

Health and Sustainable Development in Myanmar – Competence building in public health and medical research and education (MY-NORTH)

Partner institutions

University of Public Health (UPH), Yangon, Myanmar

University of Medicine 1 (UM1), Yangon, Myanmar

Ministry of Health (MOH), Nay Pyi Taw, Myanmar

Mahidol University (MU), Bangkok, Thailand

Prince of Songkla University (PSU), Songkla, Thailand

University of Oslo (UiO), Institute of Health and Society, Faculty of Medicine;

University of Oslo (UiO), Department of Anatomy, Institute of Basic Medical Sciences, Faculty of Medicine;

University of Oslo (UiO), Department of Informatics, Faculty of Mathematics and Natural Sciences

Steering group

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Financing

18 000 000 NOK (2 200 000 USD) from NORAD (the Norwegian Agency for development Cooperation)

Start and finish

2014 – 2018 (non-cost extension to 2019);

Ambition of MY-NORTH:

- to apply for new funding 2020-2024



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MY-NORTH project goal

Improved capacity and quality in basic medical sciences and public health - education, research and surveillance, and dissemination of research findings.

Objectives

- 1. Strengthened capacity in public health- and basic medical training and research competence at Myanmar higher education institutions;**
- 2. Improved quality of information and data available in Myanmar that can be used for healthy public policies**

Summary:

<http://www.med.uio.no/helsam/english/research/projects/health-sustainable-development-myanmar/index.html>

MY-NORTH activities contribute to:

- **curriculum development in medical education (undergraduate and graduate studies);**
- **improving teaching methods, teaching material, teaching facilities;**
- **establishing of a national training hub for health information systems at University of Public Health, Yangon;**
- **development of a national electronic health information system through our work on DHIS2;**
- **e-learning systems in medical universities;**
- **training of staff at master- and PhD-level;**
- **promotion of quality research;**
- **knowledge about the health situation in Myanmar, useful for local politicians (planning of health services delivery and preventive measures), donors, and researchers in their priority and in the country's interest;**
- **increasing publication rate of medical research by Myanmar researchers in international journals;**
- **electronic budgeting and accounting system in the university sector;**
- **creating of partnership and friendship**

Activities

Activity 1: Health information system

Implementation and evaluation of the DHIS2 system in two pilot townships:

Patheingyi Township, Mandalay Division and Nyaunglebin Township, Bago Division.

We use a mix of tablets and laptops to enter- and forward health information from midwife/sub-centre level to township level. The DHIS2 system has been translated to Myanmar language through the MY-NORTH-project, and we have conducted training sessions for midwife to township level. In cooperation with MOH and UPH staff and University of Oslo we have established courses in Health information systems, with special training in DHIS2 at UPH. Such training is now implemented in the curriculum for master students, and teaching will be conducted by staff from MOH and UPH.

Ambitions of MY-NORTH:

- DHIS2 is the preferable health information system to be used in whole Myanmar;
- UPH is the training hub for Health information system, with focus on DHIS2

Activity 2: E-learning

- In cooperation with staff from UiO and KMD Company, Myanmar, MY-NORTH has set up a server, 20 pc and Wi-Fi at UM1, main campus, for the purpose of: E-learning library, Open digital archive, and Remote teaching system. Staffs from all 6 medical universities, anatomy departments, have been trained in recording and uploading of e-learning lectures. E-learning lectures from UiO and four medical universities were presented and discussed in a workshop at UM1 in January 2017.

Each of the 6 medical universities, UiO and MU are responsible for producing overview lectures, in depth lectures; problem based learning material for eight anatomical regions of the body (heart, CNS, special senses, ...)

- MY-NORTH has successfully published a report in The Lancet (December 2016) in which we ask readers to contribute with e-learning lectures. We have received responses which will help building the library of e-learning resources.

Challenges: The internet speed at Myanmar universities is currently too slow to access the e-learning library and to give distance learning courses. Slow internet speed will hamper the development in Myanmar educational system and training of health personnel in remote areas. It is not possible to create a National University Network, nor to utilize facilities in international networks. At UM1 students and staff can connect to the e-learning library through Wi-Fi at Lamnadaaw campus. We provide DVDs and memory sticks to other universities and the UM1 Pyay campus.

Ambitions of MY-NORTH:

- Inspire the Government to increase the internet speed for all universities;

- Inspire the Government to make an internet connection between UM1 Lamnada and Pyay campuses;
- Inspire the Government to build an internet connection (cable) between UM1 Lamnada campus and UPH;
- Build out the e-learning library to other fields of medicine, including public health;
- Set up distance learning system when internet speed has increased

Activity 3: Scientific writing

To publish in both international and national journals has become a standard in most high-income countries, while low- and middle-income countries are lagging behind in terms of quantity. Based on a Scopus search for 2015 (affiliation country; health sciences: medicine), the UK, Norway and Sweden publish approximately 860, 1,200 and 1,200 documents per one million inhabitants, respectively. In Myanmar, the rate of international publications was 1.4 per one million inhabitants, i.e. a total of 74 documents in 2015. Corresponding figures for other countries in Asia are 3.1 in Indonesia, 11.1 in Cambodia, 13.3 in Nepal, 49.3 in Thailand, 19.0 in India and 52.7 in China.

- MY-NORTH has given courses (5 days x 2) at UPH in scientific writing in 2014 (only 5 days x 1), 2015 and 2016 with 80 participants from all medical universities and allied universities and MOH in Myanmar. In order to reinvent scientific writing in Myanmar, we have tailored a curriculum that starts with a research questions and ends with a product that is a research paper, in which all the course participants have contributed sufficiently enough to be a co-author. Teachers from UiO, PSU, The Lancet, and assistant teachers from Myanmar (who will take over the course in due time). The courses have provided life long STATA licences for analyses of data to MOH, and all medical universities and allied universities in Myanmar as well as individual researchers.
- MY-NORTH has created a team for global collaborators' that has contributed to 'The Global Burden of Diseases' (GBD 2015) and 'Global Burden of Metabolic Diseases) with several international publications, so fare including 7 in The Lancet.
- MY-NORTH has helped UPH master students to take part in regional public health conference, presenting their research work (Cambodia 2016)

Ambitions of MY-NORTH:

- Increase the rate of international and national publications from Myanmar;
- Increase the quality of international and national publications and conference abstracts from Myanmar

Activity 4: Research

- MY-NORTH has supported fieldwork and laboratory work for 7 PhD students and one master student from Myanmar in public health (6) and anatomy (2):

- Non-communicable risk factors in Yangon Region, STEPS survey 2014 (UiO: 2 PhD, 1 master)
- Mental health and domestic violence in Yangon Region, 2016 (UiO: 1 PhD)
- Maternal and child health in Yangon Region, 2016 (UiO: 1 PhD, PSU: 1 PhD)
- Neuroanatomy (MU: 1 PhD)
- General anatomy (MU: 1 PhD)
- MY-NORTH has received access to the Myanmar National STEPS survey from 2009 and the STEPS survey in Yangon Region from 2004.
- MY-NORTH has supported research projects/field work done by UPH and UM1 master students in remote areas of Myanmar. 30 students by 2018.
- MY-NORTH has supervised two Norwegian Medical students for their compulsory research work:
 - Hypertension, based on National STEPS survey 2009 (2015);
 - Dengue fever, based on a literature review (2017);
- MY-NORTH has trained 4 Myanmar staff in epidemiological research; short courses of 1.5-2 months each (PSU)

Ambitions of MY-NORTH:

- Increase the quality of data collection and research methodology
- Increase the use of already collected data;
- Conduct research that is needed for national policy planning

Activity 5: PhD students

MY-NORTH supports fieldwork, travel and scholarship for 7 PhD-students in Public Health (5) and anatomy (2).

Ambitions of MY-NORTH:

- All students return to Myanmar, contributing to development of the country (teaching, research, policy);
- High quality of training, enabling the students to be supervisors/co-supervisors for PhD-students in Myanmar and the next batch of MY-NORTH students;
- Expose students to different scientific environments that can help developing teaching methods, research methodology and dissemination of research that is helpful for further development of Myanmar

Activity 6: Master students

Ambitions of MY-NORTH:

- Support research projects/field work done by UPH and UM1 master students in remote areas of Myanmar, or by students from minority groups. 30 students by 2018;
- Give feedback to thesis writing for 10 students by 2018 (PSU and UiO)

Activity 7: Lancet Series of Health in Myanmar – Universal health coverage (UCH)

Overall aim:

Describing, analysing and evaluating the health and health care of Myanmar people, in order to contribute to the international scientific literature and to develop local evidence-based policy and practice. Furthermore, to tell the story of Myanmar; create a shared platform; and create partnership.

One of the main issues in Paper 2 will be to describe the current status - and development towards UHC. WHO "Tracking Universal Health Coverage" suggest 8 core tracker health service coverage indicators: reproductive and new-born health (family planning, antenatal care, skilled birth attendance); child immunization (three doses of diphtheria, tetanus and pertussis (DTP)-containing vaccine); infectious disease (antiretroviral therapy (ART), tuberculosis (TB) treatment); and non-health sector determinants of health (improved water sources and improved sanitary facilities).

UHC is a dynamic, continuous process that changes in response to shifting: (1) demographic; (2) epidemiological; and (3) technological trends, and involves three coverage dimensions:

1. Health services
2. Finance
3. Population

The Myanmar Lancet series could help making priorities, and could among others be a tool for:

1. Local politicians (planning of health services delivery and preventive measures);
2. Donors;
3. Researchers.

A comprehensive literature review has been conducted.

Paper 1:

To describe one of the three UHC coverage dimensions: Population.

Includes a description of demographic and epidemiological transitions, i.e. the health transition (health and disease trends presented as a total for the Union and by Regions/States).

Includes a description of the current health/disease/socio-demographic status across the country, i.e. by states and regions and total for Union. Also include 8 UHC tracker/indicators set by WHO (health service coverage indicators).

The paper will discuss a possible development in disease trends and targets for health promotion and disease prevention.

Paper 2: Working title: 'A roadmap to UHC by 2030':

Will describe two of the three UHC coverage dimensions: Health Services and finance (also donors' contribution)

Includes a description of the current status/development towards UHC.

The paper will discuss how to reach UHC by 2030 for the whole Union, with main focus on Health Services and Finance, as well as Population (described in Paper 1: including health inequality across States and regions).

Ambitions of MY-NORTH:

- Publish the papers in The Lancet in 2017.

Activity 8: Establishing Lancet-Myanmar Health Alliance with annual conferences

Ambitions of MY-NORTH:

- Arrange annual conferences (2-days) after the launching of the Lancet-Myanmar Health series in 2017;
- Create partnership with national and international experts in the field of medicine

Activity 9: Gender mainstreaming and empowerment of women

The current situation in Myanmar: More females than males in all levels at the university system (less female rectors). The gender focal point of MY-NORTH and staff from UiO and PSU have given courses at UPH in Gender mainstreaming.

Ambitions of MY-NORTH:

- Promote gender balance in research and education

Activity 10: Project management: Budgeting, accounting and leadership of research projects

MY-NORTH has supported courses in budgeting and accounting using Excel, both at UPH (participants from UPH and UM1) and UiO (participants from UPH, PSU and MU). As a requirement according to Norad, but also a good exercise for the administration and project coordinators in partner institutions, we have audited UM and PSU (JRT Auditing Co. Ltd), and UPH and UM1 using a Myanmar Audit firm (ACA – Auditing, Consulting & Accounting services, suggested to us by the Norwegian Embassy). Budgets/accounting in all universities was found to be satisfactory.

Ambitions of MY-NORTH:

- Contribute to transparent electronic systems for budgeting and accounting

Activity 11: Body preservation

MY-NORTH has supported two visits to MU to learn methods for body preservation and upgrading of dissection room.

Activity 12: Publications

1. *E-learning resources in Myanmar*. **Espen Bjertness, Thein Thein Htay, Nay Soe Maung, Zaw Wai Soe, Saw Sanda Aye, Ole Petter Ottersen, Tippawan Liabsuetrakul, Per Grøttum, Magnus Hovland, Mahmood Amiry-Moghaddam**. [Lancet 2016; 388: 2990-2991](#)
2. *Urban-rural differences in the prevalence of non-communicable diseases risk factors among 25-74 years old citizens in Yangon Region, Myanmar: a cross sectional study*. **Htet AS, Bjertness MB, Sherpa LY, Kjøllesdal MK, Oo WM, Meyer HE, Stigum H, Bjertness E**. [BMC Public Health 2016; 16\(1\): 1225](#).
3. *Worldwide trends in blood pressure from 1975 to 2015: a pooled analysis of 1479 population-based measurement studies with 19.1 million participants*. **NCD Risk Factor Collaboration**. [Lancet 2016](#)
4. *Measuring the health-related Sustainable Development Goals in 188 countries: a baseline analysis from the Global Burden of Disease Study 2015*. **GBD 2015 SDG Collaborators**, [Lancet 2016](#)
5. *Consumption of fruits and vegetables and associations with risk factors for non-communicable diseases in the Yangon region of Myanmar: a cross-sectional study*. **Kjøllesdal M, Aung Soe Htet, Hein Stigum, Ne Yi Hla, Hlaing Hlaing Hlaing, Ei Kay Khaine, Win Khaing, Aung Kyaw Khant, Naw Ohn Khin Khin, Kay Khine Aye Mauk, Ei Ei Moe, Hla Moe, Kyawt Kyawt Mon, Kyaw Swa Mya, Chomar Kaung Myint, Cho Yi Myint, Maung Maung Myint, Ohnmar Myint, Aye Aye New, Ei Sanda Oo, Khin Sandar Oo, Zin Zin Pyone, Yin Yin Soe, Myint Myint Wai, Nilar Win, Espen Bjertness**. [BMJ Open 2016 Aug 26](#)
6. *Prevalence and determinants of hypertension in Myanmar - a nationwide cross-sectional study*. **Bjertness MB, Htet AS, Meyer HE, Htike MM, Zaw KK, Oo WM, Latt TS, Sherpa LY, Bjertness E** [BMC Public Health. 2016 Jul 18;16:590](#).
7. *A century of trends in adult human height*. **NCD Risk Factor Collaboration (NCD-RisC)**. [Elife. 2016 Jul 26;5](#).
8. *Worldwide trends in diabetes since 1980: a pooled analysis of 751 population-based studies with 4.4 million participants*. **NCD Risk Factor Collaboration (NCD-RisC) Zhou B, Bjertness E, Htet AS, Htay TT, Sein AA, Mu TT, Htike MMT, Bjertness MB, et al.** [Lancet. 2016 Apr 9](#)
9. *Indigenous and tribal peoples' health (The Lancet-Lowitja Institute Global Collaboration): a population study*. **Anderson I, Robson B, Connolly M, Al-Yaman F, Bjertness E,, Htet AS, Htay TT, Sein AA, Mu TT, Htike MMT, Bjertness MB, et al.** [Lancet. 2016 Apr 20](#)
10. *Trends in adult body-mass index in 200 countries from 1975 to 2014: a pooled analysis of 1698 population-based measurement studies with 19.2 million participants*. **NCD Risk Factor Collaboration (NCD-RisC): Di Cesare M, Bjertness E, Htet AS, Htay TT, Sein AA, Mu TT, Htike MMT, Bjertness MB, et al.** [Lancet. 2016 Apr 2](#)

National publications (not updated):

1. Khaing Lay Mon, Khay Mar Mya, Ko Ko Zaw. Survival of HIV infected children on Antiretroviral Therapy. Myanmar Health Sciences Research Journal 2015 (submitted) 2016; 28(1) (published).
2. Cho Mar Kaung Myint, Min Ko Ko, Cho Thet Khaing, Saw Saw, Nay Soe Maung. Healthy eating: Teachers' perceptive and students' practice in Monastic Education schools and Basic education primary schools, Mingalardon township. Myanmar Health Sciences Research Journal 2015; 27(3).
3. May Soe Aung, Win Myint Oo, Espen Bjertness , Soe Htet Ko, Yar Zar Oo, Yin Win Tu, Win Toe***, Kyaw Thet Oo, Mon Mon Kyaw. Underweight prevalence among young adults from rural areas, Salin Township Magwe. Myanmar Medical Journal 2015; 57(3).

Abstracts (not updated):

1. Khaing Lay Mon et al Survival of HIV infected children on Antiretroviral Therapy. Myanmar Health Research Congress, 2015.
2. Cho Mar Kaung Myint et al. Healthy eating: Teachers' perceptive and students' practice in Monastic Education schools and Basic education primary schools, Mingalardon township. Myanmar Health Research Congress, 2015.
3. Mya Thandar, Wongsu Laohasiriwong, Bandit Thinkhamrop. Effect of hypertension and Type 2 DM on HbA1C level. International Conference on Public Health among Greater Mekong Sub-region Countries 2015.