national strategic plan /strategies and activities of the Health Education Bureau.
2. To be able to describe the organizational structure of the Health Education Bureau.
3. To be able to understand the process of communication and behavior centered communications, health promotion, IEC material development, community empowerment and mobilization.
4. To be able to describe the special projects and the process of monitoring and evaluation of those projects.
5. To be able to understand the linkages with other agencies within and outside the Ministry of Health including donor agencies.

4. Anti-Malaria Campaign

Specific Objectives

1. To be able to describe the organizational structure of the Anti Malaria Campaign.
2. To be able to describe functions and responsibilities of the Directorate (line Ministry) and the Regional Malaria Office.
3. To be able to describe the link between a Regional Malaria Office and the Provincial Health System.
4. To be able to discuss the trend in morbidity and mortality of Malaria in Sri Lanka and the current situation.
5. To be able to discuss the national strategic plan /strategies and the activities carried out by the Campaign to eliminate Malaria from Sri Lanka.
6. To be able to discuss the emerging issues in relation to elimination of Malaria from Sri Lanka.
7. To be able to understand the linkages with other agencies within and outside the Ministry of Health.
8. To be aware of sources of funding for the Anti Malaria Campaign.

5. Public Health Veterinary Service

Specific Objectives

1. To be able to describe the organizational structure of the Public Health Veterinary Service.
2. To be able to describe functions and responsibilities of the Directorate (line Ministry) and the District Rabies Control Unit in control of human rabies.
3. To be able to describe the link between a District Rabies Control Unit and the Provincial Health System.
4. To be able to discuss the trend in incidence of Human Rabies deaths, dog immunization, dog sterilization and post exposure vaccinations in Sri Lanka and the current situation.
5. To be able to discuss the national strategic plan/strategies and the activities carried out by the Public Health Veterinary Service vto eliminate human rabies from Sri Lanka.
6. To be able to discuss the emerging issues in relation to elimination of human rabies from Sri Lanka.
7. To be able to understand the linkages with other agencies within and outside the Ministry of Health.
8. To be aware of sources of funding for the Public Health Veterinary Service.

6. National Program for Tuberculosis Control and Chest Diseases (NPTCCD)

Specific Objectives

1. To be able to describe the organizational structure of the respiratory diseases control programme (NPTCCD)
2. To be able to describe functions and responsibilities of the Directorate (line Ministry) and the regional staff of NPTCCD
3. To be able to discuss the trend in incidence of tuberculosis in Sri Lanka and the current situation.
4. To be able to discuss the national strategic plan/strategies and the activities carried out by the NPTCCD to control tuberculosis.
5. To be able to discuss the emerging issues in relation to control of tuberculosis such as multi-drug resistance.

6. To be able to understand the linkages with other agencies within and outside the Ministry of Health.
7. To be aware of sources of funding for the NPTCCD.

7. Dengue Control Unit

Specific Objectives

1. To be able to describe the organizational structure, functions and responsibilities of the Dengue Control Unit.
2. To be able to describe the link between the Dengue Control Unit and the Provincial/Regional Health staff.
3. To be able to discuss the trend in morbidity and mortality of Dengue in Sri Lanka and the current situation.
4. To be able to discuss the national strategic plan/strategies and activities carried out by the Dengue Control Unit to prevent/control Dengue in Sri Lanka.
5. To be able to describe the process and methods involved in the monitoring and evaluation of the Dengue Control programme in Sri Lanka.
6. 2. To be able to discuss the emerging issues in relation to prevention/control of Dengue.
7. To be able to understand the linkages with other agencies within and outside the Ministry of Health.

8. Non Communicable Disease (NCD) Unit

Specific Objectives

1. To be able to describe the organizational structure of the NCD Unit.
2. To be able to describe the national strategic plan/functions and responsibilities of the Directorate (line Ministry) and the regional staff (MO/NCD).
3. To be able to describe the link between MO/NCD and the Provincial/Regional Health staff (preventive and curative).
4. To be able to discuss the trend in morbidity and mortality of chronic NCDs in Sri Lanka and the current situation.
5. To be able to discuss the national strategic plan/strategies and the activities carried out by the NCD Unit for the prevention and control of chronic NCDs in Sri Lanka.
6. To be able to describe the process and methods involved in the monitoring and evaluation of the NCD prevention and control programme in Sri Lanka.
7. To be able to understand the linkages with other agencies within and outside the Ministry of Health.
8. To be aware of sources of funding for the NCD Unit and how to prioritize the Activities for the available funds..

9. Mental Health Unit

Specific Objectives

1. To be able to describe the organizational structure of the Mental Health Unit.
2. To be able to describe the national strategic plan/functions and responsibilities of the Directorate (line Ministry) and the regional staff (MH Focal Point).
3. To be able to describe the link between MH Focal Point and the Provincial/Regional Health Staff (preventive and curative-District Psychiatrists).
4. To be able to discuss the trend in morbidity and mortality of mental illness in Sri Lanka and the current situation.
5. To be able to discuss the national strategic plan/strategies and the activities carried out by the Mental Health Unit for the prevention and control of mental illness in Sri Lanka.
6. To be able to describe the process and methods involved in the monitoring and evaluation of the Mental Health programme in Sri Lanka.
7. To be able to understand the linkages with other agencies within and outside the Ministry of Health.
8. To be aware of sources of funding for the Mental Health Unit.

10. Environment and Occupational Health Unit

Specific Objectives

1. To be able to describe the organizational structure of the Environment and Occupational Health Unit including the Food Control Unit.
2. To be able to describe the national strategic plan/functions and responsibilities of the Environment and Occupational Health Unit including the Food Control Unit.
3. To be able to discuss major Environment and Occupational Health problems in Sri Lanka.
4. To be able to discuss strategies and the activities carried out by the Environment and Occupational Health Unit and the Food Control Unit.
5. To be able to discuss the challenges in implementing the above activities.
6. To be able to understand the linkages with other agencies within and outside the Ministry of Health.
7. To be aware of sources of funding for the Environment and Occupational Health Unit.

11. Management Development and Planning Unit

Specific Objectives

1. To be able to describe the organizational structure of the Management Development and Planning Unit.
2. To be able to describe functions and responsibilities of Policy Analysis Unit and the Organization Development Unit in developing the health care delivery system in Sri Lanka.
3. To be able to describe functions and responsibilities of the Financial Planning Unit.
4. To be able to describe the planning process for the annual action plans and medium term strategic plans.
5. To be able to discuss the challenges faced by each unit in implementing the above activities.
6. To be able to understand the linkages with other agencies within and outside the Ministry of Health.
7. To be aware of sources of funding for the Management Development and Planning Unit.

12. National STD/AIDS Control Programme (NSACP)

Specific Objectives

1. To be able to describe the organizational structure of the NSACP.
2. To be able to describe the functions and responsibilities of the units within the Programme in relation to implementing the national strategic plan successfully.
3. To be able to describe the functions and responsibilities of the Public Health staff (MOH, PHM, PHI) for the national response.
4. To be able to discuss the current epidemiology of HIV/AIDS & STD in Sri Lanka.
5. To be able to understand the existing interventions for the high risk groups, the importance of ante natal VDRL testing & HIV testing, HIV testing in prisons, PMTCT and concept of counseling & importance of confidentiality etc.
6. To be able to critically discuss the surveillance systems (sero-surveillance & behavioral surveillance) and mapping of high risk target groups.
7. To be able to describe the management of a STD clinic including maintenance of registers.
8. To be able to understand the Partnership with other agencies within and outside the Ministry of Health and the national response.
9. To be aware of sources of funding for the NSACP.
10. To be able to understand the contract tracing system.
11. Visit and understand the situation of sex worker Drop-in Center.

12 Directorate for Youth, Elderly and Disabled (YED)

Specific Objectives

1. To be able to describe the organizational structure of the Directorate for YEDD.
2. To be able to discuss the national strategic plan /strategies and the activities carried out by the Directorate for YEDD.
3. To be able to describe the role of the Preventive Health Staff (MOH, PHM, PHI) in implementing the strategies and the activities of programme.
4. To be able to understand the linkages with other agencies within and outside the Ministry of Health.
5. To be aware of sources of funding for the Directorate for YEDD.

13. Disaster Management Unit

Specific Objectives

1. To be able to describe the roles and functions of the Disaster Preparedness and Response Division (DPRD) with emphasis on health sector disaster preparedness and response.
2. To be able to describe the organizational structure and the coordination mechanism within the health sector in disaster preparedness and response.
3. To be able to describe the disaster management system of the country and the roles and responsibilities of the DPRD within the National Disaster Management Framework.
4. To be able to discuss the importance of inter-sector coordination and partnerships with other government and non-governmental organizations in disaster management.
5. To be able to discuss the existing gaps and probable ways to improve the current disaster management framework within the health sector.

14. Cosmetics, Devices & Drugs Regulatory Authority (CDDRA) and Medical Supplies Division

Specific Objectives

1. To be able to describe the organizational structure of the Drug Regulatory Authority.
2. To be able to describe functions and responsibilities of the Drug Regulatory Authority.
3. To be able to understand the linkages with other agencies within and outside the Ministry of Health.
4. To be able to describe the organizational structure of the Medical Supplies Division.
5. To be able to describe functions and responsibilities of the Directorate (line Ministry) and the regional staff.
6. To be able to describe the process and methods involved in monitoring the Medical Supplies in Sri Lanka.
7. To be able to understand the linkages with other agencies within and outside the Ministry of Health.

15. Directorate for Quarantine

Specific Objectives

1. To be able to describe the organizational structure, functions and responsibilities of the Directorate for Quarantine.
2. To be able to describe functions and responsibilities of the Port Health staff (MO, PHI at the Sea Ports and Air Ports).
3. To be able to discuss the challenges for the Directorate in implementing the International Health Regulations (IHR 2005).
4. To be able to describe the role of the Directorate in a situation of public health emergency of international concern (PHEIC).
5. To be able to describe the coordinating mechanism of the Directorate with the Epidemiology Unit.
6. To be able to understand the linkages with other agencies within and outside the Ministry of Health.
7. To be aware of sources of funding for the Directorate for Quarantine.

16. Medical Research Institute

Specific Objectives

1. To be able to describe the organizational structure of the Medical Research Institute.
2. To be able to describe activities carried out by each unit.
3. To be able to describe the surveillance system for Avian Influenza and, Poliomyelitis.
4. To be able to understand the activities of the Department of Bacteriology on food and water sampling techniques by observation.
5. To be able to understand the linkages with other agencies within and outside the Ministry of Health.
6. To be aware of sources of funding for Medical Research Institute.

17. National Institute for Occupational Health & Safety (NIOSH)

Specific Objectives

1. To be able to describe the organizational structure of the NIOSH.
2. To be able to describe functions and responsibilities of the NIOSH.
3. To be able to understand the linkages of the NIOSH with other governmental and non-governmental agencies.

18. Directorate for Healthcare & Quality

Specific Objectives

1. To be able to describe the organizational structure of the Directorate for Healthcare & Quality.
2. To be able to discuss strategies and the activities carried out by the Directorate for improving Healthcare & Quality.
3. To be able to describe the process and methods involved in the monitoring and evaluation of Healthcare & Quality in the Ministry of Health.
4. To be able to understand the linkages with other agencies within and outside the Ministry of Health.

19. National Cancer Control Programme

Specific Objectives

1. To be able to describe the organizational structure of the National Cancer Control Programme.
2. To be able to discuss the trend in incidence, mortality and survival of cancer in Sri Lanka and the current situation.
3. To be able to discuss strategies and the activities carried out for the primary and secondary prevention of cancer in Sri Lanka.
4. To be able to describe the rehabilitation, survivorship and palliative care for cancer patients in Sri Lanka.
5. To be able to discuss the existing health infrastructure and human resources for prevention, comprehensive diagnosis and management of cancer in Sri Lanka.
6. To be able to describe special projects initiated by the National Cancer Control Programme and the present status of their implementation.
7. To be able to understand the linkages with other agencies within and outside the Ministry of Health.
8. To be aware of sources of funding for the National Cancer Control Programme.
9. To be able to discuss the on-going research and research priorities in relation to cancer in Sri Lanka.

20. Child Protection Authority

Specific Objectives

1. To be able to describe the organizational structure of the Child Protection Authority.
2. To be able to describe functions and responsibilities of the Child Protection Authority.
3. To be able to discuss the mechanisms adopted by the Child Protection Authority for the promotion of children's rights and prevention of child abuse.
4. To be able to understand the linkages of the Child Protection Authority with other agencies - governmental and non-governmental.
5. To be able to discuss the challenges faced in implementing their activities including human resources, infrastructure.

21. Family Planning Association

Specific Objectives

1. To be able to describe the management structure, different programmes and the overall services provided by the Family Planning Association.
2. To be able to critically review the services provided by the Family Planning Association in the context of its intended objectives and the concept of reproductive health.
3. To be able to understand the interventions carried out for high risk target groups for HIV/AIDS prevention
4. To be able to understand the social marketing and distribution system of family planning
5. To be able to critically discuss the challenges faced by the Family Planning Association in providing their service.
6. To be able to understand the linkages of the Family Planning Association with other agencies - governmental and non-governmental.

22. Sarvodhaya

Specific Objectives

1. To be able to describe the management structure, different programmes and the overall services provided by Sarvodaya.
2. To be able to critically review the services provided by Sarvodaya in the context of its intended objectives and the concept of community development.
3. To be able to make suggestions for the improvement/expansion of their activities.
4. To be able to critically discuss the challenges faced by Sarvodaya in providing their service.
5. To be able to understand the linkages of Sarvodaya with other agencies - governmental and non-governmental.

23. UN agencies-WHO, UNICEF, UNFPA, WB, UNAIDS

Specific Objectives

1. To be able to describe the mandate of each UN agency in Sri Lanka.
2. To be able to describe the contribution made by each UN agency to the Ministry of Health.
3. To be able to understand the linkages of each UN agency with other agencies - governmental and non-governmental.
4. To be able to discuss strengths and challenges faced by each agency in carrying out their work in Sri Lanka.

Annex XXIII
Guideline for development of Overseas Training Objectives and Training Program

Section A: General Guidelines

The guideline is to assist those of you who are planning the overseas/local (under special circumstances) training as part of Post-MD training in Community dentistry

1. The training objectives need prior approval from the BoS in Community dentistry. The objectives need to be clearly discussed and a negotiated plan of activities is to be developed with the prospective overseas supervisor.

2. Your overseas supervisor should be consulted in developing the overseas program matrix where specific activities that will lead you to accomplish the objectives need to be stated clearly.
   The "Template" for development of overseas training objectives and the training program should be used for this purpose (Refer Section C).

3. The overseas training is intended to add value to your knowledge and skills in public health practice and will enable you to learn through the understanding of its practical applications in a developed country. Such experiences can range from research, to review of literature critically to gain an insight into how public health practices evolved, development of public health tools, first-hand experience in on going public health programs, monitoring and evaluation of programs, formal acquisition of knowledge through different methods such as participation in workshops and seminars and teaching and sharing experiences etc. This exposure should also enable you to further your abilities in public health oriented research leading to publications.

4. You should also gain competencies in sharing your own research with others and also participate through presentations and discussions in order to promote mutual understanding of public health and its application in different settings amongst other fellows of the learning institute.

5. You should visit other related institutes that are considered as important by your supervisor that will widen your understanding of the public health issues, ways of addressing, the policy context, advocacy challenges' community involvement and participation and clinical applications if relevant.
   Participation and learning through ongoing research and related activities / projects of the institute will be advantageous, where you can also contribute with your knowledge and skills.

6. You are expected to submit the overseas training objectives with the overseas program (using the template document given), together with the profile of the proposed training institute and CV of the overseas supervisor.

Section B: Development of Overseas Learning Objectives

The trainee is expected to apply knowledge gained in writing research objectives when developing overseas learning objectives and ensure that, as far as is feasible "action verbs" are used.

Section C: Overseas Training Program Matrix

This matrix is for the trainee to discuss with the overseas supervisor and develop a suitable program indicating activities, resulting outputs and places that would be visited other than the training institute to achieve the stated objectives.

Specific Objective		Activities To Achieve Objectives	Expected Output/s *	Supervisor	Other Supervisors/Researchers	Other Institutions Visited
1.						
2.						
3.						
4.						

*** Outputs**

1. In the event of having more than one output for a given objective, all such outputs, should be included

2. Should be demonstrable/verifiable

Eg:

a. written reports on specific topics
b. critique or review of a paper
c. journal article/ evidence of submission for publication
d. Power point presentation/s
e. development of research tool/s
f. certificates of attendance
g. reflective accounts on knowledge and skills gained with relevance to the objectives

Annex XXIV
Guidelines for preparation of report on overseas training

The guidelines are for the preparation of the report for submission to the BoS (BoS) in Community Dentistry after the completion of overseas training:

Report
The report should be based on a reflection of how the BoS approved overseas training objectives were achieved.. It should be organized according to the following Sections:

A. A brief introduction to the type of training selected with reference to trainee's research interests (probably with reference to MSc and MD research projects) and the future career prospects

B. Final training objectives that were submitted and approved by the BoS

C. The Overseas Program Matrix (OPM) approved by the BoS:
The OPM developed in consultation with the overseas supervisor should be the reference for the BOS in reviewing the report. Evidence to show that the trainee has achieved the objectives and carried out the activities mentioned in the OPM shall be the main thrust of the document where the trainee is expected to link activities, places visited, persons met, output , etc and write reflecting on the experience gained and its value to the trainee and Sri Lanka.

D. A brief overview of the training institute

E. A reflection on how objectives were achieved –
The evidence to show how each objective has been achieved including a description of how the knowledge and experience gained will be useful in planning /executing research and public health programs in Sri Lanka.

F. Additional to academic activities and exposure gained in relevance to the field of Community dentistry (which do not come under the purview of the stated learning objectives)
   a. Learning of new techniques
   b. Visits paid to relevant to public health institutions.

G. Networking and professional contacts established

H. Specific mention of experiences that require/necessitated further recommendations to the BOS which may include comments on the stipend, travel arrangements, accommodation etc.

I. List of Annexes
   a. Bio-data of Supervisor/s
   b. Descriptions related to the Institution
   c. Published journal articles
   d. Other types of publications
   e. Any other relevant documents

Format of the Report
The report should be type written on A4 paper and spiral bound. The word count should not exceed 3000 words (excluding annexed documents

Submission
Four copies should be submitted to the Director/ PGIM with a covering letter within one month of arrival

Evaluation
The overseas training report will be evaluated by the Subcommittee nominated by the BoS for certification of satisfactory completion of the overseas training component of the Post MD training, of the Community dentistry training programme.

Annex XXV
Pre-Board Certification Assessment Guidelines

In 2009, the PGIM decided that prior to Board Certification as a specialist all trainees should go through a Pre-Board Certification Assessment (PBCA), which would be equivalent to the Specialty Certification Examinations in UK and other countries. This requirement was implemented in 2011 through PGIM Director's Memo No: AC/03/2011 dated 16.06.2011

After consideration of many prospectuses for speciality and sub-speciality training, which have been submitted for PGIM approval in the last few years, the AAAEDC recommends that the PGIM considers revision of the format of PBCA, based on adoption of the following broad outcomes for specialist training, across all specialities and sub-specialities:

1. Subject expertise
2. Teaching
3. Research and audit
4. Ethics and medico-legal issues
5. Information technology
6. Life-long learning

Assessment tool

The PBCA should be based on assessment of a portfolio maintained by the trainee during the period of post-MD training. The contents of the portfolio should encompass all of the above learning outcomes and contain evidence of achievement of these outcomes by the trainee. Although some of these may have been evaluated before the MD examination, the portfolio assessed at the PBCA should mainly contain evidence of achievements during post-MD training, either locally or overseas. All sections need not be of equal weight – for example, the section on Subject Expertise may be much more detailed than the others.

Contents of portfolio

The contents of the portfolio should be divided into sections according to the outcomes stated above, followed by a final section that contains evidence of reflective practice.

The following list sets out the type of evidence that may be relevant to each section. The details should be determined by each Board.

1. Subject expertise:
    - progress reports from supervisors (essential, should be according to prescribed format)
    - Supervisor feedback on communication skills
    - log of procedures carried out
    - results of any work-place assessments conducted
    - In the case of sub-specialities, this section must include evidence that the trainee has acquired the essential knowledge, skills and competencies related to the sub-speciality, identified by the Speciality Board, and monitored with regular assessments throughout the period of post-MD training, e.g. mini-CEX, Case-Based Discussions, Direct Observation of Practical Skills
- Teaching
    - undergraduates
    - postgraduates
    - ancillary health staff

- Research and Audit relevant to speciality
  - Dissertations / theses
  - Research papers published or accepted for publication
  - abstracts of presentations
  - Clinical audit
- Ethics and Medico-legal Issues
  1. Completed Professionalism Observation Forms (from integrated learning component of Professionalism Strand)
  2. Completed PTR forms during post-MD training
- Information Technology
  - Participation in training programmes / workshops
  - Evidence of searching for information and application of findings in practice

6. Life-long learning
   - Participation in conferences and meetings
- Reflective practice
  - narration of at least one learning event experienced by the trainee, in relation to each of the above outcomes, with reflection on what and how the trainee learned from this experience

The precise details of what is expected by the Board should be made known to trainees at commencement of post-MD training.

Portfolio assessment

The portfolio should be reviewed at least every 6 months by the local supervisor(s), with regular feedback to the trainee on how the portfolio may be improved. When the trainee is eligible for PBCA, 3 copies of the completed portfolio should be submitted to the PGIM Examinations Branch.

The PBCA should take the form of a final, summative assessment of the trainee's portfolio, carried out by 2 (or 3) independent examiners appointed by the relevant Board of Study or Speciality Board and approved by the Senate of the University of Colombo. The 3rd examiner should be from outside the discipline to improve objectivity.

The trainee should be called for an oral examination, during which he/she will be questioned on the portfolio. The trainee may be required to start with a presentation of 10 – 15 minutes, on the post-MD training if the Board deems it appropriate.

The overall assessment should be based on each of the main sections, which should be assessed as satisfactory or not on an overall basis. It is left to the Boards to decide whether to use a rating scale.

If the examiners are of the view that the trainee's performance is unsatisfactory, and the trainee should not be given immediate Board Certification, the examiners must provide the trainee with written feedback on how the portfolio should be improved in order to reach the required standard. The trainee should then re-submit the portfolio within a specified period of time (up to 3 – 6 months), and face another oral examination based on the re-submitted portfolio. If the trainee is successful at this 2nd oral examination, the date of Board Certification should be backdated as done routinely. If unsuccessful again, the date of Board Certification will be the date of passing the subsequent PBCA following further training for a minimum period of six months in a unit selected by the Board of Study.