Y tế Công cộng | Truyền đạt những ý tưởng rõ ràng trong bối cảnh thực tiễn
Public Health | Teaching clear ideas in a practical context

Reflections on Public Health in Vietnam

Klaus Krickeberg (KK)

Summary. This article sketches the project "Teaching Public Health in Vietnam" and sets forth the conclusions to be drawn about Public Health in Vietnam.

1. The origins

In fall 2005 I visited my friend Hoàng Thủy Nguyên, Director of the National Institute of Hygiene and Epidemiology (NIHE) in Hanoi. He told me that the Thái Bình University of Medicine and Pharmacy would like to get some cooperation in the area of teaching Public Health. As a result we started in spring 2006 a project that we later called "Teaching Public Health in Vietnam". This project evolved in the course of time but from its beginnings on we gradually developed a few basic guidelines to be followed.

First of all, we decided that the project should not be implemented by an official organization, be it governmental or not. It was to be done by scientists involved in Public Health, mainly Vietnamese and a few foreigners. This guaranteed us great flexibility in defining and readjusting content and working methods during the course of the project instead of following a rigorous work plan fixed in advance. We could take the particularities of the Vietnamese health situation and health system into account since many participants in the project knew them well; for instance the mathematician and Public Health specialist Phan Vũ Diễm Hằng (Hanoi) and KK had been working in this system in various capacities since around 1980. Above all, our decision allowed us to devote a large part of our activities to discussions and reflections and to obtain the essential new insights which are the subject of the Third Section of the present article. In addition, such a project is of course most efficient in financial respect. No offices are rented, no equipment bought, no secretaries, cars and drivers paid. However, from March 2014 to February 2016 we profited from the participation of the German "Leibniz Institute for Prevention Research and Epidemiology" (BIPS) in the project.

Secondly, it seemed obvious to us that the project needed to be a long-term enterprise. A short course or a few lectures rarely leave a lasting imprint.

Thirdly, having started in Thái Bình we wanted to expand and work with all medical faculties or universities that might have met with similar problems. At present, the relevant institutions in the following cities or regions are taking part: Hải Phòng, Thaí Bình, Thaí Nguyên, Vinh, Huế, Tây Nguyên, Cần Thơ, plus the Đà Nẵng University of Medical Technology and Pharmacy and the Thăng Long University in Hanoi. They are our "partner institutions".

Fourth, we had in mind both the training in Public Health of all medical students, that is, of the future physicians, and that of future specialists in

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Public Health. It was to be done in the spirit of the motto that appears above: "Teaching clear ideas in a practical context". To reach this goal we tried to raise the level of the lecturers of Public Health concurrently with that of their teaching.

2. Components and structure of the project

The *content* of teaching is no doubt one of its fundamental components, ahead of teaching methods and its technical means. Therefore KK read right in the beginning some of the teaching material used in Thái Bình for the courses on epidemiology, nutrition and food safety, and occupational health. He found it too formal, abstract and austere. It was mostly an enumeration of various facts without highlighting their relative importance and explaining the links between them. This material was also not sufficiently adapted to the specific Vietnamese health situation. For the latter reason we ruled out translations of foreign language books within our project.

Instead we started to write new texts in the spirit of our motto. They are published by the Medical Publishing House Hanoi in the form of a series "Basic Texts in Public Health" edited by Phan Vũ Diễm Hằng, KK and Nguyễn Văn Sơn (Rector of the Thái Nguyên University of Medicine and Pharmacy). Every volume is bilingual, Vietnamese and English in one volume, so the reader can improve her or his scientific English. It is authored by two Vietnamese persons and KK. The following texts have appeared:

2014: Epidemiology - Key to Prevention (exceptionally the English version was published separately from the Vietnamese one, in 2012 by Springer New York).

2014: Health Education.

2014: Population Science and Public Health.

2017: Environmental Health - Basic Principles.

2017: Mathematics and Statistics in the Health Sciences.

A book on "Nutrition - The Epidemiologic Viewpoint" is being written. Further plans include the titles "Social and Psychic Risk Factors", "Scientific Methodology in Public Health", "History of Public Health in Mainland Southeast Asia" and volumes within the general area "Health Systems, Health Administration, Health Economy".

These texts stress the fundamental ideas and their role in practice, not technical details. One of their main principles is *coherence*. The Series as a whole will be a coherent presentation of the field of Public Health with a focus on Vietnam. Its volumes, and the chapters inside each volume, are closely coordinated with each other by the choice of topics, concepts, terms, notations and style and by many cross-references. There will be no so-called "edited" volumes with separate chapters written by different authors.

The publisher furnishes 50 copies of each book to our partner institutions and to a few other ones, for example to NIHE.

Strictly speaking when starting the project we did not quite know what we were doing because we had no definition of the concept of Public Health. Curiously enough the various definitions given by various organizations, for example by the World Health Organisation, were all very vague, verbose and hardly practical. Therefore in the first book of our series we stated our own definition that we decided to use consistently in our project:

Public Health is the entirety of theoretical and practical activities that are related to health and deal with populations as a whole but not specifically with their individual members.

The second component of the project has been a *continuous informal exchange by e-mail* between Vietnamese lecturers and KK. This exchange is an important tool for writing together the books of our series. It also covers a lot of other topics not determined in advance. For example there were comments by KK on scientific papers and theses that had been drafted by Vietnamese lecturers; discussions on definitions and concepts; rules for good oral scientific presentations; detailed analyses of proposals for the curricula of new study courses, in particular for a Bachelor of Public Health; remarks on evaluating specific books and manuscripts; advice on how to set up a statistics centre; proposals on how to improve one's scientific English (do *work* in English, do *not* attend another course of the English language);

etc. Very many exchanges concerned preparing, guiding and evaluating our *yearly workshops*, which form the third component of our project.

In contrast to the first two components, this third component was limited in time. The first "Workshop on the Teaching of Public Health" took place in 2006 in Thaí Bình and the last, tenth, one in 2016 in Buôn Ma Thuột. The form of the workshops varied, but from the third one on, they consisted of four parts. Vietnamese lecturers presented reports on their scientific work with the intention to provoke discussions from which they themselves and the audience could learn. A field trip led to health institutions, mostly to those devoted to primary health care, in order to show to the participants how their teaching ought to be applied in practice. Much time was devoted to discussion sessions on many topics of current interest; their form, content and outcome will be described in Section 3. The fourth part of the workshops was both evident and informal; it was an occasion for the participants to meet, to get acquainted with each other's work, and sometimes also to dance.

Most workshops took place in a single medical faculty or university but three times a small team travelled between several of them and part of the programme was repeated there. In this way we could reach almost all of our partner institutions directly at least once. Here is the "Calendar" of workshops:

1. Thái Bình, March 2006;
2. Thái Bình, March 2007;
3. Thái Bình, October 2008;
4. Vientiane, March 2010;
5. Thái Bình and Thái Nguyên, November 2010;
6. Đà Nẵng, November 2011;
7. Thái Nguyên, Hải Phòng, Thái Bình, Tây Nguyên, Đà Nẵng, March – April 2013;
8. Huế, March 2014;
9. Thái Bình, Hải Phòng, Đà Nẵng, Tây Nguyên, Cần Thơ, March 2015;
10. Tây Nguyên, March 2016.

Originally we had foreseen a fourth component of the project, namely teaching *methods*. It was to enhance the demand of our motto "Teaching in a practical context" by not only treating practical problems, case studies and examples from the beginning but by also doing part of the teaching outside the lecture room, that is, in primary health institutions and in contact with the population. In analogy to the "bed-side teaching" of clinical medicine we termed it "population-side teaching". It is vaguely connected but not identical with the so-called "community teaching". A few trials at our field trips yielded interesting insights. However, reflecting about details of teaching methods before having elaborated the essentials of teaching content is a somewhat futile exercise. Due to various technical problems the first component of the project, namely our book series, took more time than expected and so we had to postpone the work on teaching methods.

Finally, a word about funding. Most of the work is being done on a voluntary basis. Financing was required for the workshops and in order to pay the expenses connected with the book series, namely printing costs charged by the publisher and translation fees.

The books are being written first in English and then translated into Vietnamese. The translators are lecturers in our partner institutions; they also learn by translating. In general they furnish good manuscripts whereas a translation done by a professional translator would almost surely be unusable.

The two first workshops had a mixed funding. It came from the Thái Bình University of Medicine and Pharmacy, the University of Bielefeld in Germany, the German state run Senior Expert Service (SES), which enables retired professionals to act as consultants, and from KK.

From summer 2008 to spring 2016 the German foundation "Else Kroener-Fresenius-Stiftung" (EKFS) funded our work as one of its "Medical-Humanitarian" projects. Good training of health staff, be it in clinical medicine or in Public Health, is indeed one of the best ways to provide humanitarian help. The EKFS allowed the flexibility that we deemed necessary. We are immensely grateful to it.

In general, our partner institutions where we had a workshop also contributed to it. Many of them provided office equipment, translation and printing of documents, lecture rooms, drinks and snacks at the coffee breaks, and in some cases lunch or local transport.

We have not yet secured funds for the translation and printing of our future books but we continue to write them.

3. Reflexions and proposals

Most workshops started with an "Opening Lecture" by KK. Some of them were meant to recall to the participants and to visitors from local health institutions the basic ideas and the history of the project but some also treated general basic topics from Public Health. In particular:

4th Workshop: Curricula reform: experiences and reflexions.

5th Workshop: Teaching Public Health – some personal experiences and views.

6th Workshop: The role of health education in Vietnamese Public Health.

7th Workshop: Epidemiology, the core of Public Health.

As said in Section 2, each workshop included *work sessions* where everybody could contribute to the discussions. Their number varied, the maximum was 11. Often the discussions took place in several separate sub-sessions whose results were then presented to the plenum. For many work sessions a worksheet written by KK was available beforehand so the participants could prepare themselves. Each session or sub-session consisted in discussions whose elements were written down on a very large blackboard so everybody could follow their progress.

Typical titles of work sessions were:

1. The benefits of Public Health compared with other components of the Vietnamese Health System.
2. What does the average "Doctor" (physician) need to know about Public Health?
3. An integrated curriculum.
4. Status of teaching staff, overburdening, working methods and habits.
5. The functions in the Vietnamese Public Health System of scientists whose university level training had not been medicine.
6. How to use the results of our project, in particular our books.
7. Teaching methods.
8. Epidemiology.
9. Demography.
10. Health Education.
11. Mathematics, statistics, computing.
12. Environmental health including the global climate change.
13. Nutrition and food safety.
14. Occupational health.
15. Genetics and immunology.
16. Social and lifestyle determinants of health.
17. Ethics, medical psychology, medical anthropology and sociology, health and society (law, politics).
18. Research projects.

The title N^0 1 refers to the justification of Public Health. It is common knowledge that Public Health has, in the history of health care, done more for the health of the population than clinical medicine. We shall not elaborate on this.

The work session N^0 2 was particularly relevant for the reflections that follow. Its worksheet recalled first some concepts of Public Health and described the activities of a doctor in a Community Health Station. Then it proposed for discussion the following list of desirable knowledge:

- Thinking in populations.
- Mathematics, statistics, computing.
- General epidemiology.
- Clinical epidemiology, in particular clinical trials.
- Epidemiology of infectious diseases.
- Health education.
- Immunology (in populations).
- Population genetics.

Let us now draw the conclusions of the combined reflections and discussions in the work sessions, and of the opening lectures. First of all, the Vietnamese health system rests largely on two outstanding achievements:

- Primary Health Care is essentially based on a system of Community Health Stations or equivalent health facilities.
- Every student of medicine needs to follow,

during his 6 years' basic studies, a certain number of courses (modules) devoted to Public Health.

Commune Health Stations (CHSs) allow an intimate and continuous contact between the physician and the population. This has obvious advantages for clinical medicine but in the present article we are not concerned with case management. However, the system of Commune Health Stations also plays a most beneficial role in Public Health. Above all, health education with a view of prevention, if well conceived, is much more efficient there than on a higher level. This holds for education about short-term preventive measures, especially about hygiene against infectious diseases; for education about long-term measures against chronic diseases such as diabetes, cancer, cardio-vascular diseases and HIV-infections; and for education about Mother and Child Health. In a similar vein advising people about various issues of health, for example by elementary genetic counselling, is a matter of Public Health to be done in CHSs. Likewise informing the population about financing health care, in particular about health insurance, can be done best in a CHS.

Efficient epidemic surveillance, too, starts in the CHSs. For example in our book on Environmental Health we have described how the system of the CHSs could be used efficiently if in Vietnam there was ever the beginning of an Ebola epidemic. Many population-based preventive and curative programmes have their natural place in CHSs, for instance systematic vaccinations. Much of health statistics and other population-based health information comes from the registers in the CHSs. The list above of desirable knowledge of a physician in a CHS reflects these manifold tasks.

The much-quoted Alma-Ata Declaration of 1978 called for good primary health care. In Vietnam, however, the system of CHSs existed already at that time in a large part of the country and was soon expanded to all of it. It fulfilled, and to some extent surpassed, all the requirements of the Declaration. It only suffered from a lack of material and equipment, which was then the consequence of the poverty of the country but can hardly be justified anymore now.

A few decades ago the buzzword of many international organizations involved in health was "District-level Health Care". It arose in countries that had no primary health care system comparable to the one of the Vietnamese CHSs. In Vietnam, it would mean a clear regression. Downgrading or abolishing the CHSs would have catastrophic consequences for health care, both for Public Health and for curative medicine. District-level health institutions have their well-defined Public Health tasks, mainly in the area of supervising and managing and also in processing information, but they can certainly not replace the CHSs in any of the activities sketched above.

Let us turn to the second achievement of the Vietnamese health care system, namely Public Health courses for all students of medicine. In what follows by "medical curriculum" we shall mean the basic curriculum for medical students during their first 6 years of study in a typical Vietnamese medical faculty. From the preceding description of Public Health tasks of physicians, especially on the primary level, it should be clear why Public Health ought to be part of their curriculum and why this plays a decisive role in improving the health of the population. However, apparently not everybody involved in health recognizes this fact. Over the years KK has talked to many students of medicine and asked them what they thought about the matter. The answer was almost always the same:

- In curative clinical medicine we shall earn more money.
- The courses on Public Health are boring and useless.

Let us see what can be done about this, and start with the second reply of the students. They were certainly right about the *content* of the courses; we have treated this issue in the 2nd Section of the present article.

Questions of the *curriculum* as a whole have occupied a large space in the work sessions. The work session N^0 3 on an integrated curriculum has indeed appeared in several workshops. At first sight it looked to us as if the courses on Public Health topics had been inserted into the medical curriculum in a fairly arbitrary and illogical fashion. To discuss this further, we distinguished four issues:

A. The structure of the part "Public Health" considered *per se*, independently of the rest of the curriculum.

B. Which subjects are missing and which ones are superfluous?

C. The way Public Health courses are distributed within the entire curriculum.

D. Relations between "Clinical" and "Public Health" courses, and in particular "mixed" courses that treat topics from both areas.

In this article we cannot describe the outcome of our discussions in much detail and shall restrict ourselves to the most important results.

The issue A is mainly the question of a reasonable order of the courses on Public Health. When looking at the existing curricula, one absurdity catches the eye: courses on epidemiology appear much too late. Epidemiology is the centrepiece of Public Health, an essential element of every part of it, as recalled in the Introductory Lecture to the 7th Workshop. An elementary, and problem-oriented, course on epidemiology must therefore be given in the first year of the curriculum.

Concerning B, a course on social and lifestyle determinants of health is direly needed. A course on International Health Programmes is superfluous. It adds practically no new knowledge to that acquired in other courses. Moreover, these programmes change frequently. I even think that a *general* course on the epidemiology of non-infectious diseases is unwarranted because these epidemiologic aspects are highly disease specific; see the discussion of the issue D below.

The issues C and D are related to each other. A solution of the problem C depends to some extent on the other parts of the curriculum, both on the foundations such as physics, chemistry, biology, anatomy, physiology etc., and on the clinical subjects. In the examples of present curricula that we have studied in a work session the order chosen was not always practical. We shall mention only one point, namely a course on mathematics including its subfields statistics and computing. Its elementary techniques are required from the beginning not only in the Public Health courses of the curriculum but also in the later practical work of most doctors. Hence this course needs to be taught in the first year.

The issue D was completely neglected in the construction of the existing curricula. It is fundamental, though, if we want to render the courses on Public Health less "boring and useless" and to understand the health care system as a whole. Let us take up a few points.

First of all there exist two subjects that consist of a "person-based" microbiological part on the one hand and a "population-based" epidemiologic part on the other hand, namely *genetics* and *immunology*. The concept of "population genetics" is well known, but the term "population immunology" does not seem to be in common use. This subject started a long time ago with concepts like "herd immunity" of a population, and is now one of the main foundations of every vaccination programme. A modern course on genetics or immunology should stress both components.

A similar remark applies to the teaching about a specific disease, for example cancer of the pancreas. In many modules of the present curricula you find, in addition to diagnostic and curative measures and perhaps some tentative remarks on the aetiology, also the so-called "epidemiology" of the disease. This, however, almost always refers only to health statistics, which is the most elementary part of epidemiology. The important aspect of risk factors and, as a consequence, of prevention, is usually left out. Teaching it ought to be combined in some way with the clinical part.

Generally speaking, whenever there is a topic that has both a clinical and a Public Health aspect the relations between the two should be highlighted and their teaching combined as much as feasible. This is what we would call an "integrated" curriculum.

Some of our partner institutions form future specialists of Public Health, most of them in addition to forming medical doctors. Many of our reflections on the education about Public Health of students of medicine apply there as well, but we shall not present them in the present article.

Let us have another look at the list of typical titles of work sessions that we gave in the beginning of this Section. We have already touched upon many titles, and in particular described the conclusions to be drawn from the discussions in the work sessions N^0 1, 2 and 3. We shall now take up briefly the sessions N^0 4, 5 and 6.

Higher health officials in the Ministry of Health, the Ministry of Education and Training and the Provincial Health Departments are lining out the general structure of Public Health in Vietnam. Their basic training had been medicine. However, the main practical work in Public Health is being done by physicians in health care institutions at a lower level and by the specialists of Public Health mentioned above. They were trained by the group of tertiary level lecturers of this subject in medical faculties and universities and in a few other universities. This group of lecturers plays a key-role in Public Health. We have analysed it repeatedly in the work sessions N^0 4 and 5. Here are the conclusions.

We shall first compare the group of Public Health lecturers with the group of lecturers of medicine. A lecturer in a medical subject, for example anatomy or internal medicine, has followed the basic 6-years medical study course plus several years of specialized theoretical and practical modules. He or she also has done independent research and usually continues to do it. Finally, a lecturer in medicine will normally be encouraged to practise, that is, to treat patients, even though it may be on a small scale; he or she will be given the possibility to do it.

This contrasts with the situation of lecturers in Public Health in present day Vietnamese universities. They have not always received an extended training; some have only acquired a Bachelor degree of Public Health after their secondary school studies. Many are not qualified for doing serious research. Very few lecturers are given sufficient time and opportunities to pursue practical work systematically if ever.

Salaries of lecturers in Public Health are low. In some universities these lecturers teach extra courses against extra payment, which further reduces their chances to conduct good practical work and research.

All of this leaves the lecturers with no time to raise their qualifications, to deepen their understanding of issues outside their very narrow specialities, and to improve their general working methods. For example, even studying the books in our series (see Section 2) poses a big problem for them as we found out in the work session N^0 6.

As a consequence, the status of third level Public Health lecturers is low, their teaching as a whole is not satisfactory, and health care in Vietnam suffers much from this situation.

Given this analysis the measures to be taken should be pretty obvious:

- Future specialists in Public Health, in particular its future lecturers, need to have solid basic university training before passing to Public Health. They can have obtained it in one of a very large variety of fields since Public Health demands a broad view and many-sidedness whereas specialization is less stressed than in medicine. Mathematics and medicine are reasonable choices, but there are as well sociology, economy, education, geography and many others. It may also be Public Health itself if this comprises a broad and high-level basic part. The absurd practice of admitting people to studies of Public Health after they failed the entrance examination to medical studies ought to be abolished.

- Lecturers in Public Health must enjoy the same working conditions and the same salaries as lecturers in medicine. This concerns in particular the time devoted to teaching, possibilities for solid research, and regular practical work.

Speaking more generally, the ideal frame of tertiary level training in health care would be a faculty or university where both Public Health and Clinical Medicine are represented on an equal footing and cultivate the relations between them like a newly married couple.

At the end of the last, tenth, workshop the participants decided to establish a "Network" of the partner institutions. It is to serve several purposes. The main ones are collection and exchange of information, and joint actions to ensure that the measures outlined in the two paragraphs above will really be taken. A "central node" of this network was put at the origin of our project, the Thái Bình University of Medicine and Pharmacy.

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