

The assessment of University of Washington(UW)-China Medical Board (CMB) program aimed in “Strengthening Global Health Capacity at Chinese Universities”

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Abstract

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Introduction: China’s role in global health keeps expanding in recent years. Key Chinese universities are committed to engage in global health and to improve their capacity to do so. With the support of the China Medical Board (CMB), the University of Washington (UW) launched a program for “Strengthening Global Health Capacity at Chinese Universities” in 2013, focused on three synergistic components: Graduate education in global health for masters and doctoral students; training and mentoring for faculty scholars; and collaborative applied research projects in global settings. This evaluation was designed to identify the strengths and challenges of this program and propose suggestions for improving the future activities.

Methods: All participants and related UW faculty and staff were included, including 12 students, 13 faculty scholars and 3 UW related faculty and staff. Kirkpatrick model

of assessment was used. Data sources included UW-CMB documents (proposals& reports), the related workshop materials, the questionnaire distribution and semi-structured interview.

Results: Both students and visiting faculty scholars showed a high satisfaction for the overall program. The courses, experience in low-and middle-income countries (LMICs), faculty resources and networking were perceived to be most valuable. Participants said that the program broadened the participants' horizons in global health and strengthen their capacity substantially. Perceived weaknesses of the program included shortage of funding, inadequate research opportunities, limited collaborations & partnerships, and some issues of program design.

Conclusions: UW has successfully trained a group of pioneers for Chinese universities' global health capacity building. For the future activities, more communication about the funding model, collaborative projects, specific expectation of the support and feasibility is needed.

Keywords: CMB, UW, global health, program assessment, mixed-method

Introduction

China's role in global health has expanded substantially in recent years(1). China's health assistance projects, foreign aid money and multilateral health cooperations keeps increasing (2) (3). According to the new estimates from Institute for Health Metrics and Evaluation (IHME), China provided an estimated 645 million dollars of development assistance for health (DAH) in 2018 (4). In 2017, the Health Silk Road was established to further augment its health spending and strengthen health and research cooperation between countries within China's Belt and Road Initiative (BRI) (5). As China takes on more and more responsibilities, more and more global health professionals are needed.

Chinese universities are logical partners of Chinese government for global health projects. Chinese universities could assist the government assess the policy, develop the policy, carry out the policy and contribute to research projects. However, Chinese universities' global health capacity is still limited. China is still facing many challenges in global health development. First, most of current global health researchers in China are domestic public health professionals without multi-disciplinary backgrounds (8). Secondly, few medical faculty members in Chinese universities have overseas experience in low-and middle-income countries (LMICs). (9) Funding for global health programs is still limited in China (10). And there are limited career paths or incentives for global health work (9). As a result, in all of China, only about 60 university faculty members are fully dedicated to global health work and only three universities offer global health degree programs (10).

In response to the lack of global health professionals in China, and with the support of China Medical Board (CMB). University of Washington (UW) developed a program for "Strengthening Global Health Capacity at Chinese Universities" initiated in July, 2013 with a planned end date of December, 2019. The program was designed in close collaboration with seven leading Chinese medical universities, including Peking University Health Science Center, Sun Yat-sen University (SYSU), Central South University (CSU), Fudan University, Zhejiang University, Peking Union Medical College and Wuhan University. The program focuses on education, training and mentorship of emerging, early and mid-career professionals and includes three synergistic components: 1) graduate education in global health for masters and

doctoral students; 2) training for faculty scholars; and 3) mentored, collaborative applied research projects in global settings.

As shown in Table 1, eight MPH students, four PhD students and 13 visiting faculty scholars were trained through this program. Among the students, six MPH students has graduated, two are graduating in June 2019; two PhD student are graduating in 2019, one PhD student has graduated with MPH degree, and one PhD student is coming in 2019. The of the 13 Faculty Scholars, 11 spent 6 or more months as visiting faculty scholars at the UW in Seattle, eight of whom have completed the six month training, and two completed a one-year training program. The last of the Faculty Scholars arrived at the UW in May, 2019, and will finish in October 2019. The other two faculty scholars joined the Afya Bora Consortium Fellowship in Global Health Leadership program (Afya Bora program) which facilitated one-year of intensive training in Africa, rather than working at the UW in Seattle. Afya Bora Faculty scholars were half-funded by the UW CMB funding and half by their own institutions.

Table 1. Basic information of CMB participants

Program	N	Status	Study period	Content
MPH graduates	7	Completed	1-2 years	4 quarter of courses, practicum, thesis
MPH students	2	In process		
PhD students	3	In process	6 years	2-3 year courses, dissertation
Visiting faculty scholar-Residence	8	Completed	Half year	2-4 courses
Visiting faculty scholar-not UW funded	2	Completed	0.5-1 year	2-5 courses
Visiting faculty scholar-Afya Bora	2	Completed	1 year	12 courses, rotation in three African countries, complete one project
Visiting faculty scholar-Residence	1	Prior to start	Half year	2-4 courses

With the request from program participants and the UW related faculty and staff, an assessment of the program was proposed. This assessment was conducted by one of the last CMB funded MPH students. The evaluation was designed to identify the strengths and challenges of this program and to propose suggestions for further education and cooperation.

Methods

Study Sample and Setting

All faculty scholars and students completed the survey and all respondents (including UW staff and faculty) were interviewed. Because the principal author was a student from the CMB program, she was excluded from the study. All of the remaining CMB funded UW students and scholars were eligible for this study. In addition, three UW CMB related faculty (the program PI, director and manager) were included in this study to provide more perspective of this evaluation. Surveys were conducted via email in China and interviews conducted in China and Seattle.

Data collection and analysis

The Kirkpatrick Model was used to structure the survey and interview questions. The model focused on four levels of outcomes: (a) reaction of participants; (b) participants' learning; (c) behaviors of participants (applying knowledge and skills during daily practice); (d) the overall results (the impact of the training on the organization or institution) (10).

A cross-sectional questionnaire survey and a semi-structured face-to-face (or telephone) in-depth interview guide were used in this study. A pretest study with three students and one faculty were conducted. For the students, the questionnaire included two parts. The first part was satisfaction, which was self-developed based on the design of the program; the second part was about the academic capacity, which was designed based on Sawleshwarkar S and Negin J's PhD and Master's Global Health Competency Model (11) (12). For the faculty scholars, only satisfaction survey was involved. We did not conduct academic capacity survey with faculty scholars, because their visiting duration was relatively short (most of them only 6 months), and their choices for arranging the coursework and projects varied widely.

Interviews were conducted among all participants. The questions mainly focus on the strengths, the weaknesses, outcomes and influence of the CMB program, as well as the suggestions. For the UW faculty, the questions mainly focused on how the program was started and designed, comments on this program, plan for future collaboration, and response to the feedback from the students and faculty scholars. One trained interviewer performed the interview and the process was recorded after the consent of the respondents.

Other data sources included the UW-CMB proposals and reports, and information gathered from a special UW-CMB workshop held at in March 2019 at Wuhan University where most of the program participants to shared their experiences and feedback for this program.

Qualitative data was analyzed based on content analysis, where categories were developed from the empirical data. The researcher immersed herself in the qualitative database, developed a coding scheme, and conducted thematic searches using the codes (13). Grounded theory was applied in this process. The coding was performed using ATLAS.ti software.

Quantitative data were analyzed using R Studio version 1.0.153. The questions were divided into different groups and some questions were summarized into one variable. Descriptive statistics was conducted on all variables to describe the satisfaction and related factors. Mean and standard deviation were calculated for each variable.

The Human Subjects Division of UW determined that this study did not meet the federal definition of "research". It did not require exempt status or IRB review.

Results

Demographic information

Thirteen CMB faculty, eight MPH students and four PhD students, as well as three UW related faculty and staff took the survey and were interviewed. Only one student and three UW faculty and staff conducted face-to-face interviews; others chose to do the interview through phone call or *WeChat*. All sent back the questionnaire. There were some missing values because several of the questions in the questionnaire were not answered. The missing values were deleted during the analysis. The characteristics of the participants when they first participated in the program are as following:

Table 2. Demographic information of CMB participants when they first participated

Categories	N	Male	Female	Mean Age(SD)	Previous Degree/Title
Students	12	4	8	24(2.2)	Bachelor 6, Master 4, PhD 2
Visiting faculty scholars	13	2	8	36(5.0)	Lecturer 6, Associate Professor 5, Professor 2

According to the survey, there were more female participants in both the student group and visiting faculty scholar group. The mean age of students when they first participated in this program was 24 (SD=2.2). Half of the students had earned bachelor's degrees. The mean age of visiting faculty scholars was 36 (SD=5.0). More than half of the faculty were senior faculty (associate professor or higher position).

Survey Results

Satisfaction (Students and Faculty)

According to the satisfaction survey, the overall satisfaction of the whole program was high in both student group and faculty group. The satisfaction for quality of courses, available resources, diversity of the cohort, communication, and faculty support were high in both groups. The satisfaction for logistics and administration, alumni management, and funding, the score was relatively lower in both groups. (See Table3 and Table 4 below).

Table 3. Mean Satisfaction score of MPH students & PhD students

(Score from 0 to 5 represent poor/worst to best)

Categories	Mean(SD)
Resources	4.6 (0.9)
Practicum	4.6 (0.7)
Diversity of cohort & communication	4.5 (0.9)
Faculty support	4.5 (0.7)
Quality of courses	4.5 (0.5)
Availability of course and projects	4.3 (0.9)
Logistic& Administration	4.0 (1.3)
Career development support	4.0 (1.1)
Alumni management	3.9 (0.7)
Funding	3.8 (1.2)
Overall satisfaction	4.6 (0.7)

Table 4. Mean Satisfaction score of visiting faculty scholars

(Score from 0 to 5 represent poor/worst to best)

Categories	Mean(SD)
Diversity of cohort & communication	4.6 (0.8)
Quality of courses	4.6 (0.6)
Resources	4.6 (0.6)
Faculty support	4.4 (0.8)
Advocacy of this program	4.4 (0.7)
Benefit to career development	4.4 (0.7)
Network	4.1 (0.9)
Design of the program	4.1 (0.8)
Alumni management	4.0 (0.9)
Logistic& Administration	3.8 (1.0)
Funding	3.8 (0.9)
Overall satisfaction	4.7 (0.5)

Student learning competency scores

Shown as Table 5, respondents reported that the program made a larger difference on several public health competencies, which include understanding globalization in health and health care, global burden of disease, strategic analysis, and program management. There was less reported improvement in cultural competency skills, financial planning and management skills.

Table 5. Mean perceived competency scores of MPH students and PhD students

(Score from 0 to 4 represent poor/worst to best.)

Categories	Before	After	Difference
Globalization of Health and Health Care	1.8 (0.8)	3.2 (0.6)	1.5 (1.0)
Global Burden of Disease	2.1 (0.6)	3.5 (0.5)	1.4 (0.5)
Strategic Analysis	1.9 (0.7)	3.2 (0.6)	1.3 (1.0)
Program Management	1.9 (0.7)	3.2 (0.4)	1.3 (0.8)
Communication, Collaboration, and Partnering	1.9 (0.6)	3.1 (0.5)	1.2 (0.8)
Analytical/ assessment skills	2.2 (0.6)	3.4 (0.5)	1.2 (0.8)
Social, Economic& Environmental Determinants of Health	2.1 (0.7)	3.3 (0.6)	1.2 (0.7)
Capacity Strengthening	1.9 (0.7)	3.1 (0.7)	1.2 (0.7)
Research Competence	2.1 (0.7)	3.2 (0.6)	1.1 (0.9)
Ethics and Professionalism	1.9 (0.6)	2.9 (0.7)	1.1 (0.8)
Health Equity and Social Justice	1.9 (0.8)	2.9 (0.8)	1.0 (1.2)
Community Dimensions of Practice Skills	2.0(0.7)	3.0 (0.7)	1.0 (0.8)
Communication Skills	1.9 (0.7)	2.9 (0.7)	1.0 (0.0)
Cultural Competency Skills	2.0 (0.8)	2.8 (0.8)	0.8 (1.0)
Financial Planning and Management Skills	2.2 (0.7)	2.9(0.6)	0.7 (0.8)

Interview Results

Knowledge, skills & resources perceived to be most valuable

All program participants said they benefited much from the courses. Among all of the 12 students, nearly all of them mentioned the skill-related courses were particularly valuable, among which most students said biostatistics and epidemiology

were helpful. Several students mentioned mixed method, qualitative research method, and the “Problems in Global Health” were helpful. Among all of the 13 faculty scholars, the most popular ones were reported to be the Introduction to Global Health, Implementation Science, and Qualitative Research Methods. Many of them stated that the implementation science is a new idea. Many participants reported that the content of the course was helpful. One faculty scholar said that:

“When I came back to my school, I shared the related knowledge with my colleagues during some seminars, they all felt they were benefiting a lot.”

Several faculty participants addressed that they learned how to design the courses from UW.

“The teaching of global health is still in its infancy in China in 2014, so there is still a lot to learn. I was there mainly to learn their teaching methods of global health.”

All participants said that networking was helpful. Most students and faculty scholars mentioned the connections with other CMB students and visiting scholars was helpful and the network with the UW faculty was valuable for research, internships and job opportunities. One faculty scholars said he/she felt he/she had colleagues and felt the support of faith.

“...it is still quite good to know that someone has the same goal as you.”

In addition, several students mentioned the oversea practicum was meaningful. One participant said that:

“Although I suffered a lot from the experience in Africa, this internship is really special. If you want to do global health, in China, few people have actually been to Africa.”

Knowledge, skills & resources perceived to be less valuable

All faculty said that the education experience in the program was valuable. Several students mentioned the leadership and management class did not help much for them, most of whom are focusing on quantitative research.

One student said that there were too many discussion classes, which focused more on the nature of the problems than on figuring out the solutions. He/she said it was not that helpful and suggested that more skill related courses were needed. Several students mentioned that the skill related courses were more helpful for getting

a job. However, several students stated that although some courses seemed less helpful at the moment, all courses were valuable.

“Now, we are still relatively young. Some courses may not be useful at this stage. We may not feel it useful directly at present, there may be some subtle influence, or some indirect help in the future.”

Overall strengths for the program

Many strengths of this program were mentioned in the interview, which were summarized into five categories. First, this was one of few global health programs and UW was the first one who began to promote the global health capacity building of Chinese universities. The reputation of DGH, School of Public Health (SPH) and School of Nursing(SN) of UW were very good. The participants could get high quality courses and adequate supports from SPH and SN. Secondly, UW DGH has many collaborations with other institutions, which included CMB, Chinese universities, NGOs and foundations in Seattle (e.g. IHME, PATH, Gates Foundation and ITECH, etc.). And this program promoted the communication and collaboration among the CMB participants. Thirdly, both UW faculty and related staff were quite supportive. Fourthly, there was funding for the program, including the full-scholarship from CMB and the travel funding for students from DGH.

In addition, many participants said the overall design of the program was appropriate for their needs. This program was perceived as very inclusive, with diversity of different cultural backgrounds and disciplines, but a cohort that was cohesive. Interviewees commented positively on the plentiful overseas research projects that required the participants to gain an experience in LMIC. They also said they appreciated that courses were not limited to the resources of DGH, providing especially faculty participants with substantial freedom.

Overall perceived weaknesses for the program

First, several faculty scholars stated that there was no travel funding for them and several students mentioned that the funding was not enough, especially for the PhD students.

Second, several participants said the research area was not diverse enough. The courses and research projects were mainly focusing on HIV/AIDS. Several students said the program was lacking a China element. One student said some students were required not to do practicum and projects in China because it was not global health enough. He/she stated that was a weakness of this program.

Third, several participants mentioned that there lacked the communication and collaboration within the UW DGH-CMB-Chinese universities partnership. Several faculty respondents criticized the lack of follow up support when the participants leave UW. One student said that the school does not have a recommendation mechanism for internship in NGOs and foundations. Another student mentioned that there lacked cooperation with profit institutions:

Fourth, there were some issues about the logistic and administration of the program. Several participants said it was hard to get some resource information. And some students did not match the advisors well.

Finally, several interviewees said that half a year was too short for research capacity building. In addition, several faculty scholars said the arrangements for the participants was not clear, especially the output requirement for this program. What's more important, several faculty said it was a weakness that they did not have a chance to participate in UW's oversea GH project.

Several students complained that there was inadequate career guidance. One student mentioned that the connection between the students and faculty was not close enough. Several respondents stated that some students did not match the advisors very well. Moreover, several students reflected that there were insufficient practical and skill-related courses, including the literature review skills, coding skills (including Stata and python), and some other software skill (Redcap).

Obstacles encountered implementing Global Health Skills in China

Most of the participants said that the policy support from Chinese government and universities was inadequate. Many faculty mentioned that there was a lack of support and safeguard policies for global health projects. One respondent said that there was a relatively low proportion of foreign aid budget for health. For health development assistance funding and projects, the Chinese Centers for Disease Control

and Prevention (CDC) played an importance role, while the role of the universities was not clear yet. On the other hand, many respondents stated that there was a lack of support from Chinese universities, especially there was no evaluation and promotion mechanism designed for global health professionals. Still, a study/project experience in a developed country was more recognized by the universities. What's more, the requirements for university funding use restricted conducting projects abroad.

Secondly, funding for global health projects is limited in China. Even though there was funding from Chinese universities, there were restrictions of funding use. As a result, it was hard to conduct projects abroad. Most of participants stated that funding is a crucial problem for global health projects so far.

“The channels of domestic funding for GH project applications I know are basically zero. Currently, we still have a lot of projects, but no domestic funding, all of them are international funding.”

“In the use of funds, for example, it is difficult for us to use some of our own funds to do research overseas. It's just that money can't go out.”

Thirdly, several faculty mentioned culture issues. One faculty said that the culture, including the living habits, language, political culture and religions culture, are quite different between China and other Asian and African countries. Several faculty mentioned that because of the colonial history, many African countries recognize American culture more than Chinese culture because of the colonial history.

In addition, several participants mentioned there some personal issues which could be obstacles for global health work, including the conflicts between family needs and doing oversea projects, the conflict between career development and doing projects in LMICs, busy with their public health work and lack of motivation.

Outcomes and impact

Although there were no requirements about specific outputs from the CMB program, many students and faculty produced some outputs related to this program (See Table 6).

Table 6. Illustrative outcomes of program participants

Students	Faculty scholars
✓ Publications: nine students wrote 16 papers for publication.	✓ Publications: seven faculty completed nine GH papers.
✓ Conferences: four students conducted poster /oral presentations in GH conferences.	✓ Proposals: three faculty competed three GH proposals.
✓ Jobs: two students got a related job position due to the connection with UW.	✓ Work as site supervisor: one participant has assisted the UW faculty with supervising and supporting two MPH students
✓ Research: three students got research projects.	✓ Conduct qualitative research training: one faculty.
✓ Continue to PhD: three students.	✓ GH textbook: one participant cooperated with UW faculty and published a book, <i>Methodology of Global Health</i> .
✓ Plan for PhD: four students.	✓ GH courses: seven faculty taught GH courses at their home universities.
✓ Continue to post-doc: one student.	✓ Work on GH journal: two faculty.
✓ Plans for post-doc: one PhD student and one graduated MPH student.	✓ Support other young faculty in GH: two faculty mentored 4 young faculty.
✓ Faculty position at Chinese university: one student.	

Most of the participants reported that the whole experience had broadened their horizons of global health. Most of the students stated that the multi-culture cohort and oversea experience had broadened their insights in global health. Most of the faculty participants mentioned that this experience provided more international perspectives, taught them the research process in other countries, broadened their research area, as well as showed them how to manage the department. One faculty said the experience affected the way he/she looks at the world:

“Their world outlook, outlook on life and values had some influence on me.”

Most of the faculty stated that this program also had an influence on their home universities. One faculty mentioned that this program had trained a group of global health pioneers for Chinese universities. Using the skills and resources from this

program, some participants said they have started their own global health projects, and some began collaborative projects with UW faculty, which widened the academic field of their institution and improving the global health discipline development in these universities.

“This project has provided our University with many seeds of GH. From the very beginning, we don't know what GH is and how to do it. Then they have trained a group of young scholars who can at least have a certain understanding of GH and have a certain ability to do GH-related work. I think it would develop well if these seeds were well protected.”

Recommendations from participants

First, many participants suggested that UW DGH increase the communication and collaboration, which including improving UW's collaboration with Chinese universities, connecting CMB visiting scholars with CMB students, connecting students with Chinese universities' projects, building CMB community group platform, improving UW-Chinese university-LMIC trilateral collaboration, increasing the communication with high-level people in Chinese universities/government departments to support the CMB scholars, as well as connecting with NGO or other institution to provide more internship or job opportunities.

Second, for the curriculum, one faculty participant suggested increasing the training of how to adapt to LMICs culture. Several students suggested the DGH increase more skill-related course and further improve the flexibility of selecting course.

Third, most of the faculty scholars said the work in LICs was important. Several faculty scholars suggested it could be better if there had been a chance for them to spend some time in LMICs. One faculty scholar suggested the program could be designed as 3-month coursework and 3-month oversea practicum.

On the other hand, several students and faculty scholars said it would be better if DGH could help them better match the resources. One participant suggested that UW could help the participants better prepare before registration. Several faculty scholars and PhD students suggested having potential collaborative projects before the participants come could be better. Several students and one faculty scholar advised to

provide more instructions and guidance for the students at the beginning of their study in UW; and several faculty respondents suggested clarifying the requirement of outputs for the program. During the period in UW, many participants suggested DGH provide more funding. Several participants suggested DGH help more about matching advisor. At the time leaving UW, several students suggested DGH provide more career development guidance; and several faculty scholars suggested increasing follow-up support.

Perspective from UW Faculty & Staff

The UW related faculty and staff agreed that funding was a crucial issue. However, the funding was limited at the beginning of this program. One UW respondent said that:

“It was pretty clear from the beginning that we couldn’t provide or they couldn’t provide as much funding as would be needed, for example, to have all of the students completely funded through their degree programs, nor was it possible to cover all of the costs for all of the faculty scholars.”

This program received two back-to-back grants. One UW respondent said that they had budget in first grant money for travel for scholars and students, but it was hard to get them to use it. Because there was overall less money for the second group, the UW faculty said they thought that Chinese universities had the financial capacity to co-fund parts of this program, particularly travel. Thus, they decided to ask the universities of the second group faculty and students to help provide travel funding to demonstrate their commitment to global health capacity building.

UW respondents mentioned that this program was designed based on the feedback from CMB and Chinese universities, the funding availability and the objective of this program, which is to push the participants go to the third country. For the faculty scholars, they were told nine months was long for many people. And they expected people to work in a third country. Therefore, they thought six months was a good time period. For the MPH students, they provided funding only for four quarters of coursework because they thought four quarter was enough for coursework and they wanted to push the students to do practicum and thesis in a third country. For the PhD student, they provided the funding for four quarter, and the PhD students were assured to do at least one RA/TA so that they could be funded for another quarter. PhD

students have the priority to get these funded positions over the master students. One respondent said that a PhD student was supposed to get their own funding by their second year. He/she said what they offered was closed to what the students needed, maybe funding for 6 quarter would be better.

Some faculty scholars suggested DGH design the faculty training program to be three-month coursework and three-month fieldwork. However, one UW respondent said that it was hard to let the Chinese faculty scholars join DGH's oversea project.

“ ...there are some ongoing research projects, usually those are grant funded in such a way that there's already staff on those projects. So, if a student is coming in just to do a small analysis, that's fine...but if, for example, a faculty member really wants to do a significant project. There needs to be some additional resources.”

One respondent said that even if there was potential project, it was hard to get it started because it took time to get the IRB and to get all the players who are interested engaged.

One respondent explained that there was no requirement for a specific output because they weren't sure what the output should be. But they would like to suggest the participants write a paper of this experience in the future.

For career development guidance for the students, one respondent said that it was challenging because it depended on what the students want to do and what the career pathway of global health in China looked like. He/she said DGH should clarify the career pathway and their expectation of the students, and then made it clear to the coming students. Besides, he/she said that it would be nice to have a professor in China to supervise or support the CMB student in UW, which could build the connection and provide more support to the student when he/she come back to China.

There was an expectation that the students and faculty scholars should go to a third country instead of doing projects in China. One respondent said that it was because the added value of this UW-CMB program was to get people outside of the Chinese perspective.

At last, they said more support could have been possible. But the specific expectations of needed support should be clarified and structured. For the alumni group, one respondent agreed that some activities could be organized annually to keep the partnership and connection. And He/she said something could be done from DGH site. Referring to the resource information, one respondents said they would like to

help the participants organize the information better although all information were on the website. One respondent agreed that the curriculum need to be improved, but he/she mentioned that they also thought that discussions were important, particularly around understanding power and privilege. Two respondents also agreed that the advisor matching should be improved.

Discussion

Both students and visiting faculty scholars showed a high satisfaction for the overall program. The courses, experience in LMICs, faculty resources and networking were perceived to be most valuable for improving GH capacity. This program has broadened the participants' horizons in GH and strengthened the GH capacity significantly at several Chinese universities. There are also some negative feedbacks from the participants. The satisfaction for the logistic and administration, alumni group, career development support, and funding was relatively lower. And there are several weaknesses of the program, including shortage of funding, inadequate research area, limited collaboration & partnership, as well as some issues of program design.

While the program was designed based on the feedback from CMB and Chinese universities and was adjusted several times, these adjustments did not always fit the needs of some of the participants well. More support from UW faculty and staff is possible, but the specific expectation of all needed support should be further clarified. UW faculty and staff would like to further improve the curriculum, alumni group and mentoring.

Based on the feedbacks from both program participants and UW related faculty and staff, we propose several policy recommendations for the future activities. First, considering that funding is an issue for both sites, we suggest that UW seek multiple funding resources. One possible source could be China Scholarship Council (CSC), which was suggested by an interviewee. There are many ongoing programs co-funded by CSC and universities in other countries(14)(15). CSC funds master programs, PhD programs as well as visiting faculty scholar programs, which is consistent with the needs of UW and Chinese universities for global health capacity building. Another source might be the Chinese universities. As mentioned in several interviews of UW faculty and Chinese faculty scholars, there is financial capacity of Chinese universities especially for the visiting faculty scholar program. It is possible for the Chinese universities to provide joint-funding for faculty training programs.

Secondly, we suggest maintaining this UW-CMB-Chinese university partnership by reuniting all related people at the Chinese Consortium of Universities for Global Health meeting every year, and deepening this partnership through collaborative

projects. There need to be more communication between UW faculty and Chinese faculty scholars to figure out potential collaborative projects. Then based on the projects, UW faculty, CMB faculty scholars and CMB students could work together in other countries.

Thirdly, as many faculty scholars said it was hard for them to get funding for oversea global health projects, we propose that CMB could provide seed funding for CMB program participants for a fixed number of projects every year. In addition, we suggest that there should be more communication and discussion among UW faculty, program participants and related leaders of Chinese universities to further clarify the needs and capacity of both sites, and to adjust the program based on the discussion. According to the results of this study, there should be more discussion on students' career development, resource information, internship opportunities, curriculum design and the specific expectation of follow-up support.

There are several limitations in this study. First, the sample size is small. The number of subjects is small in each group with large variation. And the quantitative analysis only included a descriptive analysis due to the limitation of sample size. But it was still meaningful to see the order of the scores for different categories. Secondly, there might be information bias. The participants may provide a higher assessment due to politeness. Also, self-assessment may bring bias. To reduce information bias, we emphasized to all participants that the data would be kept anonymous. Thirdly, the project did not end when the assessment started, some participants had graduated while some were still in process. Nevertheless, it was also meaningful to collect information from the participants in the process. In addition, there was recall bias for the participants in the early round of this program. And some feedback from those participants may not fit the program well at this moment since the program were slightly adjusted for several times. However, we decided their feedback was still valuable since it is important to know their feelings and needs of this program. At last, it was hard to assess the specific long-term impact of this program, since there was not a long period since the program started.

Conclusion

With the support of CMB, UW has trained a group of pioneers for Chinese universities' global health capacity building. For the future activities, more communication about the funding model, collaborative projects, specific expectation of the support and feasibility of the support is needed.

Acknowledgements

The author appreciates all the respondents of this study, which including the faculty and staff at UW and the faculty and students from Chinese universities.

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6

Appendixes- Questionnaire and interview outline for MPH students:

附录 2—调查问卷

这项课题研究在 Stephen Gloyd 教授的指导下进行，重点关注 CMB 参与者对这个项目的满意度，这个项目的优势劣势，对这个项目的改进建议，以及这个项目产生的影响。如果您同意参与此项研究，请您首先完成下面的问卷调查，之后研究人员将对您进行一个大约 30 分钟的面对面访谈或者电话访谈（详见附录 3）。如您允许，我们希望能对此次访谈进行录音。访谈结束后，研究人员将分析访谈数据完成一篇论文并尝试发表。这是一个自愿参与的研究，再次真诚邀请您参加。

Demographic Information

Gender_____

Age_____

Home University in China_____

1. When you were supported by CMB and study in UW:

Program:_____

Year of enrolling in UW:_____

Year of graduating from UW:_____

Advisor:_____

Practicum Country:_____ Practicum supervisor:_____

Thesis Country:_____ Thesis supervisor:_____

Study area on which you focused during the study in UW:_____

Do you have any RA/TA experiences? Yes___No___

CPT: Yes___No___ OPT: Yes___No___

2. Now:

Location: China___ America___ South Africa___ Others, please clarify_____

What are you doing now? Where?

___ MPH student in UW

___ PhD_____

___ Work for NGO _____

___ Work for university _____

___ Work for other institutions _____

Reaction assessment (satisfaction assessment)

1 – Strongly disagree; 2 – Disagree; 3 – Neutral; 4 – Agree; 5 – Strongly agree

N/A - Not available/Not used

Number	question	score					
		1	2	3	4	5	N/A
1	I feel welcome and respected at UW.						
2	There is good communication between faculty and students regarding student needs, concerns, and suggestions.						
3	The quality of instruction I receive in most of my classes is excellent.						
4	The content of the courses within my major is valuable.						
5	Faculty in my department are helpful and supportive in my search for professional development.						
6	Faculty in my department are well qualified to teach their courses.						
7	My academic advisor is accessible.						
8	My academic advisor is concerned about my success as an individual.						
9	I am satisfied with research resources such as facilities, equipment, and lab space in UW.						
10	Library resources and services are adequate.						
11	There is excellent diversity of student population.						
12	What I have learnt in UW is relevant to my career.						
13	My program failed to provide enough help for international students and scholars.						
14	My program prepared me well for my profession.						
15	Career counseling provided by our program is adequate and accessible.						

16	I am aware of whom to contact for questions about programs and services.						
Number	question	score					
		1	2	3	4	5	N/A
17	There are sufficient options within my program of study.						
18	Lack of course availability.						
19	Alumni group is helpful.						
20	Financial support is adequate.						
21	My program encourages student collaboration and teamwork.						
22	I have learnt a lot from communicating with my classmates in the cohort.						
23	Practicum is beneficial and meaningful.						
24	My program has high academic standards						
25	I have not been treated unfairly at school because of my gender, race/ethnicity, sexual orientation, religion, disability, or veteran status.						
26	If I were starting over, I would enroll in this program again.						
27	Overall, I am satisfied with my experience at UW.						
28	I would like to recommend this program to a friend or colleague.						

Learning assessment

Questionnaire for MPH Students

- 1 = None I am unaware or have very little knowledge of the skill;
 2 = Aware I have heard of, but have limited knowledge or ability to apply the skill;
 3 = Knowledgeable I am comfortable with my knowledge or ability to apply the skill;
 4 = Proficient I am very comfortable, am an expert, or could teach this skill to others.

Key elements	Before				After			
	1	2	3	4	1	2	3	4
Basic understanding of burden of disease in all setting—high, middle, and low income including magnitude, distribution, and variations.								
Ability to use available data to validate the health status of the population.								
Understanding of different health systems along with understanding of global health-care trends, human resources for health, and role of multiple stakeholders in planning and delivery health services.								
Understanding influence of globalization on health and be cognizant of linkages between local and global health								
Understand social, economic, and environmental factors as determinants of population health.								
Key determinants of health and their impact on access to and quality of health services in different contexts and apply it to policy development and problem analysis.								
Sharing of knowledge, skills, and resources to enhance public health programs to build human resource capacity and improve infrastructure.								
Strengthen community capabilities, build community partnerships, and with community integration improve health of individuals and communities.								
Analyze the economic, social, political, and academic conditions and address barriers to produce a strong health workforce.								
Understanding of and an ability to resolve common ethical issues and challenges that arise when working within diverse economic, political, and cultural settings to address global health issues.								

Key elements	Before				After			
	1	2	3	4	1	2	3	4
Evaluation and application of international standards and public health ethical frameworks in these settings.								
Demonstrate integrity, regard, and respect for others in all aspects of professional practice and optimize the potential of one's scope of practice within the context of a team								
Effectively communicate ideas about health and well-being to other professions, community leaders, and the general public.								
Communication skills including negotiation, mentoring, conflict resolution, advocacy, and liaison.								
Multidisciplinary teamwork and team building and working in close collaboration with local institutions to design, manage, and evaluate programs in developing countries								
Apply social justice and human rights principles in addressing global health problems.								
Demonstrate commitment to global equity, social justice, and sustainable development								
Design, implement, and evaluate global health program to improve health of individuals and populations in a sustainable manner. Apply project management techniques throughout program planning, implementation, and evaluation.								
To conduct situational analysis and bring systems thinking and determinants-of-health and population health perspective to analyze a diverse range of complex and interrelated factors to develop context-specific intervention to improve global health issues								
Core public health research skills to incorporate qualitative, quantitative, and operations research skills to design and apply reliable, valid, and ethically sound research to identify innovative solutions for global health problems								
Translating research to policy and programs								
Make evidence-based decisions								

Key elements	Before				After			
	1	2	3	4	1	2	3	4
Communicate information to influence behavior and improve health (e.g., use social marketing methods, consider behavioral theories such as the Health Belief Model or Stages of Change Model, etc.)								
Describe the diversity of individuals and populations in a community. Recognize the ways diversity influences policies, programs, services, and the health of a community, support diverse perspectives and ensure the diversity of individuals and populations being addressed.								
Distinguish the roles and responsibilities of governmental and non-governmental organizations in providing programs and services to improve the health of a community.								
Engage community members to improve health in a community.								
Explain the structures, functions, and authorizations of governmental public health programs and organizations.								
Justify programs for inclusion in organizational budgets. Develop and defend organizational budgets. Prepare proposals for funding. Manage programs within current and projected budgets and staffing levels.								
Establish teams and motivate personnel for the purpose of achieving program and organizational goal.								
Use evaluation results to improve program and organizational performance. Establish performance management systems								

附录 3--- 后续访谈提纲

非常感谢您协助完成我们的调查问卷，接下来，研究人员将联系您，预约时间进行一个约 30 分钟的电话访谈或者面对面访谈。访谈涉及的问题主要如下所示：

Application

1. Why did you choose this program?
2. Where are you and what are you doing now?
3. If you have graduated, could you please share your stories after graduation? What have you ever attempted to do (e.g. further study, job, etc.)? If you have not graduate yet, could you please share your stories in UW?
4. Have you ever applied what you have learned in UW to your work? Have you applied any resources/network you get in UW to your work? Please give an example. Please describe in detail how it is applied.
5. What knowledge, skills or resources do you think have the greatest impact on your work or study? Which ones have less impact?
6. What is your five-year career/study plan?

Application barriers

7. What do you think are the main obstacles in applying what you have learned? (e.g. no suitable projects, no good opportunities in the near future; limited ability, etc.)

Further learning:

8. Do you think more training is needed to continue your study? If so, what aspects of knowledge or ability would you like to learn to further improve yourself?

Other questions

9. What do you think are the advantages of the CMB project? (Funding & GH program) Why?
10. What are the disadvantages? Why?
11. Do you have any suggestions about this program? (Training content, training methods, etc.)
12. Have you seen any people who work very well in global health? If yes, what are the common characteristics of these people?
13. What do you think about China's global health development trend and employment prospects?
14. Outcomes

Appendixes- Questionnaire and interview outline for PhD students:

附录 2—调查问卷

这项课题研究在 Stephen Gloyd 教授的指导下进行，重点关注 CMB 参与者对这个项目的满意度，这个项目的优势劣势，对这个项目的改进建议，以及这个项目产生的影响。如果您同意参与此项研究，请您首先完成下面的问卷调查，之后研究人员将对您进行一个大约 30 分钟的面对面访谈或者电话访谈（详见附录 3）。如您允许，我们希望能对此次访谈进行录音。访谈结束后，研究人员将分析访谈数据完成一篇论文并尝试发表。这是一个自愿参与的研究，再次真诚邀请您参加。

Demographic Information

Gender_____

Age_____

Home University in China_____

3. When you were supported by CMB and study in UW:

Program:_____

Year of enrolling in UW:_____

Year of graduating from UW:_____

Advisor:_____

Practicum Country:_____ Practicum supervisor:_____

Thesis Country:_____ Thesis supervisor:_____

Study area on which you focused during the study in UW:_____

Do you have any RA/TA experiences? Yes___No___

CPT: Yes___No___ OPT: Yes___No___

4. Now:

Location: China___ America___ South Africa___ Others, please clarify___

What are you doing now? Where?

___ PhD _____

___ Work for NGO _____

___ Work for university _____

___ Work for other institutions _____

Reaction assessment (satisfaction assessment)

1 – Strongly disagree; 2 – Disagree; 3 – Neutral; 4 – Agree; 5 – Strongly agree

N/A - Not available/Not used

Number	question	score					
		1	2	3	4	5	N/A
1	I feel welcome and respected at UW.						
2	There is good communication between faculty and students regarding student needs, concerns, and suggestions.						
3	The quality of instruction I receive in most of my classes is excellent.						
4	The content of the courses within my major is valuable.						
5	Faculty in my department are helpful and supportive in my search for professional development.						
6	Faculty in my department are well qualified to teach their courses.						
7	My academic advisor is accessible.						
8	My academic advisor is concerned about my success as an individual.						
9	I am satisfied with research resources such as facilities, equipment, and lab space in UW.						
10	Library resources and services are adequate.						
11	There is excellent diversity of student population.						
12	What I have learnt in UW is relevant to my career.						
13	My program failed to provide enough help for international students and scholars.						
14	My program prepared me well for my profession.						

15	Career counseling provided by our program is adequate and accessible.						
16	I am aware of whom to contact for questions about programs and services.						
Number	question	score					
		1	2	3	4	5	N/A
17	There are sufficient options within my program of study.						
18	Lack of course availability.						
19	Alumni group is helpful.						
20	Financial support is adequate.						
21	My program encourages student collaboration and teamwork.						
22	I have learnt a lot from communicating with my classmates in the cohort.						
23	Practicum is beneficial and meaningful.						
24	My program has high academic standards						
25	I have not been treated unfairly at school because of my gender, race/ethnicity, sexual orientation, religion, disability, or veteran status.						
26	If I were starting over, I would enroll in this program again.						
27	Overall, I am satisfied with my experience at UW.						
28	I would like to recommend this program to a friend or colleague.						

Learning assessment

Questionnaire for PhD

1 = None I am unaware or have very little knowledge of the skill;

2 = Aware I have heard of, but have limited knowledge or ability to apply the skill;

3 = Knowledgeable I am comfortable with my knowledge or ability to apply the skill;

4 = Proficient I am very comfortable, am an expert, or could teach this skill to others.

Key elements	Before				After			
	1	2	3	4	1	2	3	4
Basic understanding of burden of disease in all setting—high, middle, and low income including magnitude, distribution, and variations.								
Ability to use available data to validate the health status of the population.								
Understanding of different health systems along with understanding of global health-care trends, human resources for health, and role of multiple stakeholders in planning and delivery health services.								
Understanding influence of globalization on health and be cognizant of linkages between local and global health								
Understand social, economic, and environmental factors as determinants of population health.								
Key determinants of health and their impact on access to and quality of health services in different contexts and apply it to policy development and problem analysis.								
Sharing of knowledge, skills, and resources to enhance public health programs to build human resource capacity and improve infrastructure.								
Strengthen community capabilities, build community partnerships, and with community integration improve health of individuals and communities.								
Analyze the economic, social, political, and academic conditions and address barriers to produce a strong health workforce.								

Understanding of and an ability to resolve common ethical issues and challenges that arise when working within diverse economic, political, and cultural settings to address global health issues.								
Key elements	Before				After			
	1	2	3	4	1	2	3	4
Evaluation and application of international standards and public health ethical frameworks in these settings.								
Demonstrate integrity, regard, and respect for others in all aspects of professional practice and optimize the potential of one's scope of practice within the context of a team								
Effectively communicate ideas about health and well-being to other professions, community leaders, and the general public.								
Communication skills including negotiation, mentoring, conflict resolution, advocacy, and liaison.								
Multidisciplinary teamwork and team building and working in close collaboration with local institutions to design, manage, and evaluate programs in developing countries								
Apply social justice and human rights principles in addressing global health problems.								
Demonstrate commitment to global equity, social justice, and sustainable development								
Design, implement, and evaluate global health program to improve health of individuals and populations in a sustainable manner. Apply project management techniques throughout program planning, implementation, and evaluation.								
To conduct situational analysis and bring systems thinking and determinants-of-health and population health perspective to analyze a diverse range of complex and interrelated factors to develop context-specific intervention to improve global health issues								
Core public health research skills to incorporate qualitative, quantitative, and operations research skills to design and apply reliable, valid, and								

ethically sound research to identify innovative solutions for global health problems									
Translating research to policy and programs									
Make evidence-based decisions									
Key elements	Before				After				
	1	2	3	4	1	2	3	4	
Evaluate strategies for communicating information to influence behavior and improve health (e.g., use social marketing methods, consider behavioral theories such as the Health Belief Model or Stages of Change Model, etc.)									
Describe the diversity of individuals and populations in a community. Recognize the ways diversity influences policies, programs, services, and the health of a community, and incorporate diverse perspectives.									
Assess the roles and responsibilities of governmental and non-governmental organizations in providing programs and services to improve the health of a community									
Ensure that community members are engaged to improve health in a community									
Assess the structures, functions, and authorizations of governmental public health programs and organizations									
Determine priorities for organizational budgets. Develop and defend organizational budgets. Approve proposals for funding. Ensure that programs are managed within current and projected budgets and staffing levels									
Establish teams and motivate personnel for the purpose of achieving program and organizational goal.									
Oversee the use of evaluation results to improve program and organizational performance. Establish performance management systems									

附录 3--- 后续访谈提纲

非常感谢您协助完成我们的调查问卷，接下来，研究人员将联系您，预约时间进行一个约 30 分钟的电话访谈或者面对面访谈。访谈涉及的问题主要如下所示：

Application

15. Why did you choose this program?
16. Where are you and what are you doing now?
17. If you have graduated, could you please share your stories after graduation?
What have you ever attempted to do (e.g. further study, job, etc.)? If you have not graduate yet, could you please share your stories in UW?
18. Have you ever applied what you have learned in UW to your work? Have you applied any resources/network you get in UW to your work? Please give an example. Please describe in detail how it is applied.
19. What knowledge, skills or resources do you think have the greatest impact on your work or study? Which ones have less impact?
20. What is your five-year career/study plan?

Application barriers

21. What do you think are the main obstacles in applying what you have learned? (e.g. no suitable projects, no good opportunities in the near future; limited ability, etc.)

Further learning:

22. Do you think more training is needed to continue your study? If so, what aspects of knowledge or ability would you like to learn to further improve yourself?

Other questions

23. What do you think are the advantages of the CMB project? (Funding & GH program) Why?
24. What are the disadvantages? Why?
25. Do you have any suggestions about this program? (Training content, training methods, etc.)
26. Have you seen any people who work very well in global health? If yes, what are the common characteristics of these people?
27. What do you think about China's global health development trend and employment prospects?

Appendixes- Questionnaire and interview outline for faculty scholars:

附录 2- 问卷调查

这项课题研究在 Stephen Gloyd 教授的指导下进行，重点关注 CMB 参与者对这个项目的满意度，这个项目的优势劣势，对这个项目的改进建议，以及这个项目产生的影响。如果您同意参与此项研究，请您首先完成下面的问卷调查，之后研究人员将对您进行一个大约 30 分钟的面对面访谈或者电话访谈（详见附录 3）。如您允许，我们希望能对此次访谈进行录音。访谈结束后，研究人员将分析访谈数据完成一篇论文并尝试发表。这是一个自愿参与的研究，再次真诚邀请您参加。

Demographic Information

Gender_____

Age_____

Home University in China_____

1. Before you came to UW:

How do you know about this training program?

How do you rent a house/department in Seattle?

___ UW provided house/department for scholars

___ UW offered rental information

___ UW did offer some help, but I found the house by myself

___ UW did not offer any help, I found the house by myself

2. When you were supported by CMB and study in UW:

Month/Year of arrival at UW:_____

Month/Year of departure from UW:_____

Advisor:_____

Study area on which you focused during the study in UW:_____

Did DGH arrange someone to pick you up when you arrived at Seattle?

Yes

No

Did DGH/UW arrange someone to show you around when you arrived at Seattle?

Yes

No

How did you get your stipend from DGH?

Get stipend for each month

Get all funding at one time

Others _____

Do you have your own office area in UW?

Yes

No

3. Now:

Location: China ___ America ___ South Africa ___ Others, please clarify ___

What are you doing now? Where?

Work for university _____

Work for other institutions _____

Reaction assessment (satisfaction assessment)

1 – Strongly disagree; 2 – Disagree; 3 – Neutral; 4 – Agree; 5 – Strongly agree

N/A - Not available/Not used

Number	question	score					
		1	2	3	4	5	N/A
1	There is enough information and advocacy that I could easily know about this program.						
2	I feel welcome and respected at UW.						
3	I feel it is easy to rent a house/department.						
4	I feel it is easy to get a Social Security Number.						
5	Library resources and services are adequate.						
6	Financial support is adequate.						
7	I like the cafeteria in UW.						
8	There is enough support for international scholars.						

9	UW provide me with more opportunities and network in global health.						
10	There is good communication between UW faculty and me regarding my needs, concerns, and suggestions.						
11	The quality of instruction I receive in most of my classes is excellent.						
12	The content of the courses is valuable.						
13	There are sufficient options within my program of study.						
16	Faculty in my department are helpful and supportive in my search for professional development.						
17	Faculty in my department are well qualified to teach their courses.						
18	My academic advisor is accessible.						
19	My academic advisor is concerned about my success as an individual.						
20	I am satisfied with research resources such as facilities, equipment, and lab space in UW.						
21	My program has high academic standards						
22	What I have learnt in UW is relevant to my career						
23	I have not been treated unfairly at school because of my gender, race/ethnicity, sexual orientation, religion, disability, or veteran status.						
24	I like the design of the training program.						
25	Alumni group is helpful.						
26	If I were starting over, I would enroll in this program again.						
27	Overall, I am satisfied with my experience at UW.						
28	I would like to recommend this program to a friend or colleague.						

附录 3--- 后续访谈提纲

Application

1. Why did you choose this program?
2. Where are you and what are you doing now?
3. Could you please share your stories after you leave UW? What have you ever attempted to do?
4. Have you ever applied what you have learned in UW to your work? Have you applied any resources/network you get in UW to your work? Please give an example. Please describe in detail how it is applied.
5. What knowledge, skills or resources do you think have the greatest impact on your work or study? Which ones have less impact?

Application barriers

6. What do you think are the main obstacles in applying what you have learned? (e.g. no suitable projects, no good opportunities in the near future; limited ability, etc.)

Other questions

8. What do you think are the advantages of the CMB project? (Funding & GH program) Why?
9. What are the disadvantages? Why?
10. Do you have any suggestions about this program? (Training content, training methods, how to strengthen Chinese universities global health capacity, etc.)
To what extent, do you think that UW has achieved its objectives?
11. Have you seen any people who work very well in global health? If yes, what are the common characteristics of these people?
12. What do you think about China's global health development trend and employment prospects?
13. Outcomes
14. Influence on institution

Appendixes- Interview outline for UW program PI:

CMB Program-Interview Questions-PI

May 3rd, 5:15-5:45 pm

1. Could you please share the story about how this CMB program started?
2. Why did CMB start such a program?
3. Why is UW interested in this program?
4. How did you participate in managing this program?
5. To what extent do you think this program has achieved its objective (strengthening the global health capacity of Chinese universities)?
6. The CMB program will come to an end soon. Is there any plan for the future collaboration or program?
7. What do you think about these feedbacks?
 - a) Some students said that there is limited career development training
 - b) Some students said that the funding only cover 4 quarter, which restricted their choices of courses and certificates
 - c) Some scholars said that there lack of follow-up when the training finished.
 - d) Some PhD students said that the funding and support is not enough.
 - e) Some scholars said that it would be better if there are potential collaborative projects before they came.
 - f) Some scholars said that it would be better if it is designed to be half course and half field work in low- and middle-income countries.
 - g) Some participants said that it would be better if DGH could provide a guidance book to introduce the resources and choices before they came
 - h) Some scholars said UW just required them to do oversea projects without providing related projects resources.
 - i) Someone suggested that CHEN partnership, China-Harvard Africa

network partnership, is a good model. What do you think about this?

Appendixes- Interview outline for UW program manager:

CMB Program-Interview Questions

May 9th, 9:00-9:45 pm, Le Fournil

8. How did you participate in managing this program? When? What work have you done?
9. To what extent do you think this program has achieved its objective (strengthening the global health capacity of Chinese universities)?
 - a) Faculty scholar training program
 - b) MPH students & PhD students
 - c) Collaborative projects/ meetings
10. What do you think are the strengths of the programs?
11. Is there anything you want to make a change?
12. There are many positive feedbacks. But there are also negative ones, what do you think about these negative feedbacks?
 - a) Some students said that there is limited career development training
 - b) Some students said that the funding only cover 4 quarter, which restricted their choices of courses and certificates
 - c) Some students said it lack writing skill training.
 - d) Some scholars said that there lack of follow-up when the training finished.
 - e) Some PhD students said that the funding and support is not enough.
 - f) Some scholars said that it would be better if there are potential collaborative projects before they came.
 - g) Some scholars said that it would be better if it is designed to be half course and half field work in low- and middle-income countries.
 - h) Some participants said that it would be better if DGH could provide a

- guidance book to introduce the resources and choices before they came
- i) Some scholars said UW just required them to do oversea projects without providing related projects resources.

Appendixes- Interview outline for UW program director:

CMB Program-Interview Questions

May 10th, 3:00-4:00pm

13. Could you please share the story about how this CMB program started?
14. Why did CMB start such a program?
15. Why is UW interested in this program?
16. How did you participate in managing this program?
17. How did you design the program? And why?
 - a) 6 months coursework for faculty scholars (Research capacity building? Or the view of global health capacity building?)
 - i. no potential collaborative projects before they came
 - ii. no requirement for specific output from this program
 - iii. not much resources (no travel funding) for them to participate in UW's oversea project in LMICs (why? Funding? Procedure problems?)
 - iv. 3 months coursework+ 3month field work?
 - v. lack of follow-up when the training finished (share updated information, contact and help with project, share library resources, affect the high-level people in the Chinese universities or government to support the young faculties...)
 - vi. no regular group meeting
 - b) 4 quarter funding for MPH students
 - c) 4 quarter funding for PhD students
 - i. no extra support for helping the PhD students get more funding, or help them get TA or RA position
 - ii. no clear funding information on the website
 - d) require doing practicum in other countries excluding China
 - e) when and how did you match the advisor for the participants?
 - f) no guidance book to introduce the resources and choices before they came

- g) CHAN partnership, China-Harvard Africa network partnership, is a good model. What do you think about this? The starting funding was from Gates Foundation.
 - h) Course requirement design: lack of skill knowledge, too much discussion classes
 - i) Lack of opportunities in profit institutions, like consultant companies, which could help the students get job easier
 - j) Lack of transparency for the funding use
 - k) Lack of communication within the CMB group—is that possible to create a CMB alumni group and organize people to meet/talk via Wechat annually?
18. Is there anything you want to make a change?
19. To what extent do you think this program has achieved its objective (strengthening the global health capacity of Chinese universities)?
20. How important is this CMB program and the collaboration with China for UW?
21. What's your current thinking for the future collaboration or program?

Appendixes- Inform consent form

UNIVERSITY OF WASHINGTON

CONSENT FORM

The evaluation of China Medical Board’s program aimed in “Strengthening Global Health Capacity at Chinese Universities “in University of Washington

Researchers: Zhaixing Gao, master student, Department of Global Health, University of Washington, Tel: 18210136238, Email: zhaixing@uw.edu, Advisor: Stephen Gloyd

Researchers’ statement

We are asking you to be in a research study. The purpose of this consent form is to give you the information you will need to help you decide whether to be in the study or not. Please read the form carefully. You may ask questions about the purpose of the research, what we would ask you to do, the possible risks and benefits, your rights as a volunteer, and anything else about the research or this form that is not clear. When we have answered all your questions, you can decide if you want to be in the study or not. This process is called “informed consent.” We will give you a copy of this form for your records.

PURPOSE OF THE STUDY

With the support of CMB, University of Washington (UW) launched a program for “Strengthening Global Health Capacity at Chinese Universities” in June 2013. The program was designed in close collaboration with seven leading Chinese medical universities. This program focuses on education, training and mentorship of emerging,

early and mid-career professionals and includes three synergistic components: 1) graduate education in global health for masters and doctoral students; 2) training for faculty scholars; and 3) mentored, collaborative applied research projects in global settings.

In this research study, we are conducting survey and interviews to evaluate the CMB program. This study is mainly focusing on the satisfaction of CMB program, the weakness, strength and suggestion of this program and the influence of this program.

STUDY PROCEDURES

If you decide to participate you will be asked to finish a questionnaire survey first. Then you will participate an interview, which will take you about 30 minutes.

This interview is mainly focusing on the satisfaction of CMB program, the weakness, strength and suggestion of this program and the influence of this program.

And there might be some follow-up questions by phone or by email.

This study will be completed by July 1st, 2019.

RISKS, STRESS, OR DISCOMFORT

This study involves the following risks: there is risk for the data disclosure or lost, which may make you feel embarrassed, although the data will be reserved anonymously.

There may also be other risks that we cannot predict.

If some of the risks happen, please contact the researcher to reflect the problems and get further help.

BENEFITS OF THE STUDY

It is reasonable to expect the following benefits from this research: the researcher will try to connect all the participants together and hold a seminar for people to discuss. However, we can't guarantee that you will personally experience benefits from participating in this study.

Others may benefit in the future from the information we find in this study.

CONFIDENTIALITY OF RESEARCH INFORMATION

All of the information you provide will be anonymous. The research data will be destroyed after the records retention period required by UW. There are no plans to release the data to subjects.

OTHER INFORMATION

You may refuse to participate and you are free to withdraw from this study at any time without penalty or loss of benefits to which you are otherwise entitled.

RESEARCH-RELATED INJURY

If you think you have been harmed from being in this research, contact Zhaixing Gao, Tel: 18210136238, Email: zhaixing@uw.edu; Stephen Gloyd, Email: gloyd@uw.edu.

- Inform subjects about whether any compensation is available.

The UW does not normally provide compensation for harm except through its discretionary program for medical injury. However, the law may allow you to seek other compensation if the harm is the fault of the researchers. You do not waive any right to seek payment by signing this consent form.

Zhaixing Gao

高掇星

Printed name of study staff obtaining consent Signature Date

Subject's statement

This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions. If I have questions later about the research, or if I have been harmed by participating in this study, I can contact one of the researchers listed on the first page of this consent form. If I have questions about my rights as a research subject, I can call the Human Subjects Division at (206) 543-0098 or call collect at (206) 221-5940. I will receive a copy of this consent form.

Printed name of subject Signature of subject Date

When subject is not able to provide informed consent:

Printed name of representative

Signature of representative

Date

Relationship of representative to subject

华盛顿大学知情同意书

华盛顿大学中华医学基金会“加强中国大学全球健康能力建设”项目评估

研究人员：高摘星，华盛顿大学全球健康系，研究生电话号码：18210136238，电子邮箱：
zhaixing@uw.edu，导师：Stephen Gloyd

研究声明

我们邀请您参与这项研究。这份知情同意书的目的是提供您相关的信息从而您可以决定是否参与此项研究。您可以问研究相关的问题，比如研究目的，我们会要求您做什么，可能的风险和利益，您作为一个志愿者的权利，以及任何其他关于研究或这份知情同意书您觉得不清楚的问题。当我们回答了您所有的问题，您可以决定您是否想参加。这个过程被称为“知情同意”。知情同意书一式两份，我们会提供您一份知情同意书作为记录。

研究目的

在美国中华医学基金会（CMB）的支持下，华盛顿大学于2013年6月推出了一项“加强中国大学全球健康能力”的计划。该计划是与七所顶尖的中国医科大学紧密合作设计的。该项目的重点是教育，培训和建立导师关系，培养全球健康初级和中级专业人员，包括三个组成部分：1) 研究生和博士生的全球健康教育；2) 师资培训；3) 在全球背景下，指导并协作开展研究项目。CMB为这项计划提供的资金将于今年（2019年12月）结束。因此本研究将开展项目评估，以衡量这个项目的有效性，并提出进一步的教育和合作的建议。

在本研究中，我们将以问卷调查和访谈的形式评估华盛顿大学CMB项目。本研究聚焦于对这个项目的满意度、该项目的优势，劣势，建议以及该项目的影

研究过程

如果您决定参与这项研究，您将完成一份问卷调查。然后接受一个访谈，时长大约为30分钟。访谈主要涉及以下几方面的问题：对这个项目的满意度、该项目的优势，劣势，建议以及该项目的影

响。访谈结束后，您可能要回答一些通过电话或者电子邮件进行的随访问

风险，压力或不适

题。这项研究将于2019年7月1日之前完成。

本研究涉及以下风险：数据泄露或丢失有风险，这可能使你感到尴尬，尽管数据将被匿名保留。以及其他我们无法预测的风险。

如果发生了一些风险，请与研究员联系，以反映问题并得到进一步的帮助。

参与者的收益

通过参与这项研究，下面的好处是可以合理预期得到的：研究人员将尝试把所有参与者联系起来，举办一个研讨会，供大家讨论交流。但是，我们无法保证您个人一定会从这个研究中得到好处。其他的好处可能是我们后期从此项研究中得到的信息。

研究信息的保密性

您提供的所有信息将被匿名保存。当完成华盛顿大学对于研究数据的保留期的要求时，所有研究数据将被销毁。这项研究没有计划将研究数据泄漏给被访谈者。

其他

您可以拒绝参加，并且在任何时候都可以自由退出本研究，而不受任何惩罚或失去您应得的利益。

研究相关的损害

如果您认为您在参与此项研究的过程中受到损害，请联系高摘星，电话号码：18210136238，电子邮箱：zhaixing@uw.edu；或者 Stephen Gloyd，电子邮箱：gloyd@uw.edu.

补偿：

除了造成华盛顿大学项目确认的医疗伤害以外，华盛顿大学通常不提供损害赔偿。但是，如果损害是研究人员的过错，您可以通过法律寻求其他赔偿。签署这项知情同意书并不妨碍您寻求任何补偿的权利。

高摘星

高摘星

获取同意书的工作人员姓名

签名

日期

参与者声明

这项研究已经向我解释过了。我自愿参加这项研究。我有机会问问题。如果我以后有关于研究的问题，或者如果我因参与这项研究而受到损害，我可以联系在这个知情同意书第一页上列出的研究人员之一。如果我对作为一个研究对象的权利有疑问，我可以致电 人类学部门(206) 543-0098 或 (206) 221-5940。我会收到这张同意书的复印件。

参与者姓名

签名

日期

如果参与者无法提供签名：

代表人姓名

代表人签名

日期

代表人与参与者关系