



## **B. Main Section**

### **1. Overall goals of the project**

The overarching goal is to develop and disseminate an evidence-based healthcare professional training program tobacco use treatment in Viet Nam. We also aim to create capacity for wide spread dissemination by developing and testing a train-the-trainer (TTT) program and creating a network of professionals and organizations including the Ministry of Health (MOH), who are dedicated to advancing evidence-based treatment throughout the health care system. This proposal has strong potential for high impact as it brings together critical public health stakeholders in Viet Nam, including the Viet Nam Steering Committee on Smoking and Health (VINACOSH-the MOH's tobacco control program), Ha Noi University of Medicine and School of Public Health, the Institute of Social Medical Studies (ISMS), a well-established research institute in Viet Nam, and experts in tobacco dependence treatment from New York University School of Medicine (NYUSOM). The team is well positioned to carry out the proposed activities and to create a South East Asian regional training center in partnership with Global Bridges.

#### **Key Objectives**

- 1) Develop an evidence-based healthcare professional training curriculum for tobacco use treatment;
- 2) Develop and test a train-the-trainer (TTT) program in one province;
- 3) Disseminate the TTT program nation-wide via the Viet Nam Steering Committee on Smoking and Health, and Ministry of Health.

Meeting these objectives will create the infrastructure for Viet Nam to become an active participant in the Global Bridges Network and to promote Global Bridges' goal to create and mobilize networks of healthcare professionals and organizations dedicated to advancing evidence-based tobacco dependence treatment and advocating for effective tobacco control policy.

### **2. Technical Approach**

This proposal responds directly to the goals in Category 3 (creation of healthcare professional training programs in Low and/or Middle Income Countries), and is aligned with the goals of ISMS to expand their training and evaluation capacity to include additional tobacco-related projects. In addition, this proposed work would leverage a current collaboration between ISMS, the Viet Nam Ministry of Health and NYUSOM on a study recently funded by NIH with aims that are well aligned with the goals of Global Bridges and this RFA. This randomized controlled trial, conducted in 26 public health clinics, will compare the effectiveness of two highly replicable and scalable strategies for implementing evidence-based guidelines for the treatment of tobacco use in public health clinics in Viet Nam. The long-term goal of this research is to provide critical new knowledge to facilitate the widespread implementation, dissemination and sustained utilization of evidence-based tobacco use treatment strategies. The Global Bridges funding will provide resources to develop an evidence-based curriculum to integrate into this current grant and to support the larger goals of the MOH to disseminate, across the country, a tobacco use treatment training curriculum for health care professionals.

## **2.1. Current Assessment of need in target area**

Baseline data summary: Based on the Global Adult Tobacco Survey (GATS), almost half of adult men are current smokers, a smoking prevalence that is the second highest among South East Asian countries (SEAC). Although Viet Nam has a strong public health delivery system, according to the 2010 GATS, services to treat tobacco dependence are not readily available to smokers or integrated into the health care system. The dearth of effective tobacco cessation services in Viet Nam is not the result of a lack of commitment to tobacco control. The government ratified the FCTC in 2004, and has enacted an ambitious National Tobacco Control Action Plan (Decision No. 1315/QD-TTg) for the Implementation of the FCTC. Notably, the Action Plan calls for integrating cessation services into national health and education programs and builds on the MOH 2011 Annual Review which stated that strengthening the national infrastructure to ensure access to evidence-based cessation services is one of the MOH's highest priorities. In 2012 the Viet Nam National Assembly passed the first comprehensive tobacco control legislation that took effect in 2013. A key component of the law is the establishment of a dedicated Tobacco Control Fund to provide resources for tobacco cessation treatment and training health care providers to offer smoking cessation support. The law acknowledges gaps in training and the need to increase knowledge and expertise among health care workers in order to effectively implement tobacco control goals.

In 2012, Drs. Nguyen (applicant) and Shelley conducted the first study in Viet Nam to characterize current cessation intervention practices and examine behavioral and organizational factors that may influence adherence to recommended guidelines for treating tobacco use among health care providers working in commune health centers in Viet Nam (Shelley & Nguyen 2013). The study was conducted in Dong Anh district - a suburban district in Hanoi, the capital city of Viet Nam. The sample included 134 health care providers including physicians, nurses, physician assistants, pharmacists and midwives in 23 community health centers (CHCs). The survey measured demographic data (e.g., gender, age), smoking status, current practice patterns related to tobacco use treatment and assessed factors that may influence provider adherence to tobacco use treatment guidelines. The analysis showed that only 23% of providers reported routinely screening for tobacco use, 33% offered advice to quit to smokers, and less than 10% offer cessation assistance (i.e., counseling referral or medication). Over 90% agreed or strongly agreed that advice from a provider is one of the best ways to help people stop smoking but 60% were not aware of the best treatment to help patients stop smoking. Over 80% agreed or strongly agreed that offering smoking cessation treatment was part of their job and that their supervisor thinks that helping smokers is a priority. Though health care provider's attitudes towards delivering cessation interventions were generally positive, notably, 94% reported having never received training related to tobacco treatment and less than a third reported they had training needed to help smokers to quit. A lack of training was the most commonly reported barrier to offering cessation interventions (70%).

In order to increase provider-delivered cessation interventions, a program that offers training for physicians and allied health professionals working in commune health centers (CHCs) and hospitals is urgently needed. Our proposal is an important step towards closing the knowledge and practice gaps among providers, and will advance the goals of Viet Nam's new tobacco

control law and this Global Bridges RFP. The proposed program will build much needed capacity among provider organizations and the Ministries of Health to disseminate tobacco use treatment-related education and training programs throughout public health care delivery system in Viet Nam.

Primary audience(s) targeted for this intervention: The goal will be to disseminate this training curriculum throughout the Vietnamese health care system. However, we will start by developing a robust infrastructure for training the front line health care providers who work in CHCs. The Vietnamese health care system is hierarchically organized into four administrative levels: central, province, district and commune. At the central level is the Ministry of Health (MOH). Next is the provincial-level health system, which consists of Provincial Health Departments and Preventive Health Centers. At the district level, the District People's Committee administers district health centers and district-level hospitals. Within districts the commune health centers serve as the primary access point for public health and preventive care services in Viet Nam, each providing services for an average of 6000-10000 people in their surrounding community. There are 11,148 CHCs in Viet Nam. CHCs are staffed by 5-6 health workers including physicians, nurses, midwives and pharmacists. In addition, each CHC is supported by a network of 8-10 community health workers (CHWs).

Health care providers working in CHCs, the primary target audience for this intervention, will benefit by gaining knowledge to provide patients with accurate information about the health consequences of smoking, health benefits of quitting, and mechanism of nicotine dependence, and the practice skills to conduct an assessment of smokers readiness and past quit experience and provide evidence-based treatment (i.e. counseling and pharmacotherapy).

It is important to note that ISMS will manage and implement the Project in partnership with VINACOSH (Viet Nam's MOH Tobacco Control Program) to ensure the full support and coordination with the MOH during implementation. In addition, the training curriculum will be developed in close collaboration with VINACOSH/MOH to ensure that the program meets the training goals of the MOH and will be adopted and disseminating throughout the entire health care system. As noted previously, with implementation of the Tobacco Control Fund, the MOH now has resources to ramp up training of health care workers. What they are lacking is an evidence-based curriculum and model for dissemination throughout the entire health care system. Therefore, the MOH views itself as a key beneficiary of this funding opportunity.

## **2.2. Intervention Design and Methods:**

*The intervention design includes two steps: 1-Develop and implement a core training curriculum and; 2-Create capacity for dissemination by: a) developing a Train-the-trainer (TTT) model and b) implementing a web-based training program*

### *2.2.1. Develop and implement a core curriculum.*

We will address the training gaps described above by developing an evidence-based curriculum that is language and context concordant and is appropriate for a range of health care providers including physicians, nurses, and midwives. The core curriculum will be informed by the Association for the Treatment of Tobacco use and Dependence (ATTUD) and National Center for Smoking Cessation and Training (NCSCT) core competencies. The core curriculum will

be adapted based on consultation with an expert advisory group (advisors for our ongoing NIH-funded study), and interviews with providers (we will conduct about 15 in-depth interviews with health providers at commune health centers in 2 districts of Thai Nguyen province). The curriculum will also incorporate input from Global Bridges and their regional partners.

The core curriculum will include knowledge on tobacco use and dependence (e.g., health consequences of smoking, health benefits of quitting, and mechanism of nicotine dependence), tobacco control policy, tobacco treatment guidelines including assessment of tobacco use including alternative tobacco (e.g. Waterpipes), offering advice and counseling and prescribing pharmacotherapy. The training will include a combination of lectures and role playing opportunities to build skills among providers to screen for tobacco use and offer brief advice and counseling (see draft outline of curriculum below in section 2.2.2).

We will implement and evaluate this core curriculum among 100 health care providers working in CHCs from all 21 communes of one district in Thai Nguyen province. Four 2-day training courses will be conducted by Dr Nguyen (applicant), a master trainer at ISMS' training center, and training assistants. The District Health Director provides oversight for all CHC staff and operations. Therefore we will work with the District Health Director in the target district to schedule these trainings. We have extensive experience engaging District Directors in research, program evaluation and training.

Based on the evaluation and feedback (e.g., clarity, length of training, adequate time for role playing, increased knowledge and confidence) from these initial participants/trainers the core curriculum will be revised and finalized and the TTT model will be developed. We will remain flexible in terms of developing variations of the curriculum for different target groups (physicians vs. nurses and midwives) while maintaining the rigor of the program and a commitment to increasing core competencies among trainees.

*2.2.2.a. Develop a train the trainer (TTT) model and conduct the training with 5 ISMS training division staff*

Building on the core curriculum, we will develop a TTT model and a monitoring system that ensures that curriculum is consistently implemented as intended. A training manual for the trainers will be developed that will include the following:

- Learning objectives clearly articulated
  - An outline/agenda including an overview of what the training session(s) will cover, in what sequence and how much time to allow for each part of the session.
- All of the slides of the core curriculum that they will be teaching with a summary of key messages to convey to learners and examples of exercises where needed.
- Materials and supplies needed to support instruction (e.g. case studies)
- Lesson plan templates to help the trainer organize training sessions

Based on our previous experience, a two day core curriculum (which is what we are proposing to develop), requires a 5 day TTT training program. The training interweaves skill building for the trainer (delivering presentation, communication skills) and content from the core curriculum (Treating tobacco use). Day one of the Training of the Trainers will cover modules related to the trainer's role and begin to cover the core curriculum (Modules 4-10). The

modules described below are a draft based on our previous trainings and will be further developed and finalized as described previously with input from providers, the MOH, experts in the field, and Global Bridges. On Day 1:

- Module 1 - The trainer's role and responsibilities
- Module 2 - Methods of training/training aids
- Module 3 - Planning and delivering a presentation
- Module 4 - Tobacco industry tactics: undermining tobacco control
- Module 5 - Smoking in the population
- Module 6 - Smoking and health
- Module 7 - Tobacco dependence as a chronic disease and neurobiology of nicotine addiction

Days 2-3 will start with the module on treating tobacco use followed by communication skills and Motivational Interviewing. These and use exercises that will test retention of knowledge from Day 1. The first two modules include role-playing exercises.

- Module 8 - Treating tobacco use
- Module 9 - Principles of effective communication
- Module 10- Motivational Interviewing (MI) techniques

To evaluate the training capability of trainees, in the last two days each trainee will be asked to teach a part of the core curriculum and will receive feedback on mastery of content, communication skills, use of MI principles and other skills covered in Day 1-3. On the final day we will provide training on how to use the evaluation tools (Module 11) to assess their course and how to organize and manage a training course (Module 12).

As part of our NIH-funded study we are developing self-help materials which we will make available as part of a tool kit for providers. All training and patient materials will be available through a project website.

Using the TTT model we will be able to create an infrastructure for disseminating evidence based curriculum to front line health care providers working in CHCs. We propose to conduct the TTT course with 5 staff at ISMS' training division who will become master trainers. The training will be conducted by Dr. Nguyen (the applicant) and Dr. Shelley. The master trainers will then conduct training with health professionals working in CHCs in 3 districts in Thai Nguyen province. A total of ten 2-day training courses will be conducted by master trainers with a total of 200 health workers at CHCs in 3 districts of Thai Nguyen province.

*2.2.2.b. Develop and implement a web-based program.*

We will use online training as a dissemination strategy and as a way to extend the reach of the program. We have experience conducting online training and have an existing online training system run by ISMS' Training Center developed for this purpose. The online training courses are conducted via [lms.etraining.vn](http://lms.etraining.vn). Training sessions will be video-recorded to be uploaded to the training system. Training materials will be provided in the online training system. Participants will be asked to complete pre and post test evaluations. Participants can send questions and received responses from trainers via the discussion board. Online training courses will be organized monthly. Based on evaluation and feedback we will explore several other methods

for using web-based training, including conducting live webinars rather than depending on archived trainings and using voice over slide presentations rather than videotaped trainings.

### **2.3. Evaluation Design**

There are two components to the evaluation: 1) evaluation of the initial core curriculum trainings among 100 health care workers and of the master trainer's training of health care workers in 3 districts (TTT), and 2) a 3 month post training assessment of sustained practice changes.

#### *2.3.1. Evaluation of the initial core curriculum trainings among 100 health care workers in one district, and of the master trainer's training of health care workers in 3 districts*

The purpose of the training assessment is to determine whether the learning objectives are met and to provide insights into how to improve the program. The specific objectives are to: 1) Assess satisfaction with the training and instructors; 2) Assess changes in knowledge, attitudes and confidence in applying new knowledge and; 3) Evaluate the preparation and organizational components. We will also conduct a 3 month-follow up survey with participants to assess, longer term, whether the training was associated with changes in tobacco use treatment related practice patterns. (See section 2.3.2)

The methods used to assess the series of training courses (core curriculum and TTT) include:

- Training session observations to assess trainer performance, training methods, and trainee engagement, participation and response;
- Pre- and post-tests of participants
  - Pre test: this will assess demographics, smoking status, baseline knowledge, attitudes, confidence in treating tobacco use and practice patterns related to screening and treating tobacco use.
  - Post test: will assess satisfaction with training and instructor, changes in baseline knowledge and attitudes and intention to screen and treat tobacco use and elicit suggestions for improvements in the training.

A set of assessment instruments will be adapted from current tools our Training Center has created. The evaluation forms and guides include:

- 1) *Pre- and post-test questionnaires:* A self-administrated questionnaire to assess participants' pre- and post-test knowledge, attitudes and confidence (NOTE: This survey will include questions about practice patterns related to screening and treating tobacco use that are described in more detail below in Section 2.3.2). We will use validated survey questions that were pilot tested and adapted for the target population. As an example, we will assess attitudes using a 5-point likert scale from strongly agree to strongly disagree with the following statements: 1) most smokers do not want to quit, 2) advice from a doctor or nurse in one of the best ways to help people stop smoking, 3) smoking cessation counseling is not a priority to me, and 4) patients appreciate it when I provide smoking cessation counseling. Confidence is similarly measured using a 5-point likert scale with the following statements: 1) I am confident in my ability to help patients stop smoking, 2) I have the training I need to

help smokers quit smoking, and 3) I am not aware of the best treatments for helping patients stop smoking.

2) *The post-test* will also assess participant's views about whether the training met the learning objectives, satisfaction with the training including strengths and weaknesses, ability to apply what they learned and how the training will change their practice. Satisfaction with training content is evaluated for every module. The post-test will also ask participants whether the level of the training was appropriate and to assess the trainer's skill and expertise. ISMS' Training Center has developed these tools ("The Training and Evaluation and Learning Self Assessment tool") and will adapt them for these trainings.

3) *Training Observation Instrument*: This assessment form will be used to evaluate the Master Trainers who conduct the TTT training. The form provides note-taking instructions and spaces to a) document if learning objectives are covered, and b) to what extent the trainer is using appropriate communication skills and MI principles

*Data Analysis for the training evaluation*: EpiData software will be used for data entry of the self-administered pre- and post-test questionnaires and the Training Evaluation and Learning Self-Assessment forms filled in by trainees. After checking for logical/consistency, EpiData sets will be converted into a SPSS dataset with fully labeled variables and response values.

Descriptive and bi-variate analyses will be performed. Data at the pre- and post-tests will be compared to assess the changes. A Chi-square test is performed to assess the significance of the change. A comparison of the mean score in the pre- and post-tests is also performed. A T-test is used to assess the significance of the change. Notes taken during participation observations and feedback during and after training is entered into MS Excel and then analyzed.

The training assessments will be conducted by research staff in ISMS' survey center who are experienced in conducting training assessments for various programs/projects.

### *2.3.2. Assessment of post training sustained practice changes (a baseline pre training survey and a 3-month follow-up web-based survey)*

The primary outcome measure for program effectiveness is increased rates of screening for tobacco use and delivery of cessation assistance at 3 months post training. For health care professionals attending the trainings, this outcome (screening and assistance) will be operationalized in terms of a 4As framework (ask, advice, assess, assist). The expected outcomes also include significant improvements in provider knowledge, attitudes, and confidence to screen for tobacco use and assist smokers in quitting. As part of our previous research, we developed a survey tool that that incorporates standard measures for these variables. The survey was tested in over 100 providers (Shelley & Nguyen 2013). This tool will be adapted and pilot tested for this project

The 4As are assessed with the following questions: In the past three months 1) How many new patients did you ask about their tobacco use status? 2) Among all of your patients, how many did you ask about their tobacco use status? 3) For how many patients who are tobacco users did you assess readiness to quit? 4) How many patients who are tobacco users did you give



advice or counsel to quit, 5) How many patients who are tobacco users did you refer to a community stop smoking program or counselor for help quitting, and 6) How many patients who are tobacco users did you prescribe smoking cessation medication like the nicotine patch. A 5-point likert scale answers included none, few, half, more than half or all or most will be used.

This survey of provider practice patterns related to tobacco use treatment will be part of the pre training assessment (to assess baseline practice patterns). We will then conduct a 3-month post training web-based survey to assess sustained changes in practice patterns. We will seek input from experts at Global Bridges in adapting and finalizing the survey tools.

- For baseline (pre training test) survey all participants who attend the training (core curriculum and TTT) will be invited to participate in the survey. The survey will be conducted at the first day of the training before the training sessions.
- All 300 participants in the training (100 participated in the training with core curriculum and 200 attended the training conducted by master trainers) will be invited to participate in a 3-month follow-up web-based survey. We will send up to 5 email reminders within 3 weeks. If there is no response, or the provider does not have an email address, the survey will be mailed with an incentive and stamped return envelope.

*Data analysis:* EpiData software will be used for data entry. After checking for logical/consistency, EpiData sets will be converted into a SPSS dataset with fully labeled variables and response values. Descriptive and bi-variate analyses will be performed. Comparisons of variables at 3 months follow-up and baseline will be conducted to assess the changes. A Chi-square test was performed to assess the significance of the change for proportions. For comparisons of mean score in the baseline and 3-months follow-up, a T-test was used to assess the significance of the change.

### *2.3.3. Disseminate the evidence-based training curriculum and evaluation results*

As noted above, our proposal to develop a TTT model and web-based opportunities for training will provide an infrastructure for widespread dissemination of evidence-based training curriculum. Another important component of the dissemination plan will be to leverage the advisory committee convened for their NIH-funded study to act as advisors for this proposal with their main task to assist with dissemination and sustainability. This group includes key stakeholders described above (Section B1.) and the South East Asian Tobacco Control Alliance (SEATCA), which supports ASEAN countries in promoting effective tobacco control policies. Importantly, the MOH is committed to implementing Article 14 (as stated in 2011 Annual Health Review) and views this proposal as a step toward achieving that goal. Therefore we have the support of the MOH to disseminate project outcomes throughout the health care system. Finally, our collaboration with SEATCA and Global Bridges will enhance our capacity to extend the reach of this program, once developed and evaluated, to additional SEA Countries.

In summary, the dissemination plan includes the following steps: 1) VINACOSH and ISMS will seek approval of TTT training curriculum by MOH; 2) convene meetings with the advisory group (e.g., WHO Viet Nam, Hanoi Medical University) to develop a strategy for disseminating

training, including identifying funding and other resources; 2) conduct a dissemination workshop with additional key stakeholders (organizations working on the field of tobacco control, provincial departments of health and district health directors) to obtain additional support for training and obtain input on strategies for scaling up; 3) ISMS will work with VINACOSH/MOH to develop a plan to implement the dissemination strategy including organizing additional trainings and disseminating training curriculum throughout the health care system, 4) ISMS will conduct web-based training courses. We will continue to embed evaluation in our dissemination activities.

We will utilize the existing Global Bridges' website and network to support all aspects of the project including curriculum development and dissemination activities. Regular meetings will be scheduled to communicate with Global Bridges through the duration of the project and we are committed to attending all meetings convened by Global Bridges.

### **3. Detailed Workplan and Deliverables Schedule**

The core curriculum will be developed in the first five months of project. In order to inform the development of the core curriculum, interviews with providers will be conducted and meetings with expert advisory group (MOH, VINACOSH, Hanoi Medical University, Hanoi School of Public Health, and the Viet Nam Medical Association) will be convened. The time frame is feasible because ISMS will be adapting a draft curriculum they developed for a pilot study conducted in 2013. We will use that as a starting point for provider interviews and obtaining input from our advisory group. We will also work with experts at Global Bridges to finalize the curriculum. From months 6-9 we will conduct the training with 100 health workers in one district using the core curriculum and will conduct the training evaluation. The train-the-trainer manual and curriculum will be developed in months 9-12.

The training of master trainers will be completed by the end of year one (12 months). The master trainers then conduct training for 200 health workers in 3 districts from month 15<sup>th</sup> to 18<sup>th</sup>.

3-month follow up web-based survey with participants attending the training using core curriculum will be conducted in 9<sup>th</sup> and 12<sup>th</sup> months; and in month 18<sup>th</sup> and 21 with health workers participating in training conducted by master trainers. Data analysis for the assessment on changes in health workers' knowledge, attitude, and practices related to tobacco treatment will be carried out at 22<sup>th</sup> month. Dissemination activities will be implemented in 23<sup>th</sup> and 24<sup>th</sup> months.

**Project Timeline**

<b>Activities/Deliverables</b>	3	6	9	12	15	18	21	24
Conduct interviews with providers Convene meeting with expert advisory group (MOH, VINACOSH, Hanoi Medical University, Hanoi School of Public Health, and the Viet Nam Medical Association) (Month 1-5)	X							
Adapt and finalize core curriculum	X	X						
Conduct and evaluate training (with 100 health providers) Deliverables: Data, Training reports, evaluation reports		X	X					
Develop Train the trainer manual and curriculum Deliverables: TTT manual, training materials			X	X				
Train 5 staff at ISMS's training division to be master trainers				X				
Conduct and evaluate trainings (by master trainers with 200 health providers) in 3 districts Deliverables: Data, Training reports, evaluation reports					X	X		
3-month follow up web-based survey with all participants attending the training with core curriculum and training conducted by master trainers Deliverables: Data sets			X	X		X	X	
Data analysis Deliverables: Assessment Report								X
Dissemination activities (e.g. workshops, presentations, meetings with MOH)								X