# Scope of Work

# Mentor-Mentee Program

# Development of a Framework to Guide NCD Risk Reduction Training in Undergraduate Nursing Curriculum

# Introduction

In India, nearly 5.8 million people die from non-communicable diseases (NCDs)every year.1Cardiovascular diseases, respiratory diseases, and diabetes mellitus together accounted for a substantial proportion of total deaths in India in 2016 with considerable cross-state variation. In absolute terms, cardiovascular diseases, respiratory diseases, and diabetes kill around 4 million Indians annually (as of 2016).Most of these deaths are premature, occurring among Indians aged 30–70 years. The major NCDs share four behavioural risk factors unhealthy diet, lack of physical activity, and the use of tobacco and alcohol. Educating people on risk reduction strategies and being able to screen them for early identification of disease will immensely help to prevent and control the rising burden of NCDs.

**Background**

One of the four strategic action areas identified in the National Multisectoral Action Plan for Prevention and Control of Common NCDs (2017-2022) is to strengthen capacity of human resources to provide NCD related services.2 The current education of healthcare professionals does not prepare them adequately for NCD risk reduction strategies.3,4 The limited research in this area has so far focused on examining medical curriculum for its effectiveness in training MBBS students on NCD risk identification, education, and screening.

Nurses and midwives who account for 38% of India’s health workforce are well placed to reduce risk factors associated with NCDs byimplementing policies on smoke-free environments and smoking cessation interventions, promoting physical activity, providing dietary education and guidance, screening for high blood glucose and blood pressure and preventing and treating the harmful use of alcohol.5The community health officers (CHO’s) heading the health and wellness centres under the Ayushman Bharat program are also well suited for this role. Currently almost 80% of the CHOs working at Health and wellness centres are nurses. However there are no studies that examine the effectiveness of nursing curriculum for training nurses on NCD risk reduction strategies.

**Need for the study**

The Indian nursing council has recently revised the Basic B.Sc. Nursing syllabus and the implementation of the revised syllabus is to commence from September 2021. The Syllabus for General Nursing and Midwifery was last revised in 2015.In view of the need for nurses to be well trained in NCD risk reduction strategies, it will be useful to map the proposed B.Sc. Nursing syllabus and existing General nursing and midwifery syllabus for theoretical and practical training for NCD risk reduction for nursing graduates. The mapping will help determine the emphases and gaps, and strategies to bridge the gaps.

**Research questions**

1. What pathways of NCD Risk reduction training are incorporated in the existing General Nursing and Midwifery and revised B.Sc. Nursing syllabus prescribed by Indian nursing council?
2. How can the effectiveness of NCD risk reduction training in nursing education be reformed through reinforcement, redirection, and innovation?

**Objectives**

1. To synthesize an ontological framework to analyse teaching-learning activities related to NCD risk reduction training in nursing education curriculum.
2. To map the existing nursing curriculum for undergraduate courses for NCD risk reduction training content using the framework.
3. To determine the emphases and gaps and strategies to bridge the gaps.

# Framework

The concept of risk reduction training for NCDs in Nursing education may be visualized using the ontological framework in Figure 1. The common NCDs are listed in the last column, and the taxonomy of risks is shown in the second column from the right. The object of risk reduction training is to reduce the individual and combination of risks affecting the onset and progression of an NCD or a combination of them in a patient. The potential combinations of NCDs and risks are many and their effects on a patient may be complex.

The nursing curriculum should teach the student to identify the risks, intervene to reduce them, and involvement to manage them. The three types of training and the two types of education are listed in the first two columns of the framework. Further, the training in nursing should be incorporated in the curriculum, clinical training, and field practice. The three sub-types of education are shown in the framework under nursing education.

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| **Figure 1: Ontology of Risk Reduction Training for NCDs in Nursing Education** |

The framework encapsulates 3\*3\*15\*4 = 540 pathways for risk reduction training for NCDs in nursing education. Each pathway is a concatenation of an element from each column with the adjacent words/phrases. Three illustrative pathways are:

1. Identification training in curricular nursing education for managing biological-family history risk of diabetes mellitus.
2. Intervention training in clinical nursing education for managing behavioral-diet risk of cardiovascular diseases.
3. Involvement training in field nursing education for managing environmental-food additives risk of cancers.

The risk reduction training pathways for NCDs in nursing education must correspond to the evidence related to: (a) the importance of risk-NCD combinations, and (b) effectiveness of training-education combinations for a risk-NCD combination. For example, involvement training in field education may be most effective for managing environmental-indoor smoke risk of chronic respiratory diseases. The research will seek to determine: (a) the effective pathways to reinforce, (b) the ineffective pathways to redirect, and (c) the overlooked pathways to experiment and innovate.

# Research Method

First, we shall validate the framework with experts from nursing education and National NCD prevention and control program by conducting an online round table discussion.

Second, we shall map the current nursing curricula for undergraduate and diploma nursing programs prescribed by Indian Nursing Council onto the framework. The mapping will highlight the elements and themes in the framework that are heavily emphasised in the curricula, lightly emphasised, and not included.

Third, based on the analysis of the emphases and gaps we shall propose strategies to reinforce, redirect, and innovate.

**Timeline of the study**

The study duration as stipulated by IHSC is of 12 weeks. The timeline for project activities are planned as given below;

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| **Sl.**  **No.** | **Activity** | **Duration** |
| 1 | Validation of framework with subject experts | 2 weeks |
| 2 | Development of coding categories | 1 week |
| 3 | Coding of B.Sc. Nursing and Diploma Nursing syllabus | 3 weeks |
| 4 | Identification of themes and elements that are heavily emphasized, lightly emphasized and not included | 2 weeks |
| 7 | Preparation of first draft report | 3weeks |
| 8 | Preparation of final report | 1 week |
|  |  | **12 weeks** |

**References**

1. Global status report on noncommunicable diseases 2014.WHO
2. National Multisectoral Action Plan for Prevention and Control of Common NCDs (2017-2022)MOHF,GOI
3. Talwar K, Grover A, Thakur J. Role of medical education in preventing and control of noncommunicable diseases in India. *Indian J Community Med*. 2011; 36(Suppl 1):S63-S66. doi:10.4103/0970-0218.94711
4. Pati S, Sinha R, Mahapatra P. Non-communicable Disease Risk Reduction Teaching in India: A Curricular Landscape. *Front Public Health*. 2019;7:133. Published 2019 Jun 4. doi:10.3389/fpubh.2019.00133
5. Enhancing nursing and midwifery capacity to contribute to the prevention, treatment and management of noncommunicable diseases. Human resource for health observer. Issue no 12,2012.World Health Organisation

**Compensation**

The Consultancy fee for this engagement is USD 5,000(Inclusive of all indirect taxes). The payment will be disbursed in three instalments, in the proportions given below and the consultant should provide the invoice against each deliverable.

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| **Instalment** | **Percentage** | **Amount (USD)** | **Deliverable/ Milestone** |
| 1 | 25 | 1250 | On Signing Contract |
| 2 | 25 | 1250 | On submission of literature review and methodology (including stakeholders for a qualitative interview and analysis plan) approved by the Mentor, and |
| 3 | 50 | 2500 | On submission of the final deliverable approved and accepted by the Mentor & AHI Team. |

**Term**

This engagement shall commence upon execution of this Agreement. The Agreement shall continue in full force and is effect from **September 15, 2021** to **December 15, 2021** and is extendable based on the review of Consultant’s performance by the Foundation and mutual concurrence on revised terms of engagement.