

Federal Public Service Foreign Affairs, Foreign Trade and Development
Cooperation

Special Evaluation Office of the Belgian Development Cooperation

Impact Evaluation of the Belgian University Development Cooperation



Syspons GmbH & Nuffic

Country Report Vietnam ARES Final Version

June 2018

The evaluation has been conducted by Syspons GmbH and Nuffic and has benefited from the support of a reference group in Brussels. The Special Evaluation Office ensured that the evaluation complied with the terms of reference.

The opinions expressed in this document represent the authors' points of view and do not necessarily reflect the position of the PFS Foreign Affairs, Foreign Trade and Development Cooperation.

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Date of the report (June 2018)

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Abbreviations and acronyms

ARES	Académie de recherche et d'enseignement supérieur
AUN	ASEAN University Network
BMT	Bone marrow transplantation
BTH	Blood Transfusion and Hematology Hospital
CDI	Capacity Development Index
CHC	Community health centre
CREAM	Clear, Relevant, Economic, Adequate, Monitorable
CUF	Centre universitaire de formation des personnels en soins de santé
HCMC	Ho Chi Minh City
IUC	Institutional University Cooperation
M&E	Monitoring & Evaluation
MOET	Ministry of Education and Training
MOH	Ministry of Health
Nuffic	The Dutch organisation for internationalisation in education
OECD-DAC	Organisation for Economic Cooperation and Development – Development Assistance Committee
PIC	Projet Interuniversitaire Ciblé
PRD	Projet de Recherche et Développement
SCM	Success case method
SEO	Special Evaluation Office of the Belgian Development Cooperation
ToC	Theory of Change
UMP	University of Medicine and Pharmacy
UPNT	Pham Ngoc Thach University of Medicine
VLIR-UOS	Vlaamse Interuniversitaire Raad Universitaire Ontwikkelingssamenwerking
WBI	Wallonie-Bruxelles International

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1. Introduction

The Special Evaluation Office of the Belgian Development Cooperation (SEO) commissioned Syspons and Nuffic to conduct the "Impact evaluation of the Belgian university development cooperation". The objectives of the evaluation are formative and summative. With regard to the former, the evaluation should examine the evaluability of the impact of Belgian university cooperation. More specifically, the evaluation should analyse "to what extent and on the basis of which methodological approach the impact of the Belgian university cooperation is evaluable (SEO, 2016, p.24)." Concerning the latter, the impact of the Belgian university cooperation should be evaluated on the basis of a sample of selected interventions. Hereby it should be analysed whether, to what extent and under what conditions impacts were achieved.

The scope of the evaluation covers long-term partnerships connected with interventions between January 2000 and December 2014 and scholarships that were granted for the period between January 2008 and December 2016. The interventions to be examined are located in the following countries: Vietnam (VLIR-UOS and ARES), Benin (ARES) and Ethiopia (VLIR-UOS).

In this evaluation Syspons and Nuffic were asked to deliver country reports for each of the four field missions, which took place in Benin, Ethiopia and Vietnam. The country reports should thereby assess the impact of the interventions that were selected in the previous fact-finding missions and are documented in the submitted study report by Syspons and Nuffic. Therefore, this country report analyses the impact of the selected ARES IUC with UPNT in Vietnam as well as selected impacts from the individual scholarship survey for ARES scholarships in Vietnam. Furthermore, it also describes the chosen methodological approach and the lessons learned regarding the methodology used.

The country report is structured as follows:

- **Chapter 2** gives a description of the analysed IUC with UPNT.
- **Chapter 3** describes the situation in Vietnam and at UPNT prior to the IUC.
- **Chapter 4** presents the field mission's results with regard to the IUC and the individual scholarships.
- **Chapter 5** draws conclusions on the basis of the presented results.
- **Chapter 6** introduces lessons learned with regard to the used methodology.

The **annex** includes the bibliography, the list of interviews conducted, the evaluation design, the developed Theory of Change for the IUC, the assessment grid as well as the data collection instruments used.

2. Description of the IUC

2.1 IUC with Pham Ngoc Thach University of Medicine (UPNT)

The cooperation of French-speaking Belgian universities with UPNT (previously: Centre universitaire de formation des personnels en soins de santé - CUF) dates back to 1997 and includes four IUC cooperation phases:

- P1: 1997-2002;
- P2: 2003-2007;
- P3: 2008-2012;
- and a phasing out from 2013- 2016.

In addition various small research projects (PICs and PRDs) have been implemented and a new one started October 2017.

UPNT is a medical university, founded by the People's Committee of Ho Chi Minh City (HCMC) in order to deliver medical staff to the city's health services. The IUC programme's objective in the first phase (1997-2002) was to improve the teaching of medical staff and the establishment of a virtual documentation centre with interconnections between Hanoi, Vientiane and Phnom Penh. The second phase (2003-2008) was oriented towards strengthening teaching, research and medical skills in various specific departments. In contrast to the preceding phases, it was decided during the identification of the third cooperation phase in 2007 to no longer 'focus activities on a limited number of departments in order to organise specific activities'. On the contrary, P3 was developed along transversal interventions, aiming at all present and future lecturers of UPNT¹. Accordingly, the third phase (2008-2012) and the phasing out (2013-2016) aimed at strengthening UPNT as a centre of excellence through organisational enhancement of teaching, research and management (refer to figure 1). This impact evaluation focuses on the last two phases, P3 and the phasing out and covers the period from 2008 till 2016.

UPNT was one of ARES' 13 IUC or 'Institutional Support' (Appui Institutionnel) programmes, conducted since 1997². Institutional Support 'aims to support the institutional development of a partner university, based on its strategic plan, by strengthening its capacity to improve the teaching, research and service for society. It is an approach centered on institutional objectives and results, for which three results are expected:

- The capacity to fulfill the fundamental teaching mission is strengthened.
- The capacity to fulfill the fundamental research mission is strengthened.

¹ Rapport d'identification, 14 mai 2007

² Terminology changed over the years from Institutional University Cooperation (IUC) to Institutional Support. Throughout this report we use the term IUC.

- The capacities of partner universities in terms of strategy, management and interaction with society are sustainably improved.³

The IUC cooperation was subject to a mid-term evaluation in 2011. The main conclusions were positive, especially regarding the relevance and alignment of the programme to the strategies of the university and of Ho Chi Minh City's Department of Health. Effectiveness was expected to be positive (except for one sub-project - UPNT07), partly thanks to the internal coherence of the programme and the focus of the university on one subject (Medicine). Efficiency was evaluated less positively, partly because of weak coordination, tense relations between coordinators in Vietnam and Belgium, staff changes and overloaded staff. In addition, the lack of mastery of European languages was considered an obstacle for the cooperation. Sustainability was expected to be positive, partly because of the intrinsic integrated institutional approach of the IUC, but also because of the high level of ownership by UPNT and the high retention of trained staff. Also, impact was expected to be positive because of the fact that UPNT in fact is part of the Ho Chi Minh City Health system and its graduates are absorbed by the city's health services. Finally, external coherence and relations with external stakeholders were considered limited.

In 2012 three new partner universities were identified by ARES (then CUD) for institutional support. In view of limited resources, this implied that three of the ongoing cooperation programmes had to be phased out. On the basis of an analysis of the identification reports for all P4 cooperation phases (2013-2018) by a team of external and CUD experts, UPNT was one of the three universities selected for phasing out. The argumentation was based on a poorly motivated proposal, elaborated without the help of an identification expert and without participation of the university's key stakeholders in strategic planning. However, taking into account the strengths of the university, the experts were positive about the possibilities for UPNT to position itself successfully for other support programs of the CUD⁴. After the decision for phasing out was taken by ARES, UPNT and their Belgian partners had the opportunity to develop a new proposal for phasing out for the period 2013-2016. The cooperation in practice lasted till 2017 and was closed down with a closing seminar in HCMC in April 2017, with the participation of the Belgian promoters.

Various research projects (PICs and PRDs) have been implemented before, during and after the IUC cooperation. At this moment there are still two ongoing PIC/PRD projects. These projects are not part of the scope of this evaluation but reference was sometimes made to them in the interviews. Chapter 8.4 refers to the effect of this 'portfolio approach'.

The preceding phases of the IUC programme with UPNT consisted of various sub-projects that varied in each phase, without much consistency and continuation. As has been explained in the study report, the M&E frameworks for the different phases were not always very clear, as activities, expected results and objectives were sometimes mixed up. For example, P3 was subdivided into eight sub-projects, which were formally called 'activities'. In parallel there were three global, two specific objectives and five expected results. The relation between activities, expected results and objectives is not always straightforward and had to be reconstructed for this evaluation. In all interviews and reports reference is made to the 'activities' or sub-projects of the P3 instead of results. Please refer to figure 1 for an overview of objectives and sub-projects for the last two IUC phases with UPNT. A detailed overview of the intended synergies between the funded projects is presented in the Theory of Change in annex D.

The total budget of the IUC P3 programme amounted to 2,010,204.74 Euros while 504,278.79 Euros were spent in the phasing out.

³ Rapport d'expertise sur Appui Institutionnel. Version finale, 16 Aout 2012.

⁴ Idem

Figure 1: UPNT IUC Programme P3 and phasing out

IUC programme UPNT		
P3	General objective	UPNT acknowledged as centre of excellence Population's health improved UPNT staff strenghtend in terms of quantity and quality
	Specific objective	National recruitment of UPNT graduates Evolution towards national accreditation standards
	UPNT01	Improvement of the quality of teaching and strengthening of university pedagogy, including evaluation of teaching
	UPNT02	Establishment of a laboratory platform, particularly to improve the teaching of basic sciences
	UPNT03	Strengthening the scientific level of teachers, including the methodology of research and the creation of a doctorate school
	UPNT04	Development of teaching and clinical research departments within University Hospital Cooperation Services
	UPNT05	Establishment of a postgraduate academic training in family medicine
	UPNT06	Local coordination cell (<i>This activity is not really a project intervention but a mere budget line towards the implementation of the other seven interventions. It is therefore not subject to impact evaluation</i>)
	UPNT07	Establishment of a postgraduate academic training in internal medicine
Phasing Out	UPNT08	Medical English
	General objective	Obtain accreditation of Vietnam Ministry of Education and Training Population's health improved in HCMC catchment area System of Communal health stations in HCMC catchment area reinforced
	Specific objective	Consolidate training capacity of U-PNT in line with accreditation standards of Vietnam Ministry of Education and Training related to training activities, research and management
	R1	Teaching methods comply with accreditation standards
	R2	Policies and methods support oriented research applications in the departments of clinical medicine, fundamental medicine, community health and nursing for the integration of research and training at U-PNT
R3	System of quality control and evaluation established for training, research and management	

Source: Syspons and Nuffic 2017

2.1.1 UPNT01: Improvement of the quality of teaching and strengthening of university pedagogy, including evaluation of teaching

The improvement of the teaching-learning process for all lecturers and students of UPNT was an important backbone for the institutional cooperation. Together with the Belgian partners a course in Medical Pedagogy was developed and implemented towards all UPNT lecturers. One staff member received an MSc specialisation in Medical Pedagogy but could not proceed with a PhD because of lack of time. A process of review of the six year medical curriculum was initiated, based on learning outcomes and taking into account students' and other stakeholders' views. At the end of P3 a coherent curriculum based on learning outcomes and national norms was created, without overlap between departments.

A start was made with improving the evaluation practice of the university through standardisation (Multiple Choice Questions) as well as students' evaluation of lecturers.

2.1.2 UPNT02: Establishment of a laboratory platform, particularly to improve the teaching of basic sciences

This component aimed at strengthening teaching and research in basic sciences. The intervention aimed at strengthening the biomedical lab, established in former phase P2, with the acquisition of a state-of-the-art microscope. In addition the elaboration of syllabi for basic science courses and the training of many lecturers in Belgium, Vietnam and Thailand was expected to contribute to other IUC interventions, such as UPNT03 and UPNT04.

2.1.3 UPNT03: Strengthening the scientific level of teachers, including the methodology of research and the creation of a doctorate school

The intervention aimed at strengthening UPNT staff in planning and conducting clinical research. The component included the establishment of a Research & Development Unit and development of training modules on basic research methodology for lecturers and post-graduate students in preparation of their research thesis.

2.1.4 UPNT04: Development of teaching and clinical research departments within University Hospital Cooperation Services

This intervention focussed on the need for organising the linkage between the university and various hospitals in HCMC. It responded to the need for practical training of a growing number of medical students, joint research between university and hospital staff and continuous training of hospital staff by UPNT. This component is at the heart of the medical university and comprises all three core missions of UPNT: research, education and outreach.

2.1.5 UPNT05: Establishment of a postgraduate academic training in family medicine

As CUF had become a university in 2008, there was a huge demand for the development of post-graduate training. The development of family medicine was incipient in the country and responded to interest at the national, local and organisational level. The aim of the component was in the first place the development of postgraduate specialisation in family medicine but also included the development of pre-graduate modules.

2.1.6 UPNT07: Establishment of a postgraduate academic training in internal medicine.

This component aimed at developing a post-graduate specialisation in internal medicine, including library development and staff training.

2.1.7 UPNT08: Medical English

The objective of this sub-project was to strengthen Medical English in UPNT through the development of a multi-media language lab and the development of an e-learning platform (Moodle). The strengthening of medical English was oriented towards students and not towards staff.

2.1.8 Phasing out (PO)

The various interventions under P3 were streamlined towards three result areas in the Phasing Out programme (PO), oriented towards educational strengthening, research strengthening and management strengthening.

The activities under UPNT01 were continued and consolidated under the PO/R1: 'Teaching methods comply with accreditation standards', which aimed at achieving national accreditation.

PO/R2: 'Policies and methods support oriented research applications' gave follow-up to the achievements under UPNT03 and aimed at further consolidating and institutionalising research capacity in UPNT.

Finally a third component was added: 'System of quality control and evaluation established for training, research and management' (PO/R3). In addition to the education and research strengthening in the first two result areas, this intervention is directed towards systemic and organisational strengthening.

2.2 Theory of Change of the IUC with UPNT

To achieve a common understanding of the IUC's objectives, a Theory of Change (ToC) was developed in a participatory process with ARES and the Belgian promoters. A ToC was first developed for ARES in general and based on that a more specific ToC for the IUC cooperation with UPNT was developed and discussed in a workshop in Brussels as well as in the interviews during the field mission. The IUC-ToC served as a basis for the evaluation and consists of different interconnected and independent components:

- **Inputs / activities:** "the financial, human, and material resources used for the development intervention" (defined according to the OECD-DAC, 2010)⁵
- **Outputs:** "the products, capital goods and services which result from a development intervention" (defined according to the OECD-DAC, 2010)
- **Outcomes:** "the direct benefits on the level of the beneficiaries realised through the intervention objectives" (defined according to the European Commission(Directorate-general Development Cooperation and Humanitarian Aid, 2015, p. 6))
- **Impacts:** "positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended" (defined according to the OECD-DAC, 2010)

In the following, the ToC of the IUC is presented. A graphic presentation of the ToC can be found in the annex.

2.2.1 Narrative description of the Theory of Change of the IUC with UPNT

The **overall intended impact** of the IUC with UPNT is to improve the health situation in HCMC and Southern Vietnam (i.e., the area of influence of the HCMC health service). This would be achieved through improved health care systems in this region, which in its turn would be achieved through four influences at **outcome level**: 1) UPNT graduates which respond to the health needs in the region, 2) adoption of newly developed diagnostic and treatment practices, 3) adoption of policy advices, e.g., on family

⁵ According to the Strategic Note on Results in Development Cooperation of the DG Ontwikkelingssamenwerking en Humanitaire Hulp, the DGD defines inputs, outputs and impacts in conformity with the OECD-DAC definition, but outcomes pursuant to the definition of the European Commission.

medicine, obesity, etc. and 4) direct contributions by UPNT staff to the HCMC health system.

UPNT would achieve these impacts through an increased capacity for their threefold mission: *teaching*, *research* and *outreach/interaction with society* (**outcome level**).

In the *field of research* the IUC aims at strengthening the research processes and structures as well as human resources at the respective departments and colleges (**outcome level**). Therefore it implements the following **outputs**: short-term and long-term scholarships; regular staff training courses in research methodology and clinical reasoning technology; implementation of research which leads to scientific publications and the development of new techniques for diagnosis and treatment. These outputs contribute to the institutionalisation of the following systems and infrastructure changes at **outcome level**: Biomedical Research Centre and Scientific Research Office, governed by strategies and policies and sustained by the trained human resources.

In the field of *educational capacity* the IUC tries to improve the educational quality of UPNT in order to provide better qualified human resources to the health services of HCMC. To achieve this, the IUC tries to strengthen the educational processes and structures in the respective departments and colleges (**outcome level**), by implementing the following **outputs**: long-term scholarship in Medical Education, regular staff training courses in medical pedagogy, the development of a coherent curriculum with learning outcomes, including soft skills and including family medicine components; organisation and implementation of internal evaluation, approved by the Ministry of Education; clinical and practical evaluation methods for students; digital methods for student evaluations; syllabi, textbooks, etc. This contributes to the achievement of the following systems and infrastructure, governed by strategies and policies and sustained by the trained human resources (**outcome level**): Students' Support Office and website; Evaluation and Quality Assurance Department; Language lab; and Family Medicine Department.

In the field of *outreach capacity* the IUC tries to improve the collaboration between university and hospitals in order to accommodate students' skills practicing, joint research for hospital and university staff and to organise continuous medical education for hospital staff. To achieve this, the IUC aimed at implementing the following **outputs**: exchange of students and staff, development and implementation of formal and informal MoUs for cooperation between university and hospitals for joint research, continued medical education and students' skills practice. This contributed to the achievement of the following systems and infrastructure, governed by strategies and policies and sustained by the trained human resources (**outcome level**): Office for Clinical Practice Affairs and enhanced status and position and strengthened relations with other local, national and international organisations.

The **inputs** that are needed to achieve the outputs, outcomes and impacts in these three fields are human resources of UPNT and Belgian universities and financial means of ARES, UPNT and Belgian universities.

2.3 Key hypotheses

Based on the reconstruction of the Theory of Change, the following set of key hypotheses underlying the ToC was elaborated in the Fact Finding Mission report to be tested in the field mission:

- If human resources and financial means from Belgian universities, UPNT and ARES are jointly invested in integrated, holistic and long-term capacity development of UPNT, then sustainable strengthening of UPNT's education, research and outreach capacity can be achieved.
- If UPNT staff is better trained, this will lead to better education, research and outreach capacity.

- If UPNT's education, research and outreach capacities are strengthened, this will lead to adoption of diagnostic and treatment practices in HCMC's Health system and to adoption of policy advices at local and national level.
- If UPNT's education, research and outreach capacity is strengthened, this leads to better medical staff delivered to HCMC's Health system.
- If better trained medical staff is working at HCMC's Health system, this leads to improved health care in HCMC and South Vietnam.
- If HCMC's Health system is strengthened with staff and graduates from UPNT, this leads to an improved health situation in HCMC and South Vietnam.
- If collaboration between UPNT and HCMC's hospitals and health centres is strengthened, this leads to better practical training of medical students, to better (joint) research by university and hospital staff and to development and application of relevant diagnostic and treatment techniques.
- If undergraduate and postgraduate training in family medicine is introduced in UPNT, this will lead to a better first line health care and prevention system and to less overloaded hospitals in HCMC.

In Chapter 4.2.5.4 these hypotheses are evaluated.

2.4 Target groups of the IUC with UPNT

The IUC with UPNT is implemented by different stakeholders that assume distinct roles and responsibilities within the implementation process. The stakeholders are consequently distinguishable by their functions and are defined as follows for the purpose of this evaluation:

- The **responsible organisations** bear the institutional responsibility for the implementation of the IUC.
- **Indirect beneficiaries** are persons within the responsible organisations that benefit from the IUC's activities, but serve as mediators to achieve the overall objectives and impacts of the IUC; e.g., they receive scholarships or trainings to improve capacities of direct beneficiaries or to achieve the intended impact on the level of the final beneficiaries.
- **Direct beneficiaries** are organisations who should primarily benefit from the IUC.
- **Final beneficiaries** are persons outside the responsible organisations who should benefit from the IUC.

By using these definitions, the following responsible organisations and beneficiaries can be distinguished for the purpose of this evaluation:

- **Direct beneficiary** is UPNT as an organisation
- **Indirect beneficiaries** are individual UPNT staff trained in the IUC and graduates and specialists that benefit from improved education
- **Intermediary organisations** are the hospitals and the HCMC health system in general
- **Final beneficiaries** are the people of HCMC who make use of the health services

3. Situation analysis (baseline)

3.1 Socio-economic situation in Vietnam and Ho Chi Minh City at the beginning of the IUC (2008)

After the opening-up of Vietnam's economy with the 'open door policy' (Doi Moi) in 1986, the economy grew steadily during the following two decades, the key drivers of growth being accelerated international integration, market liberalisation and job creation in the private sector. Per capita GDP doubled from US\$ 556 in 1986 to US\$ 1154 in 2008, reaching an annual growth rate of 5.7%⁶. The poverty rate had been reduced from 58 percent in 1993 to 13 percent in 2008⁷. Population increased from 60 million in 1986 to 85 million in 2008⁸.

However, development was unequally distributed around the country, and the gap between rich and poor was increasing⁹. Poverty concentrated in rural areas and along ethnic and gender lines¹⁰. Ho Chi Minh City was among the most developed regions and cities of the country. Under the name Saigon, it was the capital of the French colony of Cochinchina and later of the independent republic of South Vietnam 1955–75. On 2 July 1976, Saigon merged with the surrounding Gia Định Province and was officially renamed Ho Chi Minh City after the revolutionary leader and first president Hồ Chí Minh. In 2008, Ho Chi Minh City showed a GDP growth rate of 10.7%, almost double that of the country¹¹. The dynamism of Ho Chi Minh City's economy can be traced back to centuries ago when the booming trading activities along the Mekong Delta made the city thrive. Saigon's residents were open-minded, embracing relationships with foreigners and welcoming trade. When the French occupied the city, they increased agricultural production in the Mekong Delta and built advanced infrastructure in Saigon to use it as a transportation hub to trade with France, further reinforcing the role of Saigon as a major seaport and commercial hub in the Indochina Peninsula. Moreover, after the Americans left Saigon, they still left an enormous influence on the business culture in the city. Ho Chi Minh City is more straightforward and less bureaucratic than Northern cities¹². In 2008 Ho Chi Minh City accounted roughly for 10% of the country's population and 20% of its economy.

3.2 Health system and medical education in Vietnam, 2008

Before the re-unification of the country in 1975, the health system in the North of Vietnam had been organised following a socialist system. There was no private health sector and no health insurance, but all health care services (both curative and preventive) were financed by the government. After re-unification in 1975 and up to

⁶ Countryeconomy 2008

⁷ Freedomfromhunger, n.d.

⁸ World Bank open data

⁹ Hoat, 2008

¹⁰ Freedomfromhunger, n.d.

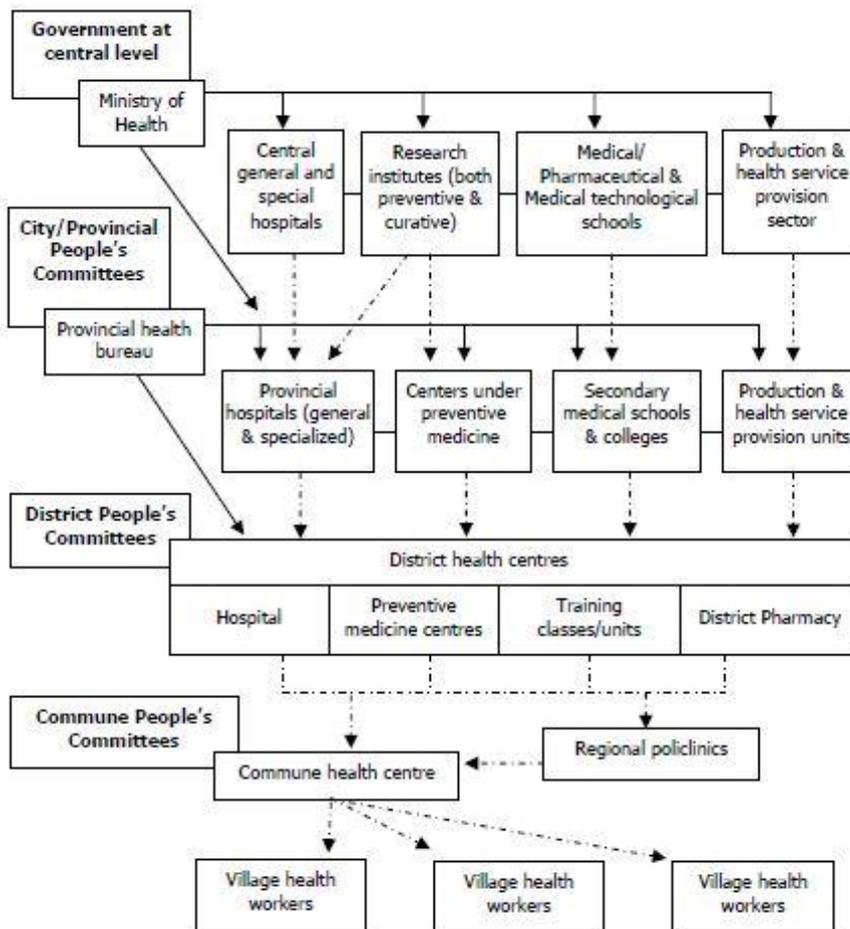
¹¹ Toughnickel, 2016

¹² ibidem

1986, the whole country followed the socialist system. But after 1986, when the market mechanism was introduced, the health system in Vietnam also started to change; the private health sector was invited to play a role in providing health care. Some components in the health system were no longer subsidised, such as the factories producing pharmaceuticals and health care equipment. At the same time, the gradual introduction of health insurance has resulted in changes in both demand for and delivery of health care, especially in the urban areas.

However, in the public health sector, the structure has changed relatively little during all this time. The 2008 structure of the system is shown in Figure 2. It was established in the North at the end of the war of liberation from the French in 1954 and expanded into the South in 1975. The figure illustrates both horizontal and vertical aspects of the system.

Figure 2: Medical system in Vietnam 2008



Source: Hoat, 2008

Horizontal aspect: there are four levels from central to community level – where professional components belong to the Ministry of Health (at **central level**) – to the provincial health bureau (at **provincial level**), to the district health centre (at **district level**) and to the community health centre (CHC) (at **commune level**). The commune is the lowest administrative level, but each commune includes between five and twenty or more villages within a radius of around ten kilometers from the commune center.

Vertical aspect: there are four components at each level from central to district:

- The **curative** vertical component consists of hospitals of different sizes at central, provincial and district level, as well as a number of specialized

research institutes with patient beds at central level that are dedicated to one discipline, such as pediatrics, obstetrics, tuberculosis, gerontology.

- The **preventive** vertical component is represented by preventive medicine institutes at central level (such as the National Institutes of Nutrition, of Hygiene and Epidemiology, and of Malariology, Parasitology and Entomology), preventive medicine centres at provincial level and preventive medicine teams at district level.
- The vertical component for **training** health professionals includes medical, pharmaceutical and medical technological universities and colleges at central level, colleges, secondary medical schools and training centres at provincial level and training classes or units at district level.
- The **production** & health service provision component is in charge of logistics for the health sector, including pharmaceutical companies/factories, health facilities and equipment provision. It is clearly separated at central and provincials level but integrated in the pharmacy unit at district level.

At commune level these four components and all activities are integrated in a single facility, the community health centre (CHC). Each CHC should have four types of health workers on staff (although coverage is not yet complete, especially in the rural and remote areas). The required staffs are: a doctor or assistant doctor, a nurse, a midwife, and a pharmacist or assistant pharmacist. The CHC staff offer health services in their centres, but they also supervise the village health workers in the villages that make up the commune, to carry out their mainly preventive duties. Together, all these levels share the preventive and curative tasks that make up the health services provided by the state. To deliver the care according to the national policies and programs, a very large workforce of well trained health professionals is required¹³.

In 2008, Vietnam had eight state medical schools belonging to the central level and two other medical schools, one belonging to a province and one to the army. Two of the eight schools were focused on very specific fields, dentistry and traditional medicine, while the others train general medical doctors and other cadre. Three of the eight schools were established more than 50 years ago and had a longer history of development, influenced by their contact with international relations, with first France, then with either the Soviet Union (in the North) or the USA (in the South). The others were established more recently to provide medical doctors for underserved regions or to provide specialised training in dentistry and traditional medicine. There were no private medical schools to train medical doctors. One of the state medical schools in 2008 was Ho Chi Minh City University of Medicine and Pharmacy, founded in 1947. CUF did not appear in descriptions of the medical education system in 2008¹⁴.

3.3 Health situation in Ho Chi Minh City

In 2008, HCMC's health system was confronted with various challenges. The most important was the fact that almost all first line medical care was provided by hospitals, which as a consequence were overloaded and consumed a large part of the health budget. Therefore, the city's health authorities developed a strategy to strengthen first line health care system in order to free up budget and hospital capacity for specialised care. Two other main problems in 2008 were the low quality of the city's health staff and the lack of structural cooperation between hospitals and universities. These problems were not exceptional for HCMC but general for the Vietnamese health care situation¹⁵.

¹³ Hoat, 2008

¹⁴ Ibidem

¹⁵ Rapport d'identification, 14 May 2007

In figure 3 some quantitative data on health indicators in Ho Chi Minh City are provided by the city's health services. These relate to incidence and mortality numbers on some diseases like cancer, cardiovascular diseases, diabetes and chronic respiratory diseases. The infant and maternal mortality rate could not be retrieved for 2008. We will come back to these in Ch 4.3.2, where we will describe the impact found on the health situation in HCMC.

Figure 3: Health indicators for HCMC, 2008

Health statistics in HCMC ¹⁶	2008
infant mortality rate	-
under 5 mortality rate	-
maternal mortality rate	-
cancer: incidence	58.073
cancer: mortality	132
cardiovascular diseases: incidence	77.823
cardiovascular diseases: mortality	722
diabetes: incidence	14.316
diabetes: mortality	34
chronic respiratory diseases: incidence	31.862
chronic respiratory diseases: mortality	29

Source: HCMC Health Department 2017

3.4 Pham Ngoc Thach university, 2008

In 2008, the third cooperation phase between French-speaking Belgian universities and the now-called Pham Ngoc Thach University of Medicine (UPNT) was launched. At that time, UPNT was still called CUF: *Centre Universitaire de formation des personnels en soins de santé* and did not have the function of a university. This meant that CUF could only deliver basic physicians (after six years training), auxiliaries (three years training), nurses (two and a half years), midwives (two and a half years), pharmacological assistants (one to three years) and caretakers (one year training). For medical specialisations and PhD training, graduates would have to continue their studies at another medical faculty (most often University of Medicine and Pharmacy (UMP) in Ho Chi Minh City).

In 2008 UPNT had 1759 students participating in the abovementioned careers with 386 teachers, of which 4% had PhD level and 23% MSc level. In the same year, 271 students graduated from the various careers, of which 144 were women (53%) and 125 were general physicians. Reference is made to figure 4.

¹⁶ absolute numbers

Figure 4: Baseline data UPNT 2008

Indicator	2008	comments
Number of staff and education level	386 16 PhDs 4% 89 MSc 23%	
Number of students	1759 930	Total General medicine
Number of freshmen	258	General medicine
Number of graduates (f/m)	271 (144 f) 125	Total (Female) General medicine
% of general medicine graduates absorbed by labour market (and where: HCMC, UPNT)	64% (80) 0	HCMC Health system UPNT
Average throughput time until graduation	6	General medicine
Number of publications (national and international)	0 4	National international
Number of research projects implemented	6	
Amount of research grants received	-	

Source: Syspons and Nuffic 2017

3.4.1 Research capacity

Research is one of the three core activities of universities. However, in 2008, CUF/UPNT was not yet a university. It is therefore not surprising that the interviewees indicate that in 2008 there was hardly any research activity. Only 4% of staff had a PhD degree and the research coordinators state that during the ten years before 2008, there were only three research projects in the entire institution. Research activities received an impetus in 2008, when CUF became UPNT and research strengthening was part of the IUC. Figure 4 indicates that in 2008 six research projects were implemented and four international papers published.

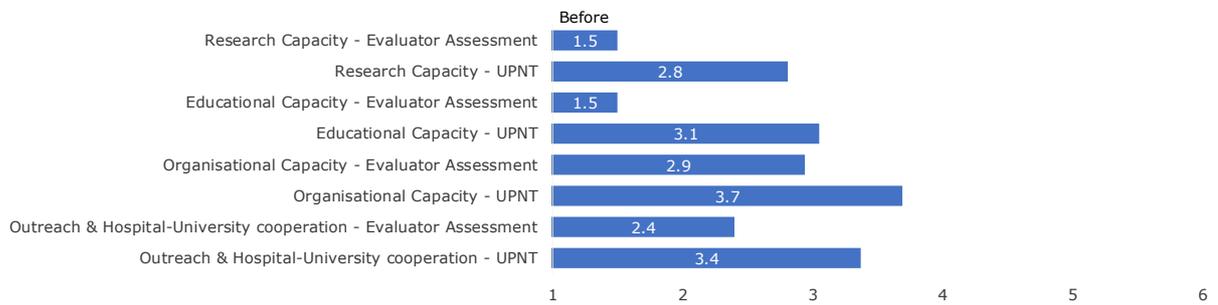
In order to capture various aspects of the capacity of UPNT before and after the IUC, Syspons and Nuffic developed a tool (Capacity Development Index - CDI). All respondents were asked to rate the situation regarding the capacity of UPNT prior to the IUC (baseline) and after the IUC along a set of items which were developed on the basis of the Theory of Change of the IUC. A detailed operationalisation of the capacity development index can be found in the data collection instrument and the assessment grid in annex E.

All assessments for each item in the index were made using a scale of 1 (capacity is lacking) to 6 (capacity is high). The index was calculated as the average of the different perspectives of the evaluators (n=2) and the Vietnamese respondents (n=24) respectively, before and after the IUC period under evaluation. The calculated mean of these different perspectives resulted in a value for the situation in 2008 and 2016. The calculated differential value between the calculated mean for the situation prior and after the IUC thus indicates the changes within each capacity that can be contributed to the analysed IUC by comparing the collected baseline data to the observed results after the implementation of the IUC (see chapter 4.3.1).

In all aspects, the Vietnamese respondents rate UPNT's capacity more positively than the evaluators (refer to figure 5). This might be explained by the critical look from the outside (refer to footnote 25).

The CDI assessment of UPNT research capacity (figure 5) confirms the picture that in 2008 research capacity was hardly developed. The Vietnamese stakeholders rated this capacity with 2,8 while the evaluators rated the research capacity in 2008 with 1.5.

Figure 5: CDI assessment research, educational, organisational and outreach capacity, 2008



Source: Syspons and Nuffic 2017

3.4.2 Educational capacity

In 2008 UPNT was still a young institution and teaching was very basic. Interviews confirm the baseline information in the identification report¹⁷: The lecturers were mere medical doctors without specific pedagogical skills or training and were not involved in research. Knowledge of basic sciences was very limited. The core curriculum was based on the national curriculum of the Ministry of Education and Training and did not respond to the specific needs of the population. Curricula for the various courses were not aligned and as a consequence sometimes overlapped with each other and in other cases gaps occurred between the various courses. For not having university status until 2008, CUF was not allowed to offer any post-graduate education whatsoever.

Relations between CUF and the city's hospitals were scarce and informal: students did not have much opportunity to practice clinical skills and lecturers were not involved in clinical research.

In 2008 there was neither knowledge nor awareness of family medicine in UPNT. There was only one lecturer who had received a specialisation in UMP in 2002. In 2008 there were three universities with family medicine training in Vietnam: UMP (HCMC), Hanoi and Hue; they formed an advisory committee on family medicine to the Ministry of Health. UNPT did not participate at that time.

This picture is confirmed by the CDI assessment: while the Vietnamese respondents qualify the education capacity slightly stronger than the research capacity (3,1 vs 2,8), the evaluators assess both the educational and research capacity of UPNT in 2008 at a low 1,5 (refer to figure 5).

3.4.3 Outreach capacity and university-hospital cooperation

Figure 5 shows that outreach and University-Hospital cooperation is rated slightly stronger than research and educational capacity by both Vietnamese respondents and evaluators: 3,4 and 2,4 respectively. As part of the HCMC health system there were always strong relations with the city's health authorities. However, because of the fact that UPNT was still considered young and weak, its position in relation to other institutions was not strong. As was stated above there were relations with hospitals, but without regular practice for students nor research opportunities for staff.

In 2008 CUF had already collaborated with the French speaking Belgian universities for a decade. Unfortunately, it was not possible to find quantitative information on other international support in 2008. The interviews and identification report indicate that apart

¹⁷ Rapport d'identification, 14 May 2007

from the Belgian university development cooperation, there were some other collaborations with international donors and universities and some scholarships for staff but more modest and on an ad-hoc basis.

3.4.4 Organisational capacity

Next to the above described capacities, which are particular to universities, each organisation needs organisational capacity to fulfil its functions and tasks. This underlying organisational capacity on the one hand manifests itself in the overarching regulations, processes and structures governing a university and on the other hand informs and supports its core functions – research, education and outreach. To this end, the IUC also tried to strengthen underlying service structures such as IT or to change regulations regarding research.

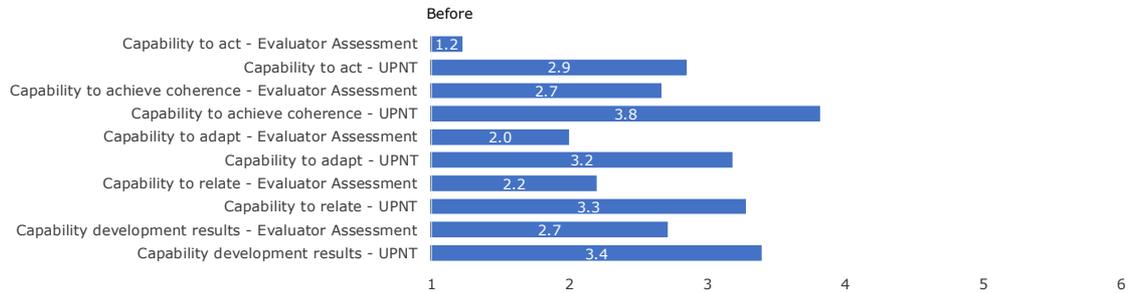
In order to capture these intended changes by the IUC as well as the IUC overall effect on the organisational capacity of UPNT, Syspons and Nuffic developed a capacity development index (CDI). This index is composed of the answers given by the respondents in the conducted survey (see chapter 4.3.1) and is based upon the following five capabilities of the 5C model, which was introduced in the inception report. A detailed operationalisation of the five capabilities can be found in the annex.

- The **capability to act** was operationalised as the availability of adequate financial and human resources as well as infrastructure in UPNT. Furthermore, effective administrative, financial, etc. systems were features of this capability.
- The **capability to generate development results** was operationalised as the resulting impact of the financed research and the improvement of the qualification of students at UPNT. Moreover, possible socio-economic changes in the life of the target groups or on a policy level were seen as dimensions of this capability.
- The **capability to relate** to other actors was operationalised as the existence of processes and structures for outreach activities in terms of trainings of extension services, consultancy or advisory services were aspects of this capability.
- The **capability to adopt and self-renew** was operationalised as the ability of UPNT to understand and adapt to shifting contexts as well as to encourage change processes. In addition it was analysed whether UPNT had processes and structures in place (e.g., knowledge management systems) to cope with changing environments.
- The **capability to achieve coherence** was operationalised as the absence of conflicts within the university with regard to the vision and strategy of the research and educational orientation. Additionally, UPNT should possess a shared vision and a set of principles which govern the organisation.

These five capabilities were thereby operationalised along different items in the survey implemented in the field mission (see annex). Also in this survey the respondents had to rate the situation in 2008 and in 2016. This data was complemented by the views of the evaluators who assessed the situation before and after the IUC through the conducted interviews with the relevant stakeholders in the field mission using the same scale. All assessments for each item were made using a scale of 1 (capability is lacking) to 6 (capability is high). The CDI was thereby calculated as the average of the different perspectives of the Vietnamese respondents, for each capability for the situation prior and after the IUC. The calculated mean of these different perspectives resulted in a value for the situation prior and after the IUC. The calculated differential value between the calculated mean for the situation prior to and after the IUC thus indicates the changes within each capability, which can be contributed to the analysed IUC by comparing the collected baseline data to the observed results after the implementation of the IUC (see chapter 4.2.4.1).

Figure 6 shows the CDI assessment by the evaluators and stakeholders of UPNT's five capabilities at the beginning of the period under evaluation (2008).

Figure 6 Organisational capacity baseline of UPNT in 2008



Source: Syspons and Nuffic 2017

The CDI assessment indicates that both Vietnamese stakeholders and evaluators rate the capability to act in 2008 as very weak. Most interviewees affirm that in 2008, many university management systems and procedures were lacking: pedagogical, testing and QA departments, systems for financial, students and human resources management. Also human resources were limited, and not well trained nor specialised, as has been argued above.

The other capabilities are judged more positively, although the highest assessment (for the capability to achieve coherence) does not surpass 2.7 (by the evaluators) or 3.8 (by the Vietnamese respondents). This relatively positive assessment is explained by the close alignment of UPNT's strategic plan with HCMC's health priorities, which included¹⁸:

- The reform and improvement of the quality of medical and paramedical training.
- Postgraduate specialised training.
- The construction of a reference laboratory by mobilising the departments of basic sciences of the university.
- Strengthening the level of scientific research of teachers and students.
- The development of teaching and clinical research within university-hospital services.
- The strengthening of the Medical Linguistic Unit and the academic training and practice of nursing.

The capability to adapt is assessed by evaluators and UPNT stakeholders with 2.0 and 3.2 respectively, which illustrates the situation of a young and relatively weak institution that is confronted with fast growing student numbers and does not yet have the infrastructure, systems and quality of human resources to adequately respond.

The capability to relate (2.2 and 3.3 respectively) illustrates the weak relations with hospitals and health centres, but also limited relations with colleagues and organisations from other countries, lack of participation in specialised associations and committees and weak relations with national and local government institutions.

Finally the assessment of the capability to deliver on development results (2.7 and 3.4 respectively) is a logical consequence of the other weaknesses and illustrates a young university with many challenges to deliver quality education and training and only incipient in developing research. The only aspect in this assessment that was positive in

¹⁸ Rapport d'identification, 14 May 2007

2008 is the acceptance of UPNT by the labour market, which was always guaranteed by the HCMC health authorities.

4. Results of the field mission

During the field mission the evaluators applied various qualitative evaluation methods (reference is made to annex C): the before and after method, contribution analysis and the success case method. As part of these methods, 77 stakeholders were interviewed, either individually, in small groups or in focus group discussions. The stakeholders included UPNT staff, students and alumni, hospital staff, directors and patients and local and national government officials (refer to annex B). In addition, 24 UPNT staff filled in an assessment of UPNT's organisational capacities before and after the period under evaluation. Also, seven ex-scholarship holders wrote testimonials about their personal and professional experiences before, during and after their stay in Belgium. Finally, secondary data was collected through project documents (annex A), but also specific data and statistics that were submitted by UPNT and HCMC's health service.

On the basis of the information collected, the evaluators were able to reconstruct the performance story and answer the evaluation questions about relevance, effectiveness, impact and sustainability of the IUC.

4.1 Analysis of the Relevance of the IUC

4.1.1. Alignment with national/local priorities

Relevance is definitely the strongest aspect of this intervention. There is a strong alignment between the health needs of HCMC, the strategic plan of the university and the IUC programme. UPNT was founded to respond to the needs of the city for health professionals. The university budget is provided by HCMC's People's Committee and the needs identified in 2008 by the city's health authorities were translated into the university's strategic plan¹⁹. UPNT must respond to the qualitative and quantitative demands of HCMC health authorities. Therefore the number of general medicine students grew between 2008 and 2016 from 930 to 4473. In 2020, health authorities expect to achieve the goal of 15 physicians per 10.000 habitants and since 2016 maximise the intake of freshmen in UPNT²⁰.

Relations between health services and UPNT have always been tight. The present director of health services was a former UPNT rector and knows the university and the IUC programme very well. In the interviews, various HCMC health authorities testify being very happy with the cooperation with UPNT and with the IUC cooperation programme and results. *"HCMC health department made their health plan and discuss this with UPNT. We ask UPNT to support us to implement our plan. The IUC helped UPNT to respond to our needs. UPNT and Belgium partners developed the strategy and plan to meet the expectations of the city health department."*

"Graduates from UPNT have more skills in basic medicine than graduates from other universities. UPNT graduates are especially good in community level, which is part of the mission of UPNT. Graduates from other universities may be more inclined to work in the

¹⁹ Rapport d'identification, 14 May 2007

²⁰ Since 2017, the system has changed and UPNT is allowed to attract students from outside HCMC. Declining numbers for HCMC health system can be complemented by growing numbers of students from and for other provinces.

big hospitals. UPNT curriculum is different from the other universities, e.g. practical community training in 4th, 5th and 6th year. All students have to practice the health services during 3 to 4 months in community health centres. It is different with students of other medical universities, who have practices in hospital only. Thanks to UPNT we have now more staff for the smaller health units. This is in line with local health policy of primary health care."

The choice of research subjects for IUC scholarships was also in accordance with HCMC's priorities. As one of the short-term scholarship holders testifies: "I went to Brussels in 2011. Stem cell research was suggested by my teacher at UPNT. Histology and Embriology is an important department for UPNT and stem cell was selected as priority by HCMC. Stem cell research is also a prioritized research topic of the MoH. MoH has requested to develop the research proposals on stem cell and funded a number of research on stem cell. Stem cell faculty is now a strong faculty of the UPNT."

Some of the IUC programme activities were directly translated from the HCMC health priority projects, such as the development of family medicine (UPNT-05), the development of hospital-university cooperation (UPNT04) and the need for a general improvement of the quality of health care provision (UPNT01,-02 and -03) (refer to Ch. 2.1). These projects were an answer to the main problems encountered in HCMC health system, as described in chapter 3.3.

4.1.2 Alignment with organisational priorities

All stakeholders interviewed testified that the development of the third IUC cooperation phase was completely in line with the needs of UPNT as described in the strategic plan (Ch. 3.4) and consequently of HCMC's health system, as described above (Ch. 4.1.1). Belgian priorities did not play a role. While former cooperation phases (P1 and P2) sometimes took the form of 'mini-research projects', for the development of P3, it was decided to adhere to the institutional strategic plan and to aim at all lecturers and all students.

In 2008, the organisational priorities were the development of physical and human capacity to handle the transformation to a university with its increased responsibilities of postgraduate education, training and research, the need to respond to the increased demand for human resources by the City Health Department, and finally the preparation for the accreditation of the UPNT. The IUC accompanied UPNT in all these priorities.

After the development of the fourth phase (2013-2018), an expert team that analysed and compared all proposals was of the opinion that the UPNT proposal was poorly motivated and elaborated without the participation of the university's key stakeholders in strategic planning (refer to Ch. 2.1). UPNT was therefore not selected for a fourth five-year cooperation phase, but for a three-year phasing out. Although the stakeholders in UPNT were very disappointed that the cooperation with the French-speaking Belgian universities would be phased out, they were satisfied with the coherent and integral set-up of the phasing out, aligned to organisational priorities and also with the opportunity to still have another three years (in practice four because the cooperation was only closed in March 2017) for a decent phasing out.

4.1.3 Relevance of research subjects

The smaller PIC and PRD projects (not subject to this evaluation) were more centred around research subjects, while the IUC programme was in the first place oriented towards strengthening the quality of teaching. However, the scholarship holders and other lecturers who received research grants from ARES affirmed that their research subjects were in line with priorities in HCMC's health situation: hematology, oncology, liver/renal transplantation, maternal health, etc. This was confirmed by other stakeholders, such as the director of HCMC health service, but also by hospital directors and staff.

4.1.4 Relevance to final beneficiaries

Assuming that the needs of final beneficiaries (patients/clients of HCMC health system) are being represented by the HCMC health authorities, this criterium has been answered in Ch. 4.1.1. There is no patient organisation in HCMC or Vietnam that could have been involved in the development of the IUC programme. However in some aspects (such as family medicine) local representations at community level were involved in the implementation of the programme (refer to Ch. 4.2.6.1).

Although in the context of this evaluation defined as indirect beneficiaries, it is worth mentioning that, as far as could be affirmed, students were not involved in the development of the IUC programme. The students and alumni that could be interviewed were not always aware of the cooperation programme, but showed satisfaction with the results.

4.2 Effectiveness and Impact of the IUC with UPNT

Insights in the effectiveness and impact of the IUC with UPNT are of central importance to this evaluation. While the criterion effectiveness captures to what extent the IUC's objectives on outcome level have been achieved and what mechanisms facilitate or impede the achievement of objectives, the criterion impact investigates to what extent mid-term to long-term effects resulted out of these achieved objectives. As mentioned in chapter 2.2.1, the IUC – broadly speaking – tries to strengthen the research, educational and outreach capacity of UPNT in order to contribute to an improved health situation in HCMC and Southern Vietnam in the long-run.

In figure 7 below the developments over time are given for the indicators in figure 4 (baseline). These will be discussed in the chapters below.

Figure 7: Baseline data UPNT 2008 and developments in 2012 and 2016

Indicator	2008	2012	2016	comments
Number of staff and education level (PhD, MSc, BSc, etc.)	386 16PhDs 4% 89 MSc 23%	534 32 PhDs 6% 141 MSc 26%	647 47 PhDs 7% 257 MSc 40%	
Number of students	1759 930	3531 2206	6888 4473	Total General medicine
Number of freshmen	258	619	887	General medicine
Number of graduates (f/m)	271 (144 f) 125	339 (132 f) 99	906 (530 f) 396	Total (Female) General medicine
% of general medicine graduates absorbed by labour market (and where: HCMC, UPNT)	64% (80) 0	65% (65) 0	- ²¹ 56% (222)	HCMC Health system UPNT
Average throughput time until graduation	6	6	6	General medicine
Number of publications (national and international)	0 4	35 21	55 6	National international
Number of research projects implemented	6	7	11	
Amount of research grants received and from who	-	1.097.989	1.640.695	(Average over several years). Total research amount 2008-2016 = EUR 8.771.336

Source: Syspons and Nuffic 2017

4.2.1 Effects on UPNT's research capacity

With the upgrading of UPNT to the status of 'university' the need for research strengthening was obvious. This was done in the IUC P3 cooperation phase through strengthening human resources from various basic sciences departments in research. Five PhD's were trained in Belgium next to two MSc's and a large number of short trainings and internships in Belgium, Vietnam and Thailand. In addition, many training courses were given on the spot by both Belgian and Vietnamese trainers (trained by Belgian trainers): e.g., 230 lecturers (out of 356) participated in the training module on basic research methodology between 2010 and 2014. This course is still offered to post graduate students.

The effects of the staff upgrading is positive. Retention of staff is high. All scholarship holders returned to UPNT, except for one who fell ill and could not finish his thesis. Most other scholarship holders could be contacted and interviewed and testified on the impact of the training on their personal and professional lives. After their return to UPNT they often occupy important functions within the university. For example: one of the IUC promotors was promoted Head of the Scientific Research Department (in 2014) and Vice Dean of Faculty of Public Health (in 2017); and one former scholarship holder was promoted Vice Head, then Head of Biostatistics & Informatics Department (in 2015).

Two IUC promotors now are vice-rectors and one coordinator is now head of the Continuous Medical Education Office. The IUC experience definitely contributed to their academic careers.

²¹ Job placement by HCMC not yet known

"The PhD scholarship in Belgium has had a major impact on the evolution of my academic career. Upon my return, I was appointed as Head of Department. I was also nominated as a member of Council Committee of Specialist level two. After 5 years studying in Belgium, I was able to acquire good knowledge in epidemiology, biostatistics which allowed me not only to conduct a research but also to supervise the students and young doctors of the Pham Ngoc Thach University. I was able to improve the level of research of PNT University students, as well as young doctors from hospitals in Ho Chi Minh City and the provinces of Viet Nam through conveying knowledge.

Other scholarship holders testified how their scholarship influenced research strengthening: *"I supported the development of the new research centre, advised on the structure and equipment."*

"I participate in the university's scientific jury for thesis presentation and defence."

"Other researchers invite me for joint research and publications."

The staff training is accompanied with investments in research equipment (Biomedical Research Centre) and the development of research protocols. During the phasing out, the IUC support towards research strengthening results in the establishment of the Office for Scientific Research affairs, which organises all research activities, develops research strategies and accompanies UPNT staff in developing research projects and obtaining research funding.

Many stakeholders testified to how the IUC support served as a seed for achieving further grants. Among 13 participants in UPNT03 (research strengthening), three received a PhD scholarship in Australia and among 230 lecturers who attended Research Methodology courses, 14 received a PhD scholarship outside Vietnam from other support sources (Belgium, France, Thailand, Japan, USA, etc.). In this way, the small IUC seed (only one component of the IUC programme) led to 17 new PhD holders in UPNT. Something similar also occurred in other components, e.g., one short term scholarship holder testified that his IUC internship was of use to obtain a PhD in HCMC University of Advanced Science, paid for by HCMC. The same goes for one IUC scholarship holder cited below, who received a PhD from ULB after a short term scholarship in the framework of the IUC.

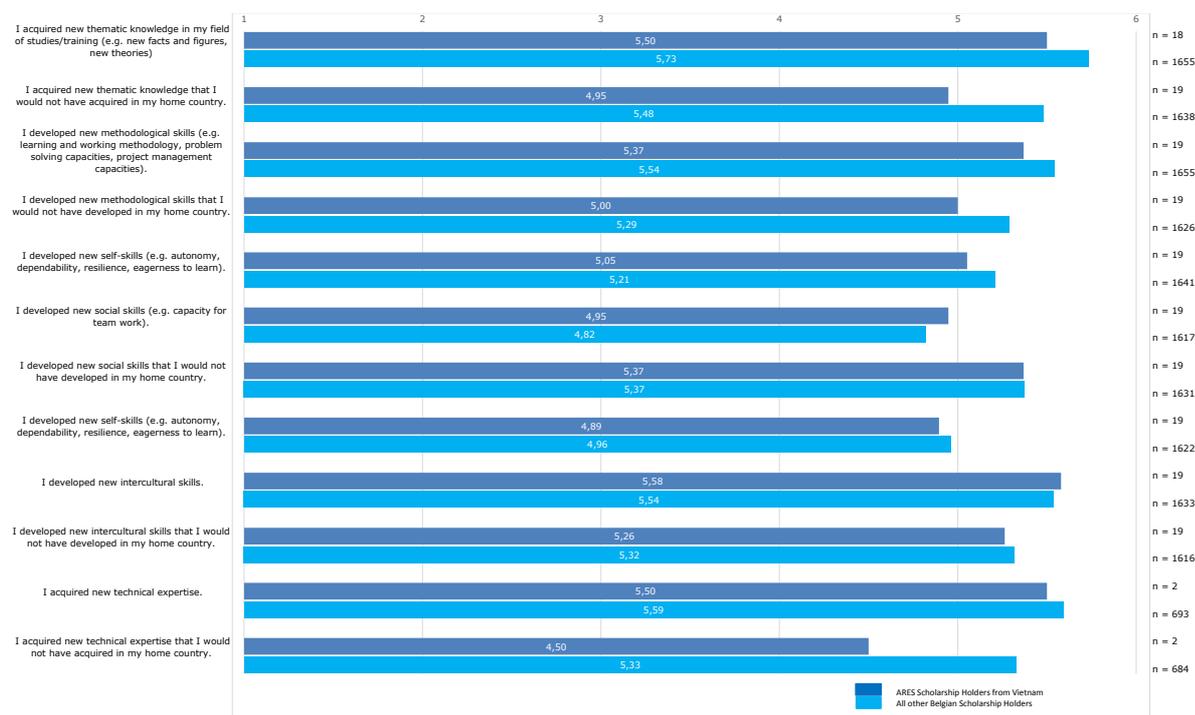
UPNT/IUC alumni also submitted at least ten research proposals after the conclusion of the IUC in 2016. Two out of five PIC/PRD proposals have been approved by ARES. The other three proposals will be adjusted and submitted again for funding by ARES or other sources. In addition, the chief promotor of the research component developed and implemented three more research proposals: a research program on Hepatitis B in cooperation with VVHA (Vietnam Viral Hepatitis Alliance – USA), a research program on chronic diseases (UK) and a research program on osteoporosis (financed by a pharmaceutical company).

Finally the project team handed over a list with 82 international publications by IUC alumni. IUC alumni are also invited to speak at research seminars such as the International Hematology Congress in USA in 2017.

Figure 7 shows how the absolute number of PhDs among staff increased threefold from 16 (4%) in 2008 to 47 (7%). The same goes for the number of MScs among staff, from 89 to 257 (refer to figure 7). In relative numbers the increase was from 23% to 40%, which still is a considerable achievement. Although the IUC is not solely responsible for these achievements, it definitely had an impact, directly and as leverage for obtaining other funding and scholarships.

The evaluators compared the integrated scholarship holders with other, individual Vietnamese scholarship holders that participated in the individual scholarship questionnaire (Syspons-Nuffic 2017). These are obviously very different types of intervention, but a comparative analysis of how they fare can yield interesting insights as to the how the Vietnamese contexts affects outcomes of university development cooperation. Figure 8 shows the competencies acquired by the individual ARES-scholarship holders in Vietnam as compared to all other individual Belgian scholarship holders. All competencies score high, between 4.5 and 5.5 and there is not much difference with the scores from other Belgian scholarship holders. These positive affirmations coincide with the experiences from UPNT scholarship holders.

Figure 8: Increases in competencies for individual scholarship holders



Source: Syspons and Nuffic 2017

When looking at the time it took individual scholarship holders to find their first job after graduation, it took them 7.7 months (N=19), 5.5 months longer than the 2.2 months of all other Belgian scholarship holders (N=1798) according to the online survey. Which still is surprising, as ARES individual scholarship holders are expected to be working in an organisation and returning there after their studies abroad. In the individual interviews they explained that they took advantage of the increased capacities to look for a better job than they had before.

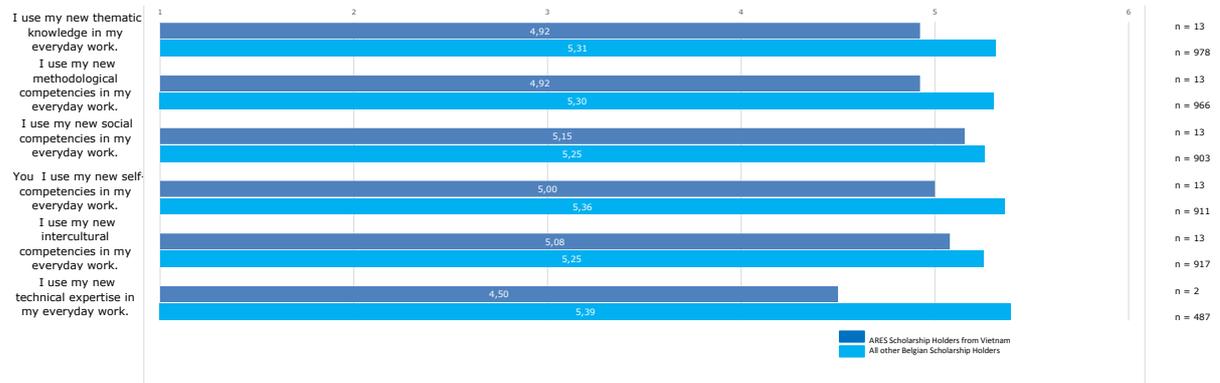
"I did not return to my old job, as I wanted to do different things now. It took me 5 months to find a job that I liked. I am working in community health research now. In the applications it helped when I mentioned I had had a scholarship abroad." (individual scholarship holder from ARES-Vietnam).

"Today, there are many Vietnamese students studying abroad back home and still jobless. It has to do with the job market and the expectation from both sides. So, in the short-term, this is not very beneficial but in the long-term and as a lifetime view, this will make a huge impact both economically and socially." (individual scholarship holder from ARES-Vietnam).

"I now work with an American NGO. I had applied for a job there before the scholarship, but missed the qualifications to get it. After Belgium I did get it." (individual scholarship holder from ARES-Vietnam).

This is obviously very different from the institutional scholarships in the case of UPNT, where all scholarship holders returned to their jobs within UPNT and there was no question of any job search.

Figure 9: application of the acquired skills and knowledge in everyday work



Source: Syspons and Nuffic 2017

Figure 9 shows the application of acquired skills and knowledge in everyday work. While appreciation is high (between 4.5 and 5.1) in all cases, it is remarkable that all of the values are lower than those of all other Belgian scholarship holders. It is not easy to explain this difference. In the qualitative interviews, scholarship holders explain how it is sometimes difficult to apply the acquired knowledge and skills in everyday work:

"I am currently the sales and marketing manager, doing sales and marketing. What I learned in this programme is more about economic development policies, so it can not directly help a company but it will help me contribute to the development of my country. It also provided me with a solid foundation to follow my passion on being an independent researcher and writer." (Individual scholarship holder from ARES-Vietnam).

In general, the individual scholarship holders were very positive on the effects for their personal lives, but more reluctant to mention direct effects for their organisations. The positive effect of the institutional scholarship holders on strengthening UPNT is not demonstrated as strongly in the case of the individual scholarship holders. The UPNT scholarship holders testified:

"The teachers got strong supports from city people committee for completion of administrative procedures to go abroad for study because this was in institutional development cooperation program, for standalone scholarships it is much more difficult to obtain permission for research."

"Also forming part of a critical mass and forming a chain (ten medical doctors trained in bone marrow transplantation during short trainings in Belgium), we work as a team together, each doctor has another specialization and together we do the transplantation but also train other colleagues."

4.2.2 Effects on UPNT's educational capacity

The demands from the city's health authorities for increasing the quantity and quality of health graduates for HCMC's health system increased enormously between 2008 and 2016. The IUC P3 cooperation phase started reviewing all undergraduate curricula, eliminating overlaps and filling gaps. The curriculum revisions were based on internal and external stakeholder consultations with student roundtables, inviting medical teachers, clinical students, hospitals, city health department and receiving feedback on the curriculum. In addition, congresses on outcomes standards were organised with the participation of MoH, MoET, hospitals in HCMC, UMP and other stakeholders. UPNT now is

unique in its curriculum. The new²² curriculum is not only more coherent, but also based on learning outcomes and it is yearly revised. The curriculum includes practical skills, soft skills, self-learning, decision making and critical thinking.

The curriculum is accompanied by evaluation and testing systems: In the framework of the IUC Multiple Choice Questions (MCQ) were introduced for all theory tests, including automatic quality control. In 2016 almost all departments apply MCQ and the quality is much enhanced. For example in 2016, 65.126 exams were done computer based and only 5.000 on paper. The IUC intervention was consolidated by investments in 400 computers and three servers for the testing unit from the university budget.

The IUC also introduced Objective Structured Clinical Evaluation (OSCE) and Objective Structured Practical Evaluation (OSPE), making UPNT till date the first and the only Vietnamese university with these systems. UPNT offers clinical evaluation with even more (20) standardised patients than ULiège which has only seven standardised patients, allowing to test more fields of practice. In the framework of OSPE, 30 stations with specimens with practical evaluation questions for laboratory testing were implemented.

The IUC interventions in educational capacity strengthening were institutionalised during the Phasing Out in the establishment of a new Department for Evaluation and Quality Assurance and a Student Support and Career Orientation Unit. A medical pedagogical course was developed and offered to UPNT's lecturers. The course is still part of the university's educational offer. This way, teachers improved their teaching skills and students improved their learning skills through workshops organised by the Student Support Unit. One lecturer received a distance MSc in Medical education and was one of the motors behind the medical education strengthening. Other candidates were less successful: ten candidates started the online MSc in Medical education but only one of them concluded the course successfully. The requirements of the online course were difficult to combine with the daily responsibilities in UPNT and demanded a lot of self-discipline.

Other (research) scholarship holders testify to how their stay in Belgium also contributed to the strengthening of education in UPNT and even in other universities: *"The short stay in Belgium opened my mind and it made me a better teacher, with more practical aspects and experiences from Europe."*

"I applied my knowledge successfully in the field of molecular biology: revised the curriculum, supervise under and post graduate students, even from other universities when they need my expertise."

"I teach pathology to 2nd and 3rd years undergraduate students. I wrote a textbook that is used in this and in other medical faculties. It is yearly updated and free downloadable."

There was also an e-learning platform introduced with the help of the IUC. As the technical requirements of the platform did not exactly fit with the needs of UPNT, the team adapted it to Vietnamese needs. It was only implemented in 2016 and by now 50 lecturers use the platform.

In addition to the above mentioned educational capacity strengthening the IUC contributed to the development of various under and post graduate courses:

- Medical Pedagogy (part of the continuous education offer to UPNT staff)
- The training module on basic research methodology that was developed for training UPNT staff is now regularly offered to post-graduate students

²² New means only new for the approx. 20% of the curriculum that is not obligatory from the MoE and MoH.

- Family medicine (modules for 4th, 5th and 6th year general medicine as well as three month and two year specialisations).
- Clinical Reasoning Technology Course

The IUC was successful in increasing the educational quality of the university. In 2017 for the first year registration was open for students from all over the country which made it possible to compare entrance scores. UPNT ranked third after University of Hanoi and UMP, which is an impressive result for such a young university.

UPNT succeeded in increasing the number of graduates threefold in eight years: in 2008, 271 students graduated from a six year general medicine programme and in 2016 906. The total number of students was four times higher in 2016 (6888) than in 2008 (1759). All stakeholders interviewed testified that in spite of this extreme increase, the quality of the graduates remained at least stable while most stakeholders confirm that the quality increased. *"UPNT is now a key medical university of Vietnam, it means that the education and training capacity of UPNT is well known now."* (Ministry of Health). Many hospital directors and staff were positive about the quality of UPNT graduates. Positive aspects they mention are the graduates' practical and research skills. In general, UNPT students come from the city, have a better working environment and speak their languages well. *"New doctors come from all universities, there is no difference in quality. Two out of three vice-directors of the hospital are from UPNT. Many key doctors in the hospital come from both universities. But on a personal account: even though I studied at UMP, my children want to study at UPNT because it offers a firm basis."* (Hospital Director).

The Ho Chi Minh City Health authorities affirm that UPNT graduates, more than graduates from other universities, are inclined to work at the community health level. According to the Ministry of Health, UPNT is playing a very important role in training medical workers and doctors to Southern and Central high land provinces in general and to HCMC in specific. *"The Government strongly believes in the training capacity of UPNT, (...). People do think that UPNT is among the best medical universities in Vietnam"*. The Ministry of Health also affirms: *"Many students register for education with UPNT when they prepare the file for national examination for the education in universities. It means that the students also believe at the good training quality of UPNT."*

Before 2008, when UPNT was still a training centre, graduates only had a six year general medical training. Since then, various specialisations have been offered so that now UPNT delivers not only general doctors, but also specialists. Many health professionals from the HCMC health services participate in post-graduate training at UPNT (Continuous Medical Education - CME). This, according to many interviewees, would not have been possible without support from the IUC programme. While before 2008, students in their last year of studies only participated in examinations, now they must also prepare a thesis for graduation. *"The effects are becoming clear in the review of the theses. Some years ago the supervisors would complain very much about the low quality but now they complain less."*

Regarding the employment rates of UPNT graduates, the numbers do not all coincide. Most stakeholders, including university and city authorities, affirm that 100% of UPNT graduates are absorbed by the HCMC's health services. However the data obtained from UPNT and from HCMC Health Service (figure 7) show lower absorption rates: around 65%. It is important to understand the way medical education is organised in Ho Chi Minh City and in general in Vietnam and recent changes that have taken place. Until recently, UPNT recruited students only from the HCMC catch area (city and southern departments) and provided the graduates to the same area. The other medical university in HCMC, UMP, was not allowed to recruit students from HCMC and their graduates were not easily allowed to work in HCMC. Hospital staff (UPNT and UMP alumni) testified that *"for UPNT graduates it is easier to find a job in HCMC. For UMP graduates (that are not HCMC residents) it is more difficult to find a job in the city. Outside the city it is not difficult to find a job. Until this year there was not really a choice where you could study, it depended on your place of residence. That has changed since this year."* According to

the Ministry of Health, the quality of UPNT was the reason why the secretary of the Communist party of HCMC requested UPNT to recruit students from the whole country and not only from HCMC, starting with the intake of new students in 2017.

The employment of UPNT graduates is also linked to the financial support from HCMC to students: *“Annually, the city health department assigns the quantity of students which need to be trained and the job placement to UPNT. The students who have high score at the admission examination will receive financial support of the city during their education in UPNT. Annually, around 50% of students of UPNT get financial supports from the city for their medical education. All the students who are trained in UPNT with the financial support from the city have to work for the public health system for at least five years, and UPNT has always responded well to the requirements of the city health department.”.*

While in theory all UPNT graduates are trained to work for HCMC Health services, in practice graduates may opt for other opportunities. In 2016, for example, 222 graduates were contracted as UPNT staff, 56% of that year’s total graduates. In spite of blurry figures, the evaluators are cautiously confident that no UPNT graduates remain unemployed and that UPNT contributed an impressive amount (more than 4.500 between 2008 and 2016²³) of well educated medical staff to health services in HCMC and Southern Vietnam.

An illustration of the direct link between HCMC’s strategy for expanding health services and employment of UPNT graduates is the recently established third Children’s Hospital, part of an ambitious endeavour by Ho Chi Minh City to expand health infrastructure in order to meet the increasing demand for health care and to relieve the crowded hospitals. In the outskirts of the city the People’s Committee invested in the development of a health campus, including a new campus for UPNT, a state-of-the-art centre for biomedical research, a new oncology hospital and the already mentioned third Children’s Hospital. The hospital opened in January 2017, but is still not fully operational (approx. 50% in use). Until now 270 doctors are working in the hospital and 90% come from UPNT, as a consequence of HCMC policy. Since 2013 HCMC Health Department specifically recruits UPNT graduates (100 doctors per year) that are first placed in pediatric hospitals no. 1 and 2 for specialised training. 150 graduates are still receiving this in-service training (graduation of 2015).

4.2.2.1 Success Case Methodology

In all interviews with stakeholders that had been involved in the implementation of the IUC programme, the question was asked: ‘What in your opinion was the most successful intervention of the IUC? Why?’ And also: ‘What in your opinion was the least successful intervention of the IUC? Why?’ Out of nine respondents, five indicated that UPNT05 (family medicine) was the most successful intervention of the IUC. Four indicated that UPNT01 (strengthening medical education) was the most successful intervention. As a less successful intervention, internal medicine (UPNT07) was indicated by seven respondents. Interestingly, family medicine was also once mentioned as less successful. This will be further elaborated on below. As family medicine and internal medicine both are part of the IUC’s efforts to strengthen UPNT’s educational capacity, both interventions are described here.

4.2.2.2 Success Case: UPNT05 Family Medicine

The history of family medicine in Vietnam goes back to the early 1990s, when Boston University trained six Vietnamese doctors in family medicine. In 2002 the Ministry of Health accepted family medicine as specialisation and started training more human

²³ This calculation is based on the exact numbers for 2008, 2012 and 2016 (figure 7) and estimations for the other years).

resources. The promotor of the PIC in family medicine in UMP, who was also trained in Boston, provided this specialisation training and trained among others one UPNT staff member in 2002, who later became the local promotor for the family medicine component in UPNT (UPNT05). In 2003, another of the specialists trained in Boston who was at that moment the Director of HCMC Health Department met an expert from the University of Liège and asked for his support for the development of family medicine in HCMC. Both the IUC component and the PIC project were developed to support this initiative and both were supported by the University of Liège. At that time, very few people in HCMC knew about family medicine, so a task force was created for planning the development of family medicine in HCMC and UPNT.

UPNT called for competitive applications from young and dynamic doctors to the sponsored training on family medicine in Belgium. A doctor from 115 Hospital with an MSc in France was selected to do the PhD in Belgium with support from the IUC. After the graduation, he came back to Vietnam and works as a family medicine specialist in UPNT. The development of family medicine in UPNT was especially supported by the vice-rector.

Key achievements

With efforts from all the stakeholders including UPNT, the HCMC Health department, and the hospitals in HCMC, the IUC has made great strides in establishing family medicine inside the UPNT. The major achievements include:

- A key Department of Family Medicine that provides 30 mandatory sessions to all students and fee-based training courses on family medicine to interested doctors.
- UPNT has provided training on family medicine to doctors/specialists who work in hospitals, health centers/departments in the Central Highland and Mekong delta provinces with hundreds of training courses per year.
- All the teachers of UPNT have participated in family medicine training and more than half of the teachers have been mobilised to deliver training sessions on family medicine.
- A family medicine clinic has been established and operates with full equipment and available doctors on board.
- Family medicine is a mandatory subject for all students. Until now, three promotions have been delivered with knowledge of family medicine (approx. 2000 general physicians).
- UPNT offers post-graduate specialisations in family medicine: until now 15 promotions of three months (70 specialists) have been delivered, two promotions of two years specialisation have started.
- Key family medicine teachers from UPNT play the role of advisors to the HCMC health department and MoH in drafting the national and regional strategy, action plan and guidelines on family medicine.

The IUC's support of family medicine has also achieved good results and impacts outside of UPNT. Major results and impacts include:

- The MoH has promulgated Decision No 935/QD-BYT dated March 22, 2013 for the approval of the National Program of the development of family medicine from 2013 to 2020 with technical advice from UPNT, University of Medicine and Pharmacy in HCMC, Hue, Can Tho and University of Medicine in Hanoi, Thai Nguyen and Hai Phong. The Family Medicine National Program aims at achieving six results, including: (1) Available family medicine model for

replication; (2) Available electronic database of the followers; (3) Available management guidelines to family medicine implementation; (4) Available human resources for national rollout period; (5) 80 family medicine clinics established and operated in the whole country; (6) Available evaluation report for the development of the Family Medicine National Roll out action plan.

- Eight months after the issuance of the MoH Decision No 935/QD-BYT, the HCMC People Committee has also promulgated the Decision No 6327/QD-UBND dated November 30, 2013 for the approval of the HCMC Family Medicine Program to 2020. The experience and technical inputs used for the development of this decision come from the pilot model of family medicine in three district hospitals (District 10, Binh Tan and district 2) with technical support from the UPNT and funding from IUC.
- HCMC has been recognised by MoH as a leading province in implementing the Family Medicine National Program, thanks to the good capacity and technical support from UPNT. 237 Family medicine cabinets have been established in HCMC, including 20 cabinets in hospitals, 25 private cabinets and 191 cabinets in commune/ward health centers and one in UPNT. All the doctors who work at Family medicine cabinets have access to three months training on family medicine, mostly provided by UPNT. HCMC is using a successful family medicine implementation model for learning and replication to other provinces in the South of Vietnam.

Impact

The most important impact of all combined efforts on family medicine (not in the least the ARES support via HCMC universities) is the improved awareness of decision makers and doctors on the development of family medicine. Comprehensive legal documents have been developed, institutionalised and implemented to support the development of family medicine in Vietnam and in HCMC.

Two key objectives of the development of family medicine in Vietnam are to help reduce patient overload at provincial and national hospitals and reduce the costs to the health services to the patients. According to the MoH report on the ten years (2005-2015) of implementation of National Resolution 46 on the protection, care and improvement of people's health, the central hospital overcrowding has basically been resolved: Hospital K, National Hospital of Endocrinology, National Hospital of Paediatrics reduce 60-70% of beds that have more than one patient to 6-7%, and the interviewed representatives of MoH believed that the development of family medicine in Vietnam has contributed to this important achievement. However, in HCMC, the evaluators did not find proof of impact on health service provision. *"Until now the impact is very modest (nihil) because the Vietnamese people do not trust family doctors, they prefer state of the art hospitals with impressive equipment and infrastructure. Especially in the cities they have the choice to go to the hospitals. Assurance policies influence a little bit, but this is only for the cabinets in the 20 hospitals and not for all other cabinets, including the university's clinic, which receives very few patients. In the countryside where there are less hospitals the concept of family medicine is easier to introduce."* Differences between HCMC and the national level can be explained by the fact that population growth in HCMC is extremely high, which makes it difficult to keep up with infrastructure and other capacity development. Also, it has been explained that the effect of family medicine is much bigger in rural areas, where patients do not have the option to go to a hospital instead of first line health care. *"We achieved confidence from the government and politics. Now we have to persuade the assurance companies. They do not want to pay for primary health care and prevention because they are afraid that it will cost them too much. But they must understand that primary health care and prevention will save a lot of health care spending later on."*

The evaluators visited various family medicine cabinets in the university, hospital and community. The concept still receives little acceptance from patients and from potential

family doctors. Few doctors are interested in working within the community: a family doctor in a community cabinet who was interviewed said that she continued working after her official retirement age because no replacement could be found. All 100 family medicine patients that were registered in the community cabinet would have to move to another cabinet and another family doctor, if available. *"Quality is more important than numbers. Quality of services is most important. The hospital has 15 community cabinets but only 2 are successfully implemented through lack of competencies of the HHRR. It is hard work at community level, the work comes on top of already a hard job and they do not receive enough support from the community. Personal commitment is key here."* (Hospital Director).

That still a lot has to be done to improve the quality of Family Medicine in HCMC is illustrated by the next quote of UPNT staff: *"We asked two questions to the official from the HCMC Health Services who is in charge of family medicine. The first question is "how many Family Medicine cabinets have met the required standards?", the answer was 0. And the second question is "with the evaluation scale from 1 to 10, 1 is worse and 10 is excellent, what scale does he give to the services of the established cabinets?", the answer was from 1 to 2."*

A lot remains to be done to improve the quality of the service and to achieve acceptance by patients and doctors. However, national, local and university decision makers remain convinced of the importance of the concept of family medicine as an effective strategy for achieving efficient and quality health care in Vietnam. *"The minister asked exactly the same question: how long before Family Medicine will be accepted in Vietnam and working as it should? The answer: maybe another 15 years. We must focus on good care and good communication."*

Success factors

It is interesting that even without much tangible impact of this component of the IUC on health provision and health situation, most IUC stakeholders still think it is the most successful case of the cooperation programme. (The one stakeholder that mentioned the same component as the least successful obviously based his opinion on the lack of impact on society). The evaluators identified the following factors that contributed to the success of the case:

- Long-term support from the Belgian universities via various support programmes (IUC, PIC, WBI), together with support from other donors (USA).
- Alignment with and strengthening of national and local policy priorities.
- Good personal and professional relations between UPNT and Belgian partners, facilitated by the UPNT staff's capacity for French language.

4.2.2.3 Least successful: UPNT07 Internal Medicine

Although the development of post-graduate training in internal medicine (UPNT07) was considered top priority at the start of the IUC cooperation in 2008, there was no follow-up during the implementation of the IUC. The reasons given for this were mainly that there was not enough devoted staff on both sides. Both promoters in both countries were overloaded with work. In addition, it was remarked that no French-speaking candidates could be found for coordinating the component nor for staff training in Belgium.

While UPNT05 on Family Medicine generally was considered a success, although it has not yet shown impact on health service provision, UPNT07 is generally considered least successful. Paradoxically it is very interesting to note, that the Department of Internal Medicine is one of the UNPT's most successful departments, in terms of quality of staff and number of students. It even was the first department to provide post-graduate

training, which was the objective of this IUC component, but without interference from the IUC. As UPNT authorities put it: *"It was definitely a priority for UPNT, but maybe one that could also be achieved with local support."* The difference between family medicine, which was merely unknown in Vietnam at the start of the cooperation, and internal medicine, which already existed with ample expertise in other Vietnamese universities, is obvious. An important lesson that can be mentioned here, therefore, is that a lack of added value of the international support negatively influences the success of the intervention.

4.2.3 Effectiveness on outreach capacity

One of the components of the IUC programme (UPNT04) aimed at strengthening Hospital-University collaboration. As UPNT does not have its own teaching hospital, the collaboration with the hospitals is very important, in the first place for offering students opportunities for medical skills practicing. The IUC contributed to a formal framework and policy for Hospital-University cooperation in which the practical skills training of undergraduate students is organised, as well as joint research between hospital and university staff and the in-service training of hospital staff as part of the Continuous Medical Education Programme. Information from the Blood Transfusion and Hematology Hospital BTH indicates that in the academic year 2011-2012, 144 students practiced in BTH. In 2015/2016 this number was 703 and in the current academic year 822 UPNT students do their practice in BTH.

As a consequence of the IUC, in 2017 UPNT had 54 formal MoUs for cooperation with hospitals, which specified the number of students doing their practical skills, their supervision, the continuous education opportunities for hospital staff at UPNT and the possibility for joint research. During, and as a consequence of the IUC, the cooperation with the second biggest hospital in HCMC, hospital no. 115, was officially approved by the People's Committee of HCMC, which is considered very important in order to have all aspects of the cooperation available at the highest political level. After conclusion of the IUC UPNT achieved another formal MoU with the Binh Dan Hospital to be signed at the highest level. Although this was not a direct consequence of the IUC, it was a result of the capacity built under the IUC.

The Hospital-University cooperation component of the IUC programme (UPNT04) led to the establishment of the Office for Clinical Practice Affairs, which is responsible for all Hospital-University cooperation, including the development of strategies and policies, the implementation and the evaluation. This office gives follow-up to the MoUs and develops new MoUs. An example is the cooperation with the new Children's Hospital No. 3. As this hospital is not yet fully operational, there is no capacity yet for receiving students. However, the hospital and UPNT plan on having a faculty office in the hospital as of 2018 and an MoU is under construction.

The internal evaluation of the formal MoU between UPNT and Hospital 115, the largest hospital in HCMC, signals various positive results and opportunities for cooperation to be extended also to other hospitals. Concrete results are²⁴:

- Training of undergraduate and postgraduate students.
- The hospital has contracted 22 lecturers of UPNT, including two as heads of clinical departments.
- UPNT has appointed six doctors of the hospital as heads and deputy heads of department including three deputy directors of the hospital.

²⁴ Report of the results of three years implementation of the pilot project of Hospital-University Cooperation (UPNT, 2017)

- 40 doctors of the hospital are teaching clinical diagnosis to UPNT students
- Regulations on the working conditions of lecturers and students have been established.
- The hospital has created favorable conditions for postgraduate students and faculty members to carry out theses and dissertations through the Science Council of the university.
- There are a number of research topics co-conducted by teachers of UPNT and doctors of the hospital.
- UPNT has and will continue to support the necessary equipment for clinical teaching to the hospital when requested.
- UPNT has created favorable conditions for the use of classrooms and lecture rooms when necessary.
- UPNT library has been providing scientific information and materials to the doctors and clinics of the hospital when needed.
- The hospital and the UPNT develop joint social activities, such as arts and sports.
- There are collaborations in scientific research between the UPNT and the hospital, many articles have been published in reputable journals in the country and some articles have been published in international magazines.

A Joint Science Committee has not been set up yet but is still planned. The hospital tried to support some lecture halls and classrooms for students but lacked space, so lecturers and students have to go back to UPNT for clinical teaching.

Here it is also relevant to mention the increased participation of UPNT staff in national and international committees on nutrition, medical pedagogy, family medicine, hematology, etc. Various stakeholders in UPNT and HCMC health services also affirmed that the relations between both institutions, which had always been strong and direct, improved considerably with the increase of quality of UPNT, making the university a much better and reliable partner for the city's health services than in 2008.

4.2.4 Effectiveness on organisational strengthening

The IUC programme was explicitly oriented towards all aspects of the university and towards all staff and students. Especially in the phasing out, efforts were made to institutionalise IUC achievements to strengthen the organisational capacity of the university for research, education and outreach. As a consequence, many units, offices and departments were established where policies and strategies were developed and implemented, and where the staff that had been trained during the IUC implemented the strategies, curricula, research, diagnostic and treatment protocols, supported by systems and infrastructure:

- Department of Family Medicine
- Department of Family Medicine Nursing
- Family Medicine Clinic
- Evaluation and Quality Assurance Department
- Student Support Unit and Career Orientation
- Office for Scientific Research Affairs

- Biomedical Research Centre
- Office for Clinical Practice Affairs
- Language lab

This institutionalisation was an important success factor for impact and sustainability (refer to chapter 4.3).

The evaluation and testing methodologies were supported by investments paid for by the HCMC budget for 400 computers and very much contributed to an improvement of the quality of teaching and learning but also to efficiency (digital testing).

The procurement of University Management Information Systems for human resources, student affairs and finances under the phasing out was considered less successful. During the PO a software was developed for HRM, finances and academic and student affairs. After the software was developed, HCMC finance department came with another mandatory system for financial management. Until now, only the student application has been tested. The great variety of different software programs that are not connected or compatible poses a considerable management problem.

Something similar happened with the e-learning platform during P3: a system was selected that turned out not to be the best fit for UPNT. However, the lecturers who had been involved in this activity found another system that was better suited by themselves: *"When I came back from the first mission, I suggested the establishment of the TVI VN program for the Assessment and Evaluation in PNT University of medicine. I also used this program for analysing the MCQ items of some final examination of UPNT. I modified the RASCH model to measure about the specificity of the test. (...) Because we didn't have enough money to set up the same system in the SMART unit (about 300.000 USD), I found the best solution to be able to use TVI VN program in my university by using the converted software. Our team also modified the Chamilo platform to become a suitable version for our objectives about the elearning activities such as: learning paths, voice chat, reports..."*

This shows that the IUC not only helped UPNT to strengthen its organisational capacity, but also to increase their capability to adapt and self-renew, if necessary (refer to the five Cs described in Chapter 3.1.4).

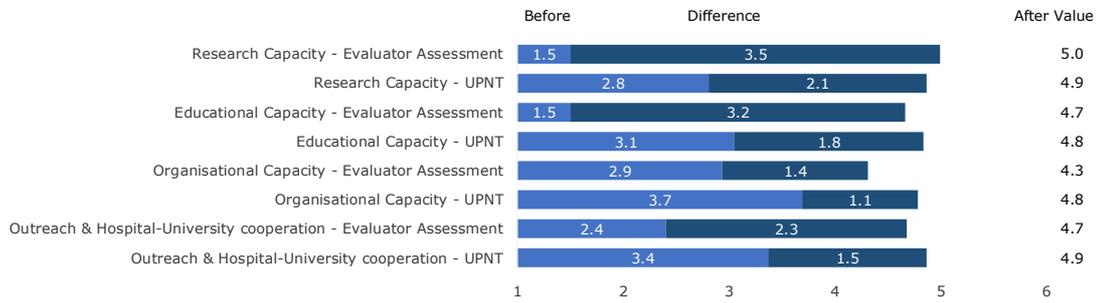
One specific objective of the IUC programme was to obtain accreditation in accordance with national standards. As part of the PO, third objective, UPNT undertook a trajectory to obtain national accreditation. They worked closely with accreditation experts of ULB on the internal evaluation and submitted the internal evaluation for approval to the MOET. At the beginning of 2016 MOET approved the internal evaluation, but before UPNT could start with the external accreditation, MOET changed the rules and opted for international accreditation. So now UPNT must partially re-do the internal evaluation with the international (AUN- ASEAN University Network) criteria. UPNT staff consider this feasible, on the basis of the experience and knowledge gained from the cooperation programme. The deadline for the accreditation is 2020. The self-accreditation is planned for 2018 and they hope to be able to call for external accreditation experts in 2019.

4.2.4.1 CDI assessment

The qualitative information obtained by the interviews and testimonials as described in the preceding chapters are confirmed by the results of the CDI assessment (refer to Ch. 3). Figure 10 shows the CDI assessment by the evaluators (n=2) and Vietnamese stakeholders (n=24) of UPNT's capacities for education, research, organisational and outreach at the beginning of the period under evaluation (2008) and at the end of the IUC (2016).

Figure 10: CDI assessment research, educational, organisational and outreach capacity 2008-2016

Results of the field mission

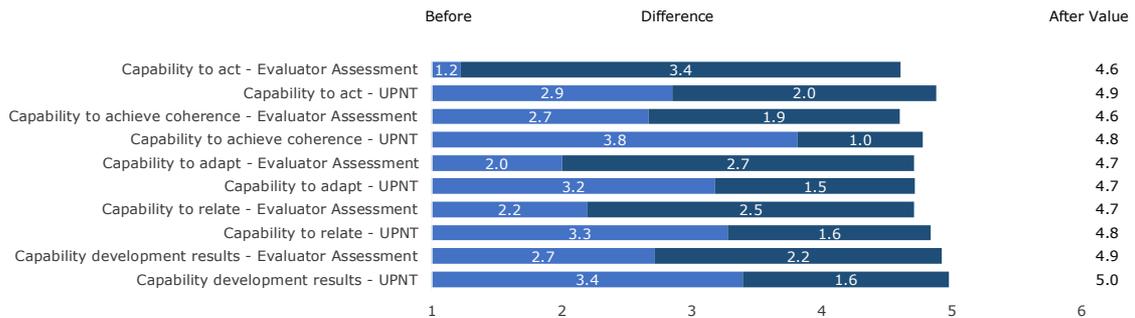


Source: Syspons and Nuffic 2017

Overall, the evaluators assess the starting situation less positively than the UPNT stakeholders and the increase in capacity more positively²⁵. However, the trends are similar: the graphic shows that the greatest increase is in research capacity (3.5 and 2.1 respectively), followed by educational capacity (3.2 and 1.8 respectively) and outreach/university-hospital cooperation. Organisational strengthening was considered the least successful (an increase of 1.4 and 1.1 respectively), which is illustrated by the not very successful procurement of University Management Information Systems for Human Resources, Student Affairs and Finances under the phasing out (refer to Ch. 4.2.3). In this regard it is also important to mention the relatively high starting point for organisational capacity, implying less felt need for management strengthening than for education, research and outreach. As mentioned earlier, UPNT only became a fully-fledged university offering postgraduate degree programmes at the very beginning of the period subject to evaluation. This created a particular need to enhance research, education and outreach.

Figure 11 shows the CDI assessment by the evaluators and stakeholders of UPNT’s five capabilities at the beginning of the period under evaluation (2008) and at the end of the IUC (2016).

Figure 11: Organisational capacity baseline of UPNT in 2008 and 2016



Source: Syspons and Nuffic 2017

Figure 11 shows the same overall trends as figure 10: the evaluators assess the starting situation of the five capabilities less positively than the UPNT stakeholders and assess the subsequent increase in capacity more positively. However, the assessment of the individual capabilities follow the same trends: the increase in the capability to act is the strongest (3.4 and 2 respectively), followed by the capabilities to adapt, to relate and to deliver development results (respectively 2.7, 2.5 and 2.2 for the evaluators and 1.5, 1.6 and 1.6 for the UPNT stakeholders). The capability to achieve coherence is considered least increased by both the evaluators and UPNT stakeholders (1.9 and 1 respectively) but already had a relatively high starting point, illustrated by the coherence

²⁵ As to the reasons for this one can only speculate. Maybe looking from the outside and in retrospect, the view of the evaluators is more extreme than for the people who experienced the changes from within.

between the university's governance, strategic planning and the priorities reflected in HCMC's policy and strategic planning. In 2016 all five capabilities are considered between 4,6 and 5 on a scale from 1 to 6, which is all very positive.

4.2.5 UPNT is an actor of change and contributes to development

4.2.5.1 Contribution to public policy changes

Various stakeholders confirmed the contribution of UPNT at the local and even national policy level and confirmed the importance of the IUC cooperation on these issues. This concerns family medicine and medical education especially. On a more modest level, UPNT staff contributed to local policy making on, for example, physical activities for college students and policy advice on obesity, dust pollution and oncology.

The introduction of family medicine changed the health scenery in the country (although slowly). This cannot be attributed to UPNT or the Belgian cooperation exclusively, but they definitely had (and still have) an active role, according also to the Ministry of Health, not only in HCMC but on the national level. For example, UPNT was invited by the Ministry of Health to organise short training courses (three months) to doctors in the Northern and Central Highland provinces in Vietnam and to support the roll out of the national action plan 2016 -2020 on family medicine clinics. UPNT was the first university in Vietnam to defend a PhD in family medicine, a direct product of the ARES cooperation. The Ministry also approved UPNT's 3-month's specialisation for practicing doctors. This set the tone for policy development in family medicine at local and national level. The role of HCMC people committee in the approval of the action plan to develop the family medicine curriculum in HCMC to 2020 was also very important. The university and the People's Committee acted together in these developments and were supported by various international partners, including USA and Belgium.

UPNT staff testify: "UPNT and HCMC pulled together in the promotion of family medicine. HCMC decided in 2013 to introduce family medicine as part of the city's health system. HCMC People Committee approved the action plan to develop the family medicine system for the period 2013-2020. At the present time, the city opened 236 cabinets of family medicine including 20 cabinets in hospitals, 8 private clinics, 17 private consultations, 191 family medicine rooms in commune health centres and one clinic in UPNT. The plan is to have 2000 family doctors and 2000 family medicine cabinets.

Later the concept of family medicine was also adopted by the Ministry of Health. The national policy regarding family medicine was too much oriented by the US model: based on hospital and state of the art equipment. UPNT now tries to change the model, focusing on quality of the case and avoiding the focus on hospitals. The national government now also tries to switch to this strategy. It is not the IUC or UPNT that triggered all this, but both the university and the IUC aligned closely with local and national policy and needs."

The cooperation program has also led to a joint action plan on development of health services and health care of health centres, medical universities and hospitals. It was agreed in the joint action plan that the district and community health centres are responsible for primary health care. The family medicine units in district and community health centres are responsible to diagnosis and treatment to reduce the overload of the higher level hospitals.

Another example of the influence of the cooperation between UPNT, the HCMC People's Committee and Belgian universities on local health policy development is the development of the new health campus on the outskirts of the city, which includes the development of a new campus for UPNT, a new children's hospital, a new oncology hospital and a biomedical research centre. The HCMC Health authorities testify: *"The cooperation with the Belgians led to better trained staff. This increased the need for better equipment. Now the city invested in state of the art infrastructure. The leader of*

HCMC saw the example of the testing centre in Brussels (St Luc) and now constructs an identical copy in HCMC. Also, the health system's management and health care have been improved on the basis of the cooperation."

Thanks to its results in medical education, UPNT is one of the Vietnamese universities receiving financial support from the World Bank for its national project HPET (Health Professionals Education and Training for Health System Reforms, launched in February 2016) and as such plays a leading role in national policy development in medical education.

Various IUC scholarship holders participate in specialised national or international associations and through those gremia have an influence on policy development: e.g., World Organization of National Colleges, Academies and Academic Associations of General Practitioners (WONCA), European Association of Nutritionists, National Institute of Nutrition, Evaluation Committee of Health Service of HCMC (Vice-president). It is the responsibility of the Evaluation Committee to evaluate the teaching documents of the Continuous Medical Education Program.

4.2.5.2 Health system strengthened

Reference is made to Ch 4.2.2, where we concluded that between 2008 and 2016 UNPT contributed a total number of more than 4.500 good quality health professionals to HCMC Health Services. The quality and quantity of these graduates increased significantly between 2008 and 2016, which would not have been possible without the contribution of the IUC programme. In addition, after 2008 UPNT started to offer post-graduate training and medical specialisations in various subjects, oriented to graduates and health professionals (Continuous Medical Education).

The research undertaken by UPNT staff and students has had a direct impact on provision of health. For instance, one of UPNT's post-graduate students is director of the rehabilitation hospital. His thesis research is based on clinical problems and relevant for the hospital and its patients.

One hospital director indicates that *"Almost all department heads of the hospital have been trained in Belgium. Belgium helped us to make good contacts with communities in the province. In the end the patients receive better medical treatment."*

Research projects that originated from the IUC, such as bone marrow transplantation techniques or subjects related to family medicine are closely coordinated with hospitals and/or the community committees. An example is the research by a former IUC coordinator, about non-epidemic diseases such as hypertension and diabetics. During a first phase she did an analysis and published an article in a national journal. In the second phase she proposes a pilot intervention. This will have direct impact on the at-risk population.

As cooperation with the community is a priority for UPNT and part of its mission, UPNT's research is more directed towards the community than other universities. Being part of the HCMC health system also provides more opportunities for community based research. UPNT researchers can more easily access community committees and obtain approval for research.

One important expected result of the introduction and promotion of family medicine in HCMC (and in Vietnam) is to avoid hospitals being overloaded with patients. As explained in Ch.4.2.2.2, this has not yet been achieved. Family medicine experts expect that this might take another 15 years to take effect.

4.2.5.3 Population's health improved

The final aim of all IUC cooperation phases of the ARES cooperation with UPNT was to improve the health situation in Ho Chi Minh City (and South Vietnam). No baseline situation was described, and no indicators mentioned. It was complicated to find solid health indicators on the level of the city or southern region that were comparable between 2008 and 2016 (refer to figure 12 below).

In general, the Ministry of Health testified that the health situation in Vietnam improved as a result of ten years (2005-2015) of implementation of National Resolution 46 on the protection, care and improvement of people's health: *Vietnam has achieved many important achievements. For example, the average life expectancy in 2005 (the first year of implementing Resolution 46) was 70 years, the result was 72.8 years in 2010, 73.2 years in 2014. The incidence of infectious diseases has been decreasing, with many of the more dangerous diseases so far contained and repressed, achieving the Millennium Development Goals (MDGs) from 1990 to 2015 in the health sector. According to the United Nations, Vietnam is one of 9 countries to achieve progress in reducing maternal mortality, and one of 23 countries that achieved progress in reducing child mortality, and a rapid reduction of child malnutrition. People in most regions have better health care; the Human Development Index (HDI) and most of the general health indicators of Vietnam exceed those of countries with the same income per capita. The grassroots health has gradually been strengthened and upgraded, becoming the decisive factor in the success of healthcare in Vietnam. Up to now (end of 2017), 100% of communes, wards and towns have health stations; 74.9% of commune health stations have doctors; 96% of commune health stations have midwives or obstetricians; 75% of villages and hamlets have health workers, 94.6% of which are in rural and mountainous areas. About 80% of community health stations perform the medical examination and treatment with the health insurance and pilot implementation of management of some chronic diseases such as asthma, hypertension and diabetes at the commune health stations, contributing to reducing the load for the upper hospitals. Central hospital overcrowding has been resolved basically: Hospital K, National Hospital of Endocrinology, National Hospital of Paediatrics reduced 60-70% of beds that have more than one patient to 6-7%. The vaccine production technology in the country has met 10/11 vaccines used in the National Extension Program. And the medical universities for sure have contributed greatly to these achievements."*

Figure 12: Health indicators HCMC 2008, 2012 and 2016

Health statistics in HCMC ²⁶	2008	2012	2016
infant mortality rate	-	7.8	7.16
under 5 mortality rate	-	9.25	8.6
maternal mortality rate	-	7.1	2.3
cancer: incidence	58,073 0.84%	73,035 0.94%	103,979 1.23%
cancer: mortality	132 0.23%	104 0.14%	89 0.09%
cardiovascular diseases: incidence	77,823 1.12%	99,095 1.28%	135,445 1.61%
cardiovascular diseases: mortality	722 0.9%	537 0.54%	579 0.43%
diabetes: incidence	14,316 0.21%	20,382 0.26%	20,270 0.24%

²⁶ Rate: number of deaths per 1,000 individuals per year

Incidence: absolute numbers and percentage of total population

Mortality: absolute numbers and percentage from incidence

diabetes: mortality	34 0.24%	21 0.1%	24 0.12%
chronic respiratory diseases: incidence	31,862 0.46%	35,918 0.46%	50,136 0.6%
chronic respiratory diseases: mortality	29 0.09%	41 0.11%	99 0.2%
HCMC population	6,946,100	7,750,900	8,426,100

Source: HCMC Health Department 2017

Figure 12 indicates developments in HCMC over time for some health indicators. Infant and under 5 mortality have decreased, and maternal mortality has decreased significantly. Incidence of cancer, cardiovascular diseases and diabetes increased, but mortality of these diseases decreased. Only for chronic respiratory diseases mortality increased relatively and absolutely more than incidence. As these are mostly absolute numbers, it is important to note that HCMC is a fast-growing city and population increased from 6,946,100 in 2008 to 8,426,100 in 2016. Regarding the positive developments we have to take into account the positive developments on a national scale, indicated above by the Ministry of Health and we cannot therefore attribute this directly to the IUC cooperation programme with UPNT. The alarming developments regarding chronic respiratory diseases are understandable, taking into account increasing economic growth, traffic and associated pollution in HCMC. In this regard, we mention the ongoing multi-disciplinary research cooperation between Belgian universities and various universities and hospitals in HCMC on respiratory diseases. Although not part of the impact evaluation, the pertinence of this project is beyond dispute.

While solid, quantitative proof for a cause-effect relation between the support from ARES through the IUC with UPNT and the health situation of the population of HCMC and Southern Vietnam is difficult to find, qualitative information from many different stakeholders confirms the Theory of Change that ten years of broad, institutional cooperation led to a stronger university that produces more and better trained health professionals, relevant research results and impact at policy level. Or, as one of the hospital directors phrased it: *"It may be difficult to prove that UPNT contributes to a better health situation in HCMC, but definitely without UPNT, the situation would have been much worse."*

By way of illustration, small examples by IUC alumni: *"Sure there is an impact: liver and renal transplantation in paediatric hospital no. 2 is very important for public health, this helps improve treatment to children and also to elderly people."*

"I learned to develop simple research techniques to detect deviations in unborn children via the blood of the pregnant mother. This way it is not necessary to take samples of the foetus and we prevent abortions."

While the Ministry of Health indicates improvements at the national level with regard to reducing overloaded hospitals, this effect was not found in HCMC. Being one of the fastest growing cities in the world, it will remain a continuous challenge to keep pace with health service developments.

4.2.5.4 Impact analysis

Based on the reconstruction of the Theory of Change (Ch. 2.2 and annex D), the following key hypotheses underlying the ToC were tested in the field mission:

- If human resources and financial means from Belgian universities, UPNT and ARES are jointly invested in integrated, holistic and long-term capacity development of UPNT, then sustainable strengthening of UPNT's education, research and outreach capacity can be achieved.

The evaluators found ample evidence of strengthened capacity of UPNT to play their threefold mission-role as a university and many stakeholders testified of the decisive role Belgian support had played to achieve this capacity strengthening. Although no quantitative data could be found on the relative importance of the ARES support, the evaluators are cautiously confident on the basis of the qualitative information that the ARES support was relatively more important than that of other donors in time frame (since 1998 and still ongoing), extent (integrated capacity development aiming at education, research, outreach and management through IUC) and depth (research strengthening in multi-actor cooperation with participation of Belgian and Vietnamese universities and Belgian and Vietnamese hospitals). Therefore the evaluators are cautiously confident that this hypothesis is true.

- If UPNT staff is better trained, this will lead to better education, research and outreach capacity.

The evaluators are highly confident that this is true.

- If UPNT's education, research and outreach capacities are strengthened, this will lead to adoption of diagnostic and treatment practices in HCMC's health system and to adoption of policy advice at the local and national level.

The evaluators found various testimonies that confirm that UPNT and ARES' research projects led to the development of new and improved diagnostic and treatment practices and to a lesser extent also the adoption of the new and improved practices in the HCMC hospitals and clinics. At the local level, the influence of UPNT on health policy is visible (family medicine, health campus) and even the direct influence of the Belgian example is clear (new testing centre copied from Brussels). The evaluators are therefore highly confident that this hypothesis is also true.

- If UPNT's education, research and outreach capacity is strengthened, this leads to better medical staff delivered to HCMC's Health system.

The evaluators have found ample evidence and testimonies that this is true and are therefore highly confident.

- If better trained medical staff is working at HCMC's Health system, this leads to improved health care in HCMC and South Vietnam.

No direct proof could be found for this hypothesis, however the evaluators are cautiously confident that there is a direct cause-effect relation between the quantity and quality of the health professionals and the quality of the health service provision. While there are other influencing factors such as equipment and infrastructure, better trained health staff will most probably have a positive effect on quality of the service provision. Therefore the evaluators are cautiously confident that this hypothesis is true.

- If HCMC's Health system is strengthened with staff and graduates from UPNT, this leads to improved health situation in HCMC and South Vietnam.

The evaluators found an improvement of various health indicators for Ho Chi Minh City, but these indicators improved all over Vietnam and therefore cannot witness for the UPNT and IUC case. While there are other influencing factors such as increase of the number of patients, increasing pollution, epidemics, etc., the evaluators are cautiously confident that an increased quality of health service provision will have a positive effect on the health situation in the area (or at least compensate partly for any negative influences).

- If collaboration between UPNT and HCMC's hospitals and health centres is strengthened, this leads to better practical training of medical students, to better (joint) research by university and hospital staff and to development and application of relevant diagnostic and treatment techniques.

Various statements and testimonials supported this hypothesis, showing how practical training for students increased exponentially, and showing the effectiveness of university-hospital cooperation in research for development and application of relevant diagnostic and treatment techniques. At the same time, the rapidly increasing student numbers place a heavy burden on the capacity of hospitals to absorb these growing numbers of students and effectively supervise them. Still, evaluators are highly confident that this hypothesis is true.

- If undergraduate and postgraduate training in family medicine is introduced in UPNT, this will lead to a better first line health care and prevention system and to less overloaded hospitals in HCMC.

The evaluators could not (yet) find evidence that proves this hypothesis. The introduction of family medicine at national as well as at local (HCMC) level is by all stakeholders considered as an important strategy to improve effectiveness and efficiency of Vietnamese health care. The introduction of family medicine in UPNT led to an increase in health professionals specialised in family medicine as well as an improvement of the quality of general medicine career with family medicine components. However the application of family medicine is not yet accepted by patients, not yet supported by health insurance schemes neither is its introduction into the health service organisation without challenges. Various stakeholders affirmed their conviction that family medicine will in time achieve its goal but this may take as long as 10, 15 years. At this moment therefore the evaluators are neither confident nor not confident that this hypothesis is true.

Figure 13 Assessment of hypotheses

		Hypothesis	Qualitative assessment	Quantitative scale
Outcome	1	If human resources and financial means from Belgian universities, UPNT and ARES are jointly invested in integrated, holistic and long-term capacity development of UPNT, then sustainable strengthening of UPNT's education, research and outreach capacity can be achieved.	Cautiously confident that () is true	0.70 - 0.85
	2	If UPNT staff is better trained, this will lead to better education, research and outreach capacity.	Highly confident that () is true	0.85 - 0.95
Impact	3	If UPNT's education, research and outreach capacities are strengthened, this will lead to adoption of diagnostic and treatment practices in HCMC's Health system and to adoption of policy advices at local and national level.	Highly confident that () is true	0.85 - 0.95
	4	If UPNT's education, research and outreach capacity is strengthened, this leads to better medical staff delivered to HCMC's Health system.	Highly confident that () is true	0.85 - 0.95
	5	If better trained medical staff is working at HCMC's Health system, this leads to improved health care in HCMC and South Vietnam.	Cautiously confident that () is true	0.70 - 0.85
	6	If HCMC's Health system is strengthened with staff and graduates from UPNT, this leads to an improved health situation in HCMC and South Vietnam.	Cautiously confident that () is true	0.70 - 0.85
	7	If collaboration between UPNT and HCMC's hospitals and health centres is strengthened, this leads to better practical training of medical students, to better (joint) research by university and hospital staff and to development and application of relevant diagnostic and treatment techniques.	Highly confident that () is true	0.85 - 0.95
	8	If undergraduate and postgraduate training in family medicine is introduced in UPNT, this will lead to a better first line health care and prevention system and to less overloaded hospitals in HCMC.	Neither confident nor not confident that () is true (or false) - no idea	0.5

Source: Syspons & Nuffic, 2018

4.3 Analysis of the Sustainability of the IUC

4.3.1 Institutional sustainability

As has been elaborated in the preceding chapters, the outputs delivered by the IUC are well institutionalised in the organisation: offices, departments and units are established, where curricula, systems, protocols and processes are maintained and consolidated by upgraded staff. Staff retainment is high. The different project components led to firm teams (medical education, family medicine, research team, university-hospital cooperation), to support the teachers and the students. The involvement of the university authorities in the IUC cooperation contributed to this institutional sustainability.

The strong partnership with the public health services system, as well as the district and community People's Committee contributes to sustainability. The academic success of UPNT led to an even stronger relation with the city: *"The link with HCMC Health service was always tight, but now there is much more recognition. The relation is now closer. The People's Committee's leader went to Belgium together with the director of health services and a delegation of UPNT. HCMC invested heavily in the university since 2015."*

4.3.2 Technical sustainability

The investments made by the cooperation programme are well sustained and maintained by the university, with the help of HCMC health services. *"If we need something, we just ask the city"*.

The staff trained in the IUC programmed showed their ability to adapt some technical improvements and systems introduced by the IUC programme to local needs (e.g., e-learning platform). On the other hand, the investments done for the language lab and the introduction of moodle for medical English do not seem sustainable: the massive growth of student numbers made the capacity of the language lab insufficient and limitations had to be made in the available competencies that can be learned. The moodle platform probably will not be maintained by the university's ICT department and

the language team has been recommended to adapt to the new platform that is being introduced. With nine team members trained in Belgium it should be possible to make the change and successfully adjust to the new platform.

4.3.3 Academic sustainability

UPNT is able to improve the quality of its training because it has qualified teachers and continues receiving support from the city for infrastructure improvement and external organisations for education quality improvement.

Academic sustainability is also strengthened by the parallel and subsequent implementation of IUC cooperation, smaller research projects which include UPNT, Belgian universities and hospitals and individual scholarships.

The university was not yet able to receive external accreditation due to a procedural change within the Ministry of Education and Training (MOET). However, enough capacity has been built and experience gained within the IUC programme with the national procedure that we are confident that the university will be able to develop the documents and procedures for international accreditation.

4.3.4 Financial sustainability

Financial support from HCMC to the university is stable and considerable. In view of the steady growth figures for HCMC's GDP (still 8% in 2016), UPNT has confidence in the continuation of this support in the future. This has also been confirmed by the director of HCMC Health Services. In addition, since 2017 UPNT has been allowed to recruit students from the entire country and is no longer limited to the tuition fees set by the HCMC authorities. As a consequence, UPNT doubled the tuition fees. UPNT aims at achieving financial sustainability this year.

The Ministry of Health has promulgated a circular on capacity improvement and continuous learning of health staff, doctors and technicians. All health workers have to attend to continuous education (48 hours per two years for the health workers, 40 hours/year for health officials and 120 hours per five years for doctors and health practitioners). These requirements present opportunities to all medical universities to offer continuous training and receive payment for it. UPNT, assisted by IUC, developed a wide offer of further training opportunities, which is being organised by the Centre for Continuous Medical Education, headed by the former IUC coordinator.

4.3.5 Sustainability of partnerships

The Belgian university development cooperation opened up many new opportunities for external cooperation and support. As has been mentioned, many IUC alumni participate in local, national and international associations and are able to maintain their academic networks. All IUC teams testified that they are still in close contact with their Belgian partners: *"Sure, we consult them, send images, ask for a second opinion, they are happy to reply."* (UPNT alumni). The Belgian promoters interviewed also showed their commitment and interest in maintaining the cooperation with UPNT.

5. Conclusions

5.1 Success factors

- The IUC cooperation between French speaking Belgian universities and UPNT was successful in the first place because staff on both sides were committed and enthusiastic. This includes the management level, which was always directly included in the management of the cooperation programmes and still shows its responsibility and commitment even after the IUC programme has ended. This commitment is also evidenced by low turnover: very few staff members have left the university, although some may be working at other parts of the HCMC health service system.
- Furthermore an important success factor was the alignment with HCMC health policies, which made the IUC programmes very relevant and pertinent. The (financial) commitment from HCMC health policies contributed very much to the effectiveness and sustainability of the programme's achievements. This in its turn was made possible by the favourable economic growth of Vietnam in general and HCMC in particular.
- The alignment with UPNT priorities very much contributed to its effectiveness and sustainability: this contributed to the sense of ownership by the university's authorities. There was also the conjunctural opportunity: in 2008 UPNT officially became a university and had to respond to demands for post-graduate training and research. The IUC supported the university in responding to these new demands. *"With the transfer to university in 2008, UPNT started to offer post-graduate training which require research. The expansion of research activities may not have been induced by the IUC, but its accompaniment was crucial to make it possible".*
- Another important success factor was the broad-based, long-term, integrated capacity development. This very much led to a sustainable capacity strengthening on all different aspects, including the capacity to adjust and self-renew. This approach led to the institutionalisation of IUC achievements by establishing units, departments and centres, where curricula, protocols and systems were sustained by teams of well-trained professionals.
- The human factor seems very important for the success of the IUC programme: the interviews showed much mutual respect and appreciation between Belgian and Vietnamese colleagues and showed still lasting personal and professional relations. *"Success very much depends on personal factors, personal enthusiasm, commitment". "The success of Family Medicine is not in the least because of the relationship with the Belgian promotor. He understands us, he listens to us, he understands our politics."*
- Finally the relative added value of the Belgian support is decisive for the success of the capacity strengthening (e.g., family medicine versus internal medicine).

5.2 Weak points

- The French language was in some cases a limitation: the selection of candidates for scholarships and for other project functions sometimes depended more on French language capabilities than on other skills or competences. It also hindered effective internships in some cases, when interns had to work in Belgian hospitals and could not communicate well with patients.
- The project team complained in general of a high work load for project staff: nine out of ten candidates for a distance education MSc scholarship in Medical pedagogy dropped out; the lack of progress in internal medicine (UPNT07) was partly blamed on lack of time for both promotors.
- It was difficult to find any information on gender policy in UPNT and in the IUC. Most data were not gender segregated. While at the national and local level, the Vietnamese government applies a strict gender equality policy, UPNT indicated that this was not necessary nor relevant for the university and the IUC program did not pay much attention to these policies either. The evaluators met many excellent female UPNT staff, including heads of department and one ex-rector. Two out of five PhD scholarship holders are women. The list of interviewees indicate a majority of women, although the higher management functions were occupied by men. As the gender gap is not easily bridged, the evaluators would still recommend UPNT and ARES pay more explicit attention to gender in content and quota.

5.3 Suitability of IUC modality

As was discussed above, the long-term and broad-based approach from the IUC programme together with its strong alignment with the university's priorities are important factors for effectiveness and sustainability. Most stakeholders, including the rector, confirm this view.

At the same time the complementarity of IUC with smaller research projects definitely shows an added value (refer to 5.4).

5.4 Portfolio approach

Since the first phase of IUC cooperation between UPNT and French-speaking Belgian universities, complementary research projects were implemented. This 'portfolio approach' shows an added value. As one of the Belgian promotors stated: "*IUC and research projects all have their own intrinsic value. No need to choose one or the other. IUC provides a solid base, gives a broad support whereas the PIC dig deeper and can have more concrete and direct results, e.g. liver transplantation*". The evaluation visits to the HCMC hospitals showed the strong and multiple relations between UPNT, hospitals and Belgian partners. Often the research cooperation with the hospitals originated from the specific research projects in which Belgian universities cooperated with both UPNT and HCMC hospitals and contributes to academic sustainability.

The mutual and even tripartite relationships are also reinforced by the individual scholarships awarded by ARES to staff from the university and from the hospitals, which in their turn may lead to a new research project: "*Five students who completed their doctoral theses under this IUC partnership received ARES postdoctoral fellowships to continue their research. Two of them have been involved, since 2017, in a research*

Conclusions

project for development funded by ARES entitled "Building prevention and management strategies for Helicobacter pylori infection in children". (Final report²⁷).

The complementary implementation of IUC, research projects and scholarships contributed to the effectiveness and academic sustainability of the ARES cooperation with UPNT. However, it is important to mention that ARES has not explicitly developed a portfolio approach as a strategy.

²⁷ ARES : Appui Institutionnel Rapport 2016 Version finale, Décembre 2017

6. Lessons learned regarding the evaluation design and used methodology

6.1 General

As was already mentioned in the study report, the evaluability assessment done in the fact-finding mission probably caused a bias towards more successful cooperation cases. The evaluability assessment confirmed that the intervention was evaluable, preventing the selection of interventions that were less well-planned and implemented.

6.2 Specific

The fact-finding mission confirmed the preselected interventions and did not lead to changes in the evaluation subject. The fact-finding mission was very useful to prepare for the field visit. In view of the considerable environmental costs of an extra flight (2.600 kg CO₂, which is 62,5% of the total annual emissions of an average household) the added value of two subsequent missions can be questioned. An alternative could be to have one more extended mission, which would also have less impact on the beneficiaries of the intervention who now had to prepare and receive two missions. The reason for two subsequent missions was not clear to everyone.

The fact that UPNT is part of the HCMC health system and the evaluation had the city's health service director's formal support very much facilitated our job. Without this support it would have been much more complicated to obtain permission to conduct interviews in the hospitals and health centres. Only in one hospital we were not allowed to interview patients without the written approval of the health authorities, in all other cases we found the management, staff and patients of the hospitals at our service and willing to cooperate. For future impact evaluations it is important to have the commitment of the formal authorities, especially in centrally led countries such as Vietnam.

It was complicated to obtain reliable quantitative data to fill in the baseline and the ToC and to compare developments over time. UPNT and the HCMC health department did an enormous job to provide all the data on impact, outcome and output indicators and on health (service) indicators for 2008, 2012 and 2016. The analysis of all project data during the inception phase indicated that the more recent project information is much more complete, both in terms of baseline information and logframe, formulation of indicators, et cetera. This should receive even more attention from donor organisations such as ARES in order to facilitate future evaluations. In order to facilitate impact evaluations, project implementers should at the start of the project not only define indicators to measure project success at the end of the project period (project outcome level), but also some time after project closure (impact level). The possibility could be considered to include an obligation to report on impact indicators for some period after project closure (e.g., five years), for projects and scholarship holders.

It appeared impossible to obtain quantitative information on the university budget and on the influence of different donors on this budget. This omission was already mentioned during the identification of the IUC in 2007. It is clear that UPNT has and had other donors. Also on the level of the health system of HCMC it was difficult to compare the influence of Belgian and other donors. Many stakeholders confirmed that ARES provided

by far the most important, long-term and institution-based support to UPNT, but this could not be substantiated. For future impact evaluations, this information should be mandatory as part of the project planning and reporting requirements.

The comparison of individual scholarship holders with the institutional scholarship holders was complicated, as the background for both kinds of scholarships is very different. The qualitative interviews helped to provide some additional background information. For future impact evaluations it would be worth considering inviting institutional scholarship holders that participate in an institutional impact evaluation to fill in the same questionnaire as the individual scholarship holders. However, this would remain a small number of respondents and therefore not very representative.

The impact evaluation of the IUC with UPNT was done through a mix of qualitative methods. Already during the inception phase it was accepted that a counterfactual could not be constructed in the case of an IUC programme. The evaluators found that the combination of various (qualitative) methods, as recommended during the academic seminar in Brussels at the start of the study, contributed to a reliable base of information to support conclusions and this could be applied to future impact evaluations.

The CDI assessment tool confirmed the findings from the interviews and testimonials and strengthened the basis for drawing conclusions.

The success case method showed that a success case is not necessary completely successful and a not-successful case can after all appear to be quite successful. Still, the evaluators were happy with the method, as it was a quick way to collect opinions on the pros and cons of a limited number of interventions and it led to some clear findings and conclusions. It can be questioned whether the formulation was precise enough ("What in your opinion was the most successful intervention of the IUC? Why?" And: "What in your opinion was the least successful intervention of the IUC? Why?"). A more precise question could have been: "Which intervention showed most impact on strengthening UPNT?" or "Which intervention had most impact on HCMC health situation?" This might have led to other answers, although possibly to the same findings and conclusions.

List of annexes

- Annex A: Bibliography – especially for used secondary data
- Annex B: List of Conducted Interviews
- Annex C: Evaluation design
- Annex D: Theory of Change
- Annex E: Assessment Grid
- Annex F: Data Collection Instruments

Annex A. Country report Vietnam ARES

A.1 Bibliography

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A.2 List of conducted interviews

1. PNT

No	Full name	Sex		Title	Faculty – Organization
		M	F		
1	Dr. Ngo Minh Xuan	x		Rector Activitee R3 responsible	Direction, CUI program
2	Dr. Nguyen Thi Ngoc Dung	X		Ex-Rector	Ear, Nose, Throat CUI program
3	Dr. Phan Dang Dieu	X		Vice Rector Head of department, Activitee 01 and R1 responsible	Direction, Anatomy, CUI program
4	Dr. Nguyen Thanh Hiep	X		Vice Rector	Medical doctor International cooperation Office
5	Dr. Vo Thi Xuan Hanh		X	Head of Department, Project Manager	Health Organisation Department, CUI program
6	Dr. Nguyen Dung Tuan	X		Head of office	QA office, Bio-chemistry
7	Dr. Vu Phi Yen		X	Lecturer	Embryo-Histology
8	Dr. Ho Nguyen Anh Tuan	X		Lecturer	Anatomy
9	Dr. Tran Thi Mong Hiep		X	Deputy head of department	Pediatry, Family Medicine
10	Dr. Tran Ngoc Thanh		x	Lecturer	Physiology department
11	Dr. Nguyen Ngoc Van Phuong		X	Lecturer	Informatics and statistics
12	Dr. Vu Hoang Phuong Thu		X	Researcher	Oncology- Immunology
13	Dr. Dang Chi Vu Luan	X		Lecturer	Hematology
14	Dr. Vo Thanh Liem	X		Lecturer	Family medicine
15	Dr. Trinh Van Hiep	X		Ex-Lecturer Activitee 05 responsible	Family medicine CUI program
16	Dr. Nguyen Ngoc Van Phuong		X	Head of department	Biostatistics
17	Dr. Nguyen The Dung	x		Ex-Vice-Rector Activitee 03 and R2 responsible	Epidemiology, CUI program
18	Dr. Tang Kim Hong		X	Deputy head of Office, Head of department	Research Office Epidemiology
19	Dr. Nguyen Thi My Hoa		x	Head	Post-graduate office and Hematology department
20	Dr. Tran Tien Tai	x		Deputy head	Educational testing and QA, Physiology
21	Dr. Dao Thi Yen Phi		x	Head	Nutrition and Food Safety
22	Dr. Chau Van Tro	x		Head	Dermatology
23	Dr. Au Nguyet Dieu		x	Lecturer	Anatomy

24	Dr. Tran Khiem Hung				
25	Dr. Vu Hoang Phuong Thu		x	Lecturer	Research center
28	Dr. Nguyen Duc Quynh Vy		x	Lecturer	Preclinical
29	Dr. Nguyen Thi Ngoc Trinh		x	Lecturer	Epidemiology
30	Dr. Hoang Thi Hang		x	Lecturer	Foreign language
31	Dr. Vo Thi Kim Thuy		X	Lecturer	Foreign language
32	Dr. Phan Thi Nam Tran		X	Lecturer	Foreign language
33	Dr. Cuu Quang Thanh	x		Lecturer	Foreign language
34	Dr. Hoang Thi Phuong Thao		x	Lecturer	Foreign language
35	Dr. Tran Thi Linh Cam		x	Lecturer Activitee 08 responsible	Foreign language CUI program
36	Dr. Huynh Duy Thao		x	Lecturer	Mesenchymal tissue
37	Dr. Nguyen Huu Ngoc Tuan	x		Lecturer	Biochemistry
38	Dr. Huynh Ngoc Linh		x	Lecturer	Anatomy
39	Dr. Le Minh Nguyet		x	Lecturer	Pedagogy
40	Dr. Ho Thuy Dien		x	Lecturer	Pedagogy
41	Dr. Nguyen Thi Ngoc Dung		x	Lecturer	Former Rector
42	Dr. Tran Thi Khanh Tuong		x	Head,	Internal Medicine

2. Students of PNT

No	Full name	Sex		Title	Faculty – Organization
		M	F		
1	Nguyen Ho Kim Ngoc		X	Student	Nutrition
2	Nguyen Thi Dieu Huyen		X	Student	Pediatric
3	Mac Phung Phu	X		Student	Nutrition
4	Ngo Minh Thong	X		Student	Nutrition
5	Truong Nhut Cuong	X		Student	Pharmacy
6	Bui Nguyen Nhat Tien		X	Student	Pharmacy

3. City health department

No	Full name	Sex		Title	Faculty – Organization
		M	F		
1	Dr. Nguyen Tan Binh	X		Director	
2	Dr. Tran Minh Thai	x		Deputy head	Human resources
3	Dr. Vo Hong Ngoc		x	Specialist	Planning office

4. 115 Hospital

No	Full name	Sex		Title	Faculty – Organization
		M	F		
1	PhD. Dr. Nguyen Dinh Phu	x		Vice director	
2	Specialist II Dr. Tran Van Song	x		Head	Human resources/ Training unit
3	Msc. Dr. Khau Minh Tuan			Head	Emergency
4	Specialist II Dr. Truong Thi Anh Phuong		x	Deputy head	Internal medicine/ Gastroenterology
5	Msc. Nguyen Thi Duyen Anh				

5. Pediatric hospital 3

No	Full name	Sex		Title	Faculty – Organization
		M	F		
1	PhD. Dr. Truong Quang Dinh	x		Director	
2	Dr. Bui Thi Thanh Huyen		x	Head	Community medicine
3	Dr. Phan Thanh Vinh	x		Specialist doctor	Internal medicine
4	Dr. Lam Tuyet Trinh		X	Specialist doctor	External medicine
5	Nguyen Cam Tu		x	Head	Gastroenterology
6	Dr. Tran Quoc Viet	x		Deputy head	External medicine
7	Dr. Dang Le Nhu Nguyet		x	Head	Child health

6. HCMC Oncology hospital

No	Full name	Sex		Title	Faculty – Organization
		M	F		
	Dr. Pham Xuan Dung	x		Director	Oncology
1	Dr. Nguyen Hoang An	x		Specialist doctor	Child health
2	Le Lan Chi		x	Pharmacist	Pharmacy
3	Dr. Dang Huy Quoc Thinh	x		Vice director	

7. Blood Transfusion and Hematology hospital

No	Full name	Sex		Title	Faculty – Organization
		M	F		
1	Dr. Phu Chi Dung	x		Director	
2	Dr. Pham Phuong Lien		x	Vice Director	
3	Dr. Hoang Nguyen Khanh	x		Deputy head	Emergency
4	Dr. Hoang Duy Nam	x		Doctor	Transplantation
5	Dr. Huynh Duc Vinh Phu	x		Doctor	Transplantation
6	Dr. Nguyen Ngoc Sang	x		Doctor	Social affairs
7	Dr. Tran Thi Thien Kim		x	Deputy head	Research
8	Dr. Vo Thi Thanh Truc		x	Head	Children
9	Dr. Trinh Thuy Duong		x	Doctor	Preclinical

8. District 10 hospital

No	Full name	Sex		Title	Faculty – Organization
		M	F		
1	Dr. Doan Xuan Tung	x		Director	District 10 hospital
2	Dr. Nguyen Thi Kim Oanh		X	Doctor	Family medicine

A.3 Evaluation design²⁸

A.3.1 Mixed evaluation methods

After the inception and fact finding mission phase, the evaluators agreed with SEO to evaluate the IUC with UPNT using a combination of mixed evaluation methods:

- *Core Module*: Contribution Analysis
- *Optional Module IV*: Before-and-After Design
- *Optional Module V*: Success Case Method (SCM)

In a first step, the ToC for the institutional support to UPNT was reconstructed together with stakeholders from ARES and the Belgian universities. During that session, the assumptions underlying the ToC and the context were defined. Moreover, the plausibility of the ToC was analysed with the stakeholders ("Is it reasonable to conclude that the IUC intervention contributed to a strengthened UPNT and to a better health situation in HCMC?").

In a second step, a field mission to HCMC was implemented by a team of evaluators: an international and a local evaluator. During the field visit the above mentioned qualitative methods were applied.

Interviews were held with university authorities and project staff, focus group discussions (FGD) with university staff that had and had not been involved in the project. FGD with students and with alumni of UPNT. Additionally, ex-scholarship holders were invited to write a testimonial on their experience, focusing on personal and professional effects of the scholarship. Reference is made to annex B, with the list of all stakeholders interviewed during the field mission. In addition, seven personal testimonials were written by ex-scholarship holders.

At the level of the HCMC Health Department, interviews were held with the authorities and with the Human Resource Department about health staff assigned that have graduated from UPNT and from other universities as well as about developments and trends over time. Finally, interviews and FGD were held with authorities, staff and patients at HCMC hospitals and health units on specific themes (quality of UPNT graduates, hospital-university cooperation and effects of specific IUC interventions-to be specified). After the field mission, an interview with the Ministry of Health in Hanoi was held to capture their views on strengths and weaknesses of UPNT, its contribution to policy development at the local, regional and national level, (its contribution to improvement of) health situation at the local, regional and/or national level, the role of the IUC cooperation ARES/UPNT, etc.

A.3.1.1 Before and after design

The **before-and-after design** compared key indicators before and after the intervention to identify the change that had occurred – particularly in the research, educational and organisational dimensions of UPNT, but also at outcome and impact level. For this purpose, baseline data were collected as well as data at the end of the intervention using secondary data and interviews.

UPNT and HCMC Health Service submitted quantitative data to reconstruct the institutional timeline and data to measure impact, outcomes and outputs in accordance with reconstructed indicators.

²⁸ For an elaboration on research design, reference is being made to the Can Tho Field mission report.

A.3.1.2. Contribution analysis

As the before and after design is weak in terms of robustness (e.g., the changes occurred due to other factors), we combined it with a **contribution analysis** to assess the contribution of the IUC to the observed changes in the research, educational and organisational dimension on the level of UPNT.

The main part of the evaluation therefore was a contribution analysis in conjunction with the proposed 5C model by Peter Morgan to assess the IUC's impact on the research, educational and organisational capacity of UPNT. For the implementation of the contribution analysis we proceeded as follows:

1. At the beginning we conducted a **situation analysis** on the basis of secondary data to reconstruct the situation with regard to the educational, research and organisational capacity dimensions (baseline). Concerning the latter we also collected baseline data regarding the CDI (see below). Here we describe the different challenges UPNT was facing prior to the IUC. Moreover, we analyse the causes and possible influencing factors that led to or maintained this situation prior to the IUC. In this regard we also map the effects this situation caused in terms of e.g., educational quality or health situation in HCMC. This situation analysis was furthermore enriched through data collected through interviews during the field mission.
2. In a next step we reconstructed the **ToC** of the IUC with UPNT in a participatory workshop with the Belgian promoters and ARES. The ToC thereby depicted how the IUC was actually implemented and not how it was originally planned. The draft of the ToC was further informed by the already gathered secondary data and the institutional ToC of ARES. The developed ToC for the IUC can be found in annex C.

Based on the ToC we developed an **assessment grid** in which we detailed all specific evaluation questions regarding effectiveness and impact for this IUC. Furthermore, we assigned indicators and descriptors to each evaluation question in order to operationalise them. In addition, we assigned data collection sources to each evaluation question to make transparent on which data basis each evaluation question was answered.

A specific focus was put on the influence of the IUC on the organisational capacity of UPNT. For this purpose we adapted the proposed **CDI** – based on the 5C model – to the particular circumstances of the IUC. We collected qualitative as well as quantitative data for this index. With regard to the latter we used closed questions based on ordinal scales and had them filled in by the stakeholders during the field mission. In addition, the evaluation team also filled in the CDI assessment to compare with an external view. In total, 24 CDI assessments were filled in by UPNT stakeholders. The assessment grid – including the dimensions of the CDI – can be found in annex E.

The assessment grid then forms the basis for the development of the **data collection instruments** (interview guidelines, format for scholarship testimonials and the CDI assessment form in annex F).

The developed data collection instruments were used to populate the ToC with data. For this purpose we used not only interviews with the main stakeholders but also available secondary data sources, the scholarship testimonials and the CDI assessments. With this data we tested whether the developed ToC worked out as planned, with all its depicted mini-steps.

3. Based on the collected data we continuously assembled, assessed and revised the gathered performance story of the IUC during the field mission. Moreover, the evaluation team analysed to what extent alternative explanatory factors might have caused the observed impacts. Hereby we paid particular attention to

singular cases that did not follow the described impact pathway. In addition, we assessed to what extent

- participants or organisations had been affected by other interventions,
- observed impacts could only be reached due to the combination of different interventions (e.g., portfolio approach of ARES (see also chapter 2.1 and 3.1) but also other external interventions) and
- observed impacts were caused by changes in external circumstances (e.g., changes in the regulatory framework for universities).

At the same time the evaluation team continuously sought out additional evidence where needed to complete the performance story. Hence, the final performance story was assembled in an iterative process throughout the field mission.

A.3.1.3 Success case method

Finally, the evaluation design included the Success Case Method (SCM). This methodology sets out to discover whether or not an intervention is working by searching for particularly successful or unsuccessful instances ("success" and "non-success" cases). The SCM does not set out to find out about the "average" case, but instead intentionally seeks out the very best (and worst) that a programme has produced. The SCM was applied in this evaluation to identify good and poor practices in the selected interventions and the lessons learned from these good and poor practices. Within the interviews and focus group discussions during the field mission we used **narrative interview techniques** in order to identify which interventions are considered most or least successful. On the basis of the results, the interventions that were commonly considered most and least successful were studied in-depth. The conclusions and recommendations are presented in Chapter 4.2.6 in the form of in-depth stories, setting out the details of the most compelling cases and the lessons learned.

A.4 Theory of Change

- See additional documents (zip file)

A.5 Assessment grid

- See additional documents (zip file)

A.6 Data Collection Instruments

- See additional documents (zip file)

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