

Impact on skills, knowledge and performance of public health
leaders after participating in the University of Suriname Master
of Public Health program

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A thesis

*submitted in partial fulfillment of the requirements
for the degree of*

Master of Public Health

University of Washington

2012

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ACRONYMS

ADEKUS	Anton de Kom University of Suriname
BOG	Bureau Openbare Gezondheidszorg (Bureau of Public Health)
EB	Epidemiology/Biostatistics (track)
FMEW	Faculty of Medicine (Medische Wetenschappen)
HPDP	Health Promotion and Disease Prevention (track)
IGSR	Institute for Graduate Studies and Research
I-TECH	International Training and Education Center for Health
MPH	Master of Public Health
MOH	Ministry of Health
MSH	Management Sciences for Health
NHPLI	National Public Health Leadership Institute
NEHPLI	Northeast Public Health Leadership Institute
WHO	World Health Organization

ACKNOWLEDGEMENTS

The researcher wishes to thank first and foremost the students from the first cohort of the Anton de Kom University of Washington, Institute of Graduate Studies and Research, Master of Public Health Program, who took the time to participate in this study despite the demands of their own thesis research on their already heavy workloads as public health professionals in Suriname. The researcher also extends her gratitude to Dr. Eersel, Director at the Ministry of Health Suriname, as this study could not have been done without her support. Dr. Rinia Codfried, coordinator of the MPH program, and Dr. Maltie Algoe, Head Planning Unit, Ministry of Health and MPH Student, also provided valuable information about the program, without which this research would not have been feasible.

Finally the researcher thanks faculty, staff and students of the University of Washington Department of Global Health, especially the staff of the International Training and Education Center for Health, for their generous support during this process.

ABSTRACT

Like many developing countries, Suriname experiences challenges in maintaining a strong and qualified health workforce, including insufficient graduate training for individuals in public health leadership positions. The University of Suriname established an MPH program in 2008 in order to address this issue, with the first cohort reserved for public health professionals in leadership positions.

Specific Aims: This study aimed to determine whether this program had an impact on the knowledge, skills and performance of students who participated in this program. The study focused specifically on whether these students developed or strengthened leadership and management competencies, and whether they, as a result, are better equipped to perform the essential public health functions associated with their positions within the Suriname public health system.

Setting: Research was done in Suriname between December 2011 and February 2012 at various Ministry of Health locations. The study sample consisted of students from the first cohort of the MPH program.

Methods: Mixed methods were used for data collection. Eighteen students were surveyed using a questionnaire. Additional data were gathered from eight students and two key informants through in-depth interviews, a focus group, anecdotal discussions and email correspondence. The questionnaire captured the students' opinions on which competencies were important for effective public health leadership and management and assessed their own competencies and whether participating in the MPH program had developed or strengthened these competencies.

Results: Student responses reflected agreement on the skills needed for effective public health leadership and management. Approximately half rated themselves as strong on the skills considered most important (strategic thinking/planning skills and communication skills). The majority reported a limited impact of the program on development and strengthening of these skills, with a significant difference in the responses of students from different tracks. This finding was supported by follow-up discussions with the students and a key informant from the Ministry of Health. There was agreement among all that additional training in several leadership and management areas would be useful.

Conclusions: A needs assessment should be performed to determine which topics within the broad fields of leadership and management would be most relevant. In addition, the curriculum for the MPH program should focus on developing and strengthening leadership and management competencies. Implementing these recommended strategies will contribute to strengthening of the public health capacity in Suriname.

BACKGROUND

Introduction

Suriname is a country in northern South America. It borders French Guiana to the east, Guyana to the west, Brazil to the south, and the Atlantic Ocean to the north. Suriname was a former colony of the British and of the Dutch and was previously known as Dutch Guiana. Suriname achieved independence from the Netherlands on 25 November 1975. At just under 64,000 square miles, Suriname is the smallest sovereign state in South America. It has an estimated population of approximately 560,157¹, most of whom live on the country's north coast where the capital Paramaribo is located². See Appendix I for additional information about Suriname.

In Suriname, like in many developing countries, the public health system is experiencing challenges maintaining a strong and qualified health workforce. Strengthening of public health capacity is, therefore, a core strategy in the health sector reform efforts currently being undertaken in Suriname. In 2007, as part of this process of health sector reform, an international consulting firm, Bitran and Associates³, was engaged to perform an assessment of the public health human resource capacity and training needs in Suriname. In their final report, “Strengthening of Public Health Training Capacity”, the consulting firm presented the results of assessments conducted at the Bureau of Public Health (BOG) and at the national level. The aim of these assessments was to identify the need for public health training for public health leadership, nurses and community health workers. The assessment of public health leadership capacity in Suriname indicated a need for graduate training in public health at different levels and structures of the public health authority. In this report, fifty-eight positions in the Suriname public health system were identified as in great and relatively urgent need of being served by professionals with graduate training in public health. There are only a limited number of persons with a Master of Public Health (MPH) or other public health degree in Suriname⁴. All of these individuals were trained abroad. The Ministry of Health (MOH) has financed public health training for key officials at foreign universities, but this strategy is expensive, and attrition rates have been high due to more lucrative international and local opportunities for graduates. In order to strengthen the public health capacity in a rapid and more sustainable manner, the MOH encouraged and supported the establishment of an MPH program at the Anton de Kom University of Suriname (ADEKUS)⁵. The program was started at the Anton de Kom University of Suriname in January 2008. The 20 students

included in this first cohort are in the final stage of the program and expected to complete their degree in 2012.

The Bitran and Associates report identified this MPH program as an opportunity to develop the cadre of public health professionals needed to serve in the positions identified at the BOG and national level. Establishment of this MPH program was expected to contribute to the sustainable fostering of public health expertise in Suriname. Several individuals in the positions identified in the Bitran and Associates assessment, most of them already in government service, were invited to participate in this program.

Study Aims

This study aimed to determine whether the knowledge, skills and performance of students who participated in this MPH program have improved and whether they, as a result, are better equipped to perform the essential public health functions associated with their position within the public health system in Suriname. The study focused specifically on whether the students developed or strengthened leadership and management competencies, such as program and human resource management, coalition building, policy analysis and advocacy, and interdisciplinary collaboration.

Specific Study Questions

1. Have graduates of the ADEKUS MPH program developed or strengthened relevant leadership and management competencies through participation in this program?
2. How has participation in the ADEKUS MPH program impacted their performance in their function as public health leaders?

Relevance

The findings from this study will provide information to stakeholders on whether the MPH program is contributing to human capacity development and addressing the training needs of Suriname. Specifically, the findings will help determine whether providing MPH training in Suriname is more cost effective than sending students abroad for training and whether to start a second cohort. The findings include whether leadership and management competencies were gained in the program and inform whether additional leadership and management training is required for this first cohort. Also, if a decision is made to continue this program and a second cohort is recruited, the curriculum can be revised to include identified leadership and competencies training currently lacking.

Literature Review/Internet Research

The Lancet article on transforming education for health professionals in the 21st century discusses how professional education has not kept up with the challenges that are being faced by health professionals in the 21st century because of fragmented, outdated and static curricula that produce ill-equipped graduates⁶. The Education of Health Professionals for the 21st Century: A Global Independent Commission came together in 2010 to develop a shared vision and common strategy for postsecondary education in medicine, nursing and public health. The reforms that the Commission proposed included promotion of inter-professional and trans-professional education to break down professional silos while enhancing collaborative and non-hierarchical relationships in effective teams. Alongside technical skills, this education should, the Commission stated, focus on crosscutting generic competencies such as analytical abilities, leadership and management capabilities and communication skills. By including this type of reform in their framework, this landmark document emphasized the importance of leadership and management competencies for 21st century health professionals and the need to include development of these competencies in public health education.

In a 2010 study, Hohl, Beschta, Gloyd, Wasserheit and Hagopian reported on how a university curriculum could optimally prepare students to address current and future global health needs⁷. Their findings included a need for training in applied skills, with a focus on context, leadership and management. The main competencies and skill areas that current global health leaders considered important included coalition and team building, program and human resource management, information analysis and synthesis, epidemiology, policy analysis and advocacy and monitoring and evaluation. Case studies and experiential learning were mentioned as learning approaches to prepare future global health professionals, as well as interdisciplinary collaboration. This study underscored the importance of including leadership and management competencies in the curriculum of graduate level studies. Hohl et al reported that several overseas schools of public health already focus on primary health care management and leadership (e.g., Thammasat University, Thailand; University of Western Cape, South Africa; Eduardo Mondane University, Mexico; University of Zimbabwe; University of Nairobi).

The researcher reviewed literature on leadership and management programs designed to develop and/or strengthen leadership and management competencies for health care professionals. There are many well-established programs and/or frameworks for strengthening health leadership and

management. One example is the World Health Organization (WHO) Leadership and Management Strengthening Framework⁸, which reflects the Leadership/Governance building block in the WHO Health Systems Strengthening Strategy for improving health outcomes. This Framework includes the following components: adequate number of managers, appropriate competencies, functional support system and an enabling environment. The WHO has used this Framework in international consultations and workshops such as the 2007 *International Consultation on Strengthening Leadership and Management* in Ghana as a component of scaling up health services to reach the Millennium Development Goals⁹. The Management Sciences for Health (MSH) leadership development programs have been implemented in many developing countries in an effort to strengthen leadership in health. MSH has also developed an approach for evaluating the outcomes of these programs¹⁰. Several universities based in the United States (US) have established leadership development programs such as those within the National Public Health Leadership Institute (NHPLI) at the University of North Carolina School of Public Health¹¹ and the Northeast Public Health Leadership Institute (NEPHLI), affiliated with the University of Albany¹², the Afya Bora Consortium Fellowship in Global Health, a collaboration between four US and four African universities¹³ and the Population Leadership Program at the University of Washington¹⁴. Evaluations have been conducted with graduates of several of these leadership development programs. In 2004, Saleh, Williams and Balougan reported significant improvements in skill levels in all of the examined competency areas for graduates of the NEHPLI program¹⁵. In the 2007 evaluation of the NHPLI program, participants reflected a large (36%) or moderate (43%) long-term influence of the program on their leadership. The majority of participants reported moderate or large/great strengthening of their leadership skills¹⁶. Fatima Mohamed noted In a 2010 evaluation of the University of Washington Population Leadership Program for health professionals in Sudan that 95% of the respondents reported at least some improvement in their leadership skills following the training, more than 80% reported at least some improvement in their management skills, and less than 5% reported no improvement in their policy development skills¹⁷.

Findings from this literature review support the assumption that leadership development programs such as the ones discussed above have a significant effect on participants with regards to development or strengthening of leadership and management competencies. However, these programs primarily provide leadership development programs to public health professionals who are emerging leaders after their formal education. In contrast, there are a limited number of programs available at US-based universities that have incorporated the development and strengthening of leadership and management

competencies in a graduate level program. Of the forty-eight schools associated with the Association of Schools of Public Health, a limited number offer a MPH Program with a specific leadership concentration (e.g., Loma Linda University, Johns Hopkins University, University of North Carolina, University of Washington). However, several universities focus on leadership and management competencies through concentrations such as Health Policy and Management, Health Promotion, Public Health Communication and Marketing (e.g., George Washington University, Boston University, Harvard University, and University of Michigan). However, the researcher did not encounter evaluations of these graduate level programs, specific to the development and strengthening of leadership and management competencies. In 2008, during efforts to establish competencies for a graduate school curriculum in international health, the University of Washington did attempt such an evaluation by asking incoming MPH students to rate themselves on their core competencies. They intended to use this information as a baseline for comparison with assessment data after these students completed the program two years later. They also asked students who had completed a year of the program about courses they had taken which they thought contributed most to the identified competencies.¹⁸ The results from this study, once available, might inform whether any development or strengthening of leadership and management competencies had taken place during the MPH program. At this time, literature supporting the hypothesis that MPH programs have an impact on strengthening or development of L&M skills is unavailable. This study was an attempt to capture evidence to support this assumption, specific to the ADEKUS MPH program.

The Master of Public Health Program at the University of Suriname¹⁹

The Master of Public Health program was implemented by the Anton de Kom University of Suriname within the Institute of Graduate Studies and Research (IGSR). The first cohort of this two-year program started with 20 students in January 2008. The students in this first cohort were all in public health leadership positions at the time of enrollment, including leadership and management positions within the Ministry of Health, the Bureau of Public Health, National AIDS Program, National Tuberculosis Program, Academic Hospital and the Regional Health Authority. A few students are employed by non-governmental organizations involved in public health.

Mission

The mission of the Master of Public Health Program at the University of Suriname is to contribute to the promotion, maintenance and protection of the health of communities and individuals through strengthening of public health capacity and generation of strategic public health information.

Goal

The goal of this two-year program is to strengthen the national, regional and international capacity for the development, implementation and evaluation of public health programs through the training of highly knowledgeable and motivated public health professionals and the implementation of scientific public health research.

Objectives

The objectives for the program include:

- a) Development of a high quality Master of Public Health Degree program;
- b) Educating public health professionals; and
- c) Maintaining an academic and contextually relevant public health research program.

Curriculum

The program initially offered two tracks, an Epidemiology/Biostatistics track and a Health Promotion and Disease Prevention Track. Of the first cohort of twenty students, twelve entered the Epidemiology/Biostatistics track and eight entered the Health Promotion and Disease Prevention Track. A third track, International Health, was planned, but has not yet been offered. Please see Appendix II for the complete curriculum.

The core competency areas for the MPH program are:

- Biostatistics
- Epidemiology
- Public Health, Policy and Planning
- Social and Behavioral Sciences
- Communication
- Leadership, Professionalism and Ethics
- Diversity and Cultural Competence
- Environmental and Occupational Health
- Critical and Analytical Thinking

Based on these competency areas the following areas of knowledge are identified:

<p>Core General</p> <ul style="list-style-type: none"> ▪ Biostatistics ▪ Epidemiology ▪ Public Health theory ▪ Public Health organization, management and policy development ▪ Behavioral and social science ▪ Public Health philosophy and ethics ▪ Public Health law ▪ Research methods ▪ Environmental and occupational health ▪ Reproductive health 	
<p>Epidemiology/Biostatistics</p> <ul style="list-style-type: none"> ▪ Theories of distribution of disease and causality ▪ Epidemiological research ▪ Chronic non-communicable disease epidemiology ▪ Infectious disease epidemiology ▪ Clinical Epidemiology ▪ Principles of biostatistics, statistical reasoning, tests and inferences ▪ Health informatics 	<p>Health Promotion and Disease Prevention</p> <ul style="list-style-type: none"> ▪ Health behavior research ▪ Theories and models of health behavior and behavioral determinants ▪ Planning and implementation of health promotion and disease prevention programs ▪ Community-based approaches to health promotion and disease prevention ▪ Health promotion and disease prevention policy development ▪ Health communication

These core competencies and areas of knowledge are in line with the core discipline areas and crosscutting domains established by the US-based Association of Schools of Public Health in 2004²⁰ and incorporate leadership and management competencies. It can be expected that some focus on leadership and management competencies would be included in the courses listed below.

<p>Required Core Curriculum:</p> <ul style="list-style-type: none"> ▪ Public Health Principles, Theory and Practice ▪ Public Health Administration and Policy ▪ Public Health Ethics ▪ Planning, Implementation and Evaluation of Public Health Programs ▪ Social and Behavioral Aspects of Health
<p>Health Promotion and Disease Prevention track:</p> <ul style="list-style-type: none"> ▪ Planning and Implementation of Health Promotion and Disease Prevention Programs ▪ Evaluation of Health Promotion and Education Programs ▪ Health Communication
<p>Electives</p> <ul style="list-style-type: none"> ▪ Cultural Competence ▪ Proposal Writing ▪ Stress Management ▪ Control and Prevention of HIV, Malaria and TB

Some focus on leadership and management competencies might have been included in the courses listed above, but syllabi were not available for all of them. Of those reviewed, only a few specifically indicated the development or strengthening of leadership and management competencies as an objective or outcome. For instance, the syllabus for “Public Health Administration and Policy” specifically lists being able to “understand and critically discuss leadership functions and concepts related to public health” as an objective of the course. Other objectives, including “understand and critically discuss management and monitoring of public health programs and projects” and “understand and critically discuss administration of public health programs and ministries of health”, indicate that this course was intended to include a focus on leadership and management competencies. The course objectives listed on the syllabus for “Planning, Implementation and Evaluation of Public Health Programs” also indicate a similar focus. It includes objectives such as “eliciting input from those who will affect or be affected by the program”, “developing plans for promoting collaborative efforts among health agencies and organizations with mutual interests”, “using research results for planning”, etc. These objectives reflect leadership and management competencies. The syllabus for “Public Health Principles, Theory and Practice”, “Public Health and Globalization” and “Social and Behavioral Aspects of Public Health” all refer to understanding of leadership and management concepts or development of skills related to these concepts. Review of the curriculum and the available syllabi indicated some focus on development and strengthening of leadership and management competencies, albeit not necessarily expressed explicitly. See Appendix III for objectives for some of the relevant MPH program courses.

METHODS

Study Type

The study aimed to describe the impact of the ADEKUS MPH program on the skills, knowledge and performance of students. It was a descriptive, exploratory study. Findings from this study are expected to inform policy decisions on the part of the MOH and the MPH program administration. Results and recommendations from this study may influence the curriculum for future cohorts in the program. The findings are intended to encourage further research to better address the needs of the students in this program.

The researcher was not able to perform an assessment of the research subjects' leadership and management competencies prior to the start of the program. Also, the researcher did not have access to a control group of students to be used for comparison purposes. As this study only included a post-assessment and was limited to one group, it follows the posttest-only non-experimental design²¹. While a posttest only non-experimental study made it difficult to attribute the observations from the study to the program, it still provided valuable information about the students' belief in the impact of the program.

This study combined quantitative and qualitative research methods, such as literature review, Internet research, questionnaires, individual in-depth interviews with key informants and a focus group. Mixed methods are recommended for research questions in which either the quantitative or the qualitative approach would, by itself, be inadequate to develop multiple perspectives and a complete understanding about the research question²². The researcher felt that adding qualitative research methods provided additional valuable information compared to only a quantitative analysis of the questionnaire responses.

Study Sample

The only eligibility criteria for the study participants were being a student in the first cohort of the MPH program and being employed in a public health leadership position. All 20 students from the first cohort were contacted to participate in the study, making this a purposive sample. These students started the program in January 2008 and had completed all required courses when this research was conducted. The students were all in the process of completing theses and expected to graduate in

2012. Since all of the 20 students who started the program were still enrolled in the program at the time of the research, there was no need to exclude any student due to drop out or non-completion of the program. There were only 20 students enrolled in the first cohort, and, as a result, the sample size for this study was quite small. In addition to the students, the researcher spoke with two key informants within the Ministry of Health and the MPH program administration.

Data Collection

The researcher contacted the Director of the MOH Suriname in July 2011 for permission to conduct this research in Suriname. The researcher had a prior professional relationship with the Director because of her employment with the International Training and Education Center for Health (I-TECH). I-TECH has collaborated with the Suriname MOH under a US government-funded project for health systems strengthening in the Caribbean. After receiving a positive response from the Director, students were recruited for participation in the research study via email. The MPH Program Administrator provided contact information for the students. In addition, the MOH sent an email to the students requesting their support for and participation in this study.

The researcher collected data between December 15, 2011, and February 3, 2012. The in-person data collection took place at various offices within the MOH, located in Paramaribo.

Questionnaire

A questionnaire was sent to all 20 students of the first cohort. See Appendix IV for the questionnaire template. One student could not be contacted due to incomplete contact information. Of the remaining 19 students, a total of 18 returned a completed questionnaire, resulting in a 90% response rate.

The questionnaire used in this study was adapted using different survey instruments used in evaluation of leadership and management skills development. The first instrument the researcher reviewed was one used by the Afya Bora Consortium Fellowship in Global Health for self-assessment of leadership competencies. The researcher also incorporated aspects from a survey instrument used in an evaluation of the leadership program conducted by the National Public Health Leadership Institute at the University of North Carolina. The competencies included in the final questionnaire reflect some of the skills recommended by current global health leaders as essential for the next generation. The questionnaire was in English.

The questionnaire consisted of three parts which intended to capture 1) the students' opinions on which competencies are important for effective leadership and management in public health leadership positions; 2) their assessment of their own strengths related to these competencies and, especially relevant for this study; and 3) whether they believed that participating in the ADEKUS MPH program had developed or strengthened these competencies. The questionnaire was designed with a four point scale. The values for the first part were: "very important", "important", "useful, but not essential" and "of minimal importance". For the second part the values used were: "excellent", "strong", "moderate" and "weak". The values for the final part were: "very much", "somewhat", "a little" and "not at all".

Interview/Focus Group

The researcher planned to use semi-structured interviews with a number of key informants as well as conduct a focus group if appropriate. The researcher had not yet scheduled any of these interviews when an excellent opportunity arose to interact with several research subjects. Through her practicum affiliation with the MOH, the researcher attended a technical working group meeting with several representatives of public health institutions in Suriname. Five of the participants in this working group were students from the cohort under study. The researcher was able to arrange an impromptu focus group with four of these students following the working group meeting. During this informal discussion, the students elaborated on their responses to the questionnaire and further discussed the MPH program. Notes were transcribed and translated into English following the discussion, which took place in Dutch, the official language of Suriname,

The researcher also conducted both informal discussions and more structured interviews with five of the students in the program. Finally, the researcher had several discussions with the Director of Health at the MOH, who was also one of the initiators/supporters of the MPH program. The Director of the Ministry of Health has some of these students under her direct supervision and has frequent interactions with several others. As a result, she is well positioned to assess whether the students have exhibited a change in their skills, knowledge and performance throughout and after completing the program. These discussions also took place in Dutch. Notes were transcribed and translated directly following these discussions.

Study methods and instruments were approved by the Human Subjects Division at the University of Washington prior to commencing the study under application #41797-EG.

RESULTS

Data Analysis

Questionnaires

The analysis below shows the average scores for each category in each part of the completed questionnaires. See Appendix V for the breakdown of scores for the skills in each of the categories.

Importance of leadership and management competencies for public health professionals in leadership positions: Students agreed on the importance of the competencies included in the questionnaire (Table 1). Most of these competencies were considered very important or important, with management skills considered least important (86% compared to 97%). A number of students thought management skills might be useful but not essential (14%).

Table 1: Responses of students related to the importance of leadership and management competencies for health care professionals in public health leadership positions

Competency	Very Important	Important	Useful But Not Essential	Of Minimal Importance
Strategic Thinking and Planning Skills	67%	29%	3%	0%
Management Skills	42%	44%	14%	0%
Communication Skills	68%	29%	3%	0%
People Skills	60%	38%	2%	0%
Personal Characteristics	57%	40%	2%	0%

Self-assessment of leadership and management skills: Approximately half of the students rated themselves as strong on the skills included, but a fair amount assessed their strategic thinking and planning skills (41%) and communication skills (38%) as moderate (Table 2). Approximately a tenth of the students rated themselves as weak on management skills (11%).

Table 2: Responses of students related to their self-assessment of leadership and management competencies

Competency	Excellent	Strong	Moderate	Weak
Strategic Thinking and Planning Skills	14%	42%	41%	0%
Management Skills	15%	43%	24%	11%
Communication Skills	9%	48%	38%	6%
People Skills	26%	46%	25%	3%
Personal Characteristics	18%	49%	26%	5%

Contribution of MPH program to development and/or strengthening of leadership and management skills: Students reported an impact of the program on the development of strategic thinking and planning skills (76%) (Table 3). However, for the remaining competencies a large number of students felt that there was only a little or no contribution at all (between 46% and 55%).

Table 3: Responses of all students related to the contributions of the MPH program for the development and strengthening of leadership and management competencies

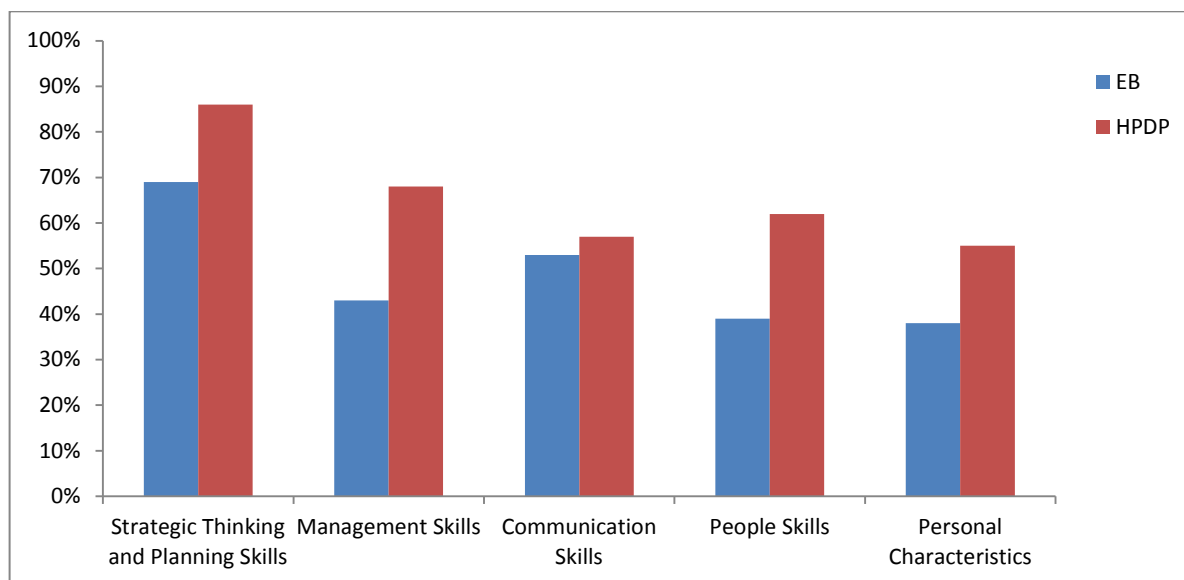
Competency	Very Much	Somewhat	A little	Not At All
Strategic Thinking and Planning Skills	30%	46%	16%	9%
Management Skills	22%	31%	15%	31%
Communication Skills	27%	28%	26%	20%
People Skills	22%	26%	29%	23%
Personal Characteristics	19%	25%	34%	21%

Contribution of MPH program to development and/or strengthening of leadership and management skills: Comparing the responses of students from each track with regards to the contribution of the program to the development and strengthening of leadership and management skills was informative (Table 4; Figure 1). With the exception of communication skills (57% compared to 53% reported that the program contributed very much or somewhat), there was a significant difference between responses from students from the Health Promotion and Disease Prevention (HPDP) Track compared to those from the Epidemiology/Biostatistics (EB) track. Among the HPDP students 88% reported a contribution to strengthening/development of strategic thinking and planning skills compared to 69% of the EB students. For management skills, these percentages are 67 v. 43, for people skills 62 v. 39 and for personal characteristics 56 v. 37. Figure 1 on the next page reflects the percentages reported above.

Table 4: Comparison of responses of students related to the contributions of the MPH program for the development and strengthening of leadership and management competencies

	Very Much		Somewhat		A Little		Not At All	
	EB	HPDP	EB	HPDP	EB	HPDP	EB	HPDP
Strategic Thinking and Planning Skills	36%	20%	33%	66%	16%	14%	0%	0%
Management Skills	23%	21%	20%	46%	18%	11%	2%	21%
Communication Skills	27%	26%	25%	31%	18%	37%	0%	6%
People Skills	18%	29%	21%	33%	24%	36%	0%	2%
Personal Characteristics	14%	27%	23%	29%	30%	41%	0%	4%

Figure 1: Comparison of responses of students related to the contributions of the MPH program for the development and strengthening of leadership and management competencies – Very Much or Some Contribution



Interviews/Focus group

During the impromptu focus group, the students commented on experiencing the program as too theoretical and lacking practical experiences such as a practicum or internship or the integration of practical exercises into the courses. A student referred to an assignment in one of the courses that did include a more practical component, but it was conducted at a level that was not applicable to their work. The students would have preferred using concrete scenarios from their work environment, which they would have found more useful. The students agreed that some of the courses had some practical value. They mentioned a communication course that focused on strategies to interact with media and the wide public. The students also appreciated the Health Promotion and Disease Prevention course, which included an assignment where students had to design a health promotion and disease prevention intervention. The students mentioned the lack of a Policy and Management course. The students also discussed the timing for choosing a thesis project, which, for this cohort, happened at different times in the course of the program. They indicated that if they had been able to do this sooner, they could have taken more advantage of choosing the appropriate projects for assignments during the courses taken in previous years. As a result of the more theoretical approach in this program, the students agreed that there had not been a specific focus on leadership and management competencies. Some areas of leadership and management competencies, such as communication skills,

were touched upon, but the students were also not clear on whether these types of competencies should be included in an MPH program. The researcher brought up the expectations for this program to address the need for graduate training for public health professionals already in leadership positions. The students indicated that a clearer picture of what the expectations were for someone with an MPH degree would be welcome. A significant portion of the discussion was spent on the topic of which leadership and management competencies would have been beneficial to them. Human resource management, coalition building and collaboration with partners were most frequently mentioned. A student mentioned the challenge of being put in charge of a team of health professionals resistant to change. Another mentioned the challenges of dealing with specialists who feel superior to hospital administration. Issues such as dealing with partners to get required information and challenges with hiring representative staff were also mentioned. The student noted that these leadership and management challenges were not addressed at all or not sufficiently in the MPH program and would have been beneficial. These are the types of subjects they would appreciate additional training in. However, one student, who had taken leadership training outside of this program cautioned against the wrong type of leadership training, mentioning that this particular training did not provide her with practical tips for using leadership competencies in the workplace. For instance, she mentioned one topic within the training focusing on motivating subordinates, but did not take away any concrete practices on how to motivate her staff. Another student mentioned having received some more practical training in a Teacher Training program she had completed previously. The students also indicated that because most of them have been in the public health field during the 4+ years of attaining their MPH degree, they are not able to exclusively attribute any improvements in skills, knowledge and performance to the MPH program. Rather, they cited on-the-job learning as a major contributor as well as being inspired by leadership in their work environment. The students also mentioned that even if some of the competencies might have been developed or strengthened during their participation in the program, they were not being given the tools to apply them or their job description did not include using them. Finally, the students indicated that the significant shortage of public health professionals, the lack of time and their heavy workloads prevent them from applying some of the competencies that they may have strengthened or developed. One student mentioned, for instance, that she did not have the time to work on policy development. Another described his/her job as “putting out fires” and, as a result, was not able to focus on system improvements.

During a semi-structured interview with a student, it was again emphasized that this program did not provide any formal training in leadership and management through the curriculum. The program, according to this student, did not provide any tools, practical tips or resources that would contribute to the development or strengthening of students' competencies in these areas. The student indicated that some of the faculty referred to the leadership role that these students have or would have in the future and, as a result, created some awareness among students about expectations. However, the students were not, according to this informant, in any concrete way prepared for this role. The student indicated, as was mentioned during the focus group, that the majority of learning took place on the job. The student mentioned that topics related to collaboration and group dynamics, i.e., how to handle political issues, how to interact with peers and management and how to interact with different audiences (communities, stakeholders, etc.), would have been very useful and would be appropriate for additional training. This matched with the topics indicated during the focus group as being relevant topics. The student also emphasized the role of the leadership of the program in encouraging and supporting the students during their education; for instance, by providing them with the needed resources to complete their thesis and giving the students the idea that they are valued for their role and contribution in public health in Suriname. At the same time, the student recognized the individual responsibility of students to think outside the box and apply their education and skills in their positions even though that might not be a direct expectation or requirement. Finally, this student discussed the importance of being a good communicator in leadership roles, adding that this topic would be useful for further training including the skill of presenting information to a variety of audiences, in order to effectively get across public health messages and interact with different groups. During a work-related interaction with another student, the researcher briefly discussed the program, with the student emphasizing the difficulty of completing the thesis considering his/her workload. In the course of another interview, a student indicated that the program added value to the medical degree previously obtained in that it added the public health perspective to practicing medicine. The student indicated that there were some skills strengthened in this program that had not been obtained through previous education. According to the student, this was mainly achieved through the health promotion courses that focused on communication and designing interventions to specific target audiences. The student indicated the lack of health economics or health law curriculum and expertise in the country and recommended those as topics for further training. The student specifically referred to the ability to do cost-effective analyses of different treatments to use in discussions with policy makers. This student also discussed a need for more focus on enforcing health related laws.

The Director of the MOH indicated that, while she had seen some improvement in leadership and management skills among some of the students in the program, she lamented the lack of the existence of a new cadre of motivated/engaged public health leaders in general. She had hoped that this program would have contributed more to the emergence of such a cadre. She acknowledged the benefits of the program for people in their individual positions, but recognized that additional leadership and management training might be needed to provide the additional competencies for students graduating from this MPH program. She also indicated that the curriculum might be adapted to incorporate more leadership and management skills for future cohorts.

DISCUSSION

Review of the MPH program inception document and the MPH program curriculum suggests that this program, although intended for public health leaders in positions identified in the Bitran and Associates report as being in need of graduate public health training, was not designed with a focus on developing or strengthening leadership and management competencies. This finding is reinforced by the analysis of the experiences of the students in this cohort. As indicated by the questionnaire results and the discussions the researcher had with students and others, it is clear that the MPH program lacked a specific focus on leadership and management competencies. These competencies were briefly touched upon in some of the courses included in the curriculum, but there was not a deliberate attempt to develop and/or strengthen them in the students of this first cohort. The program, with such a clearly defined target audience for the first cohort, could have been customized more to better prepare the students to emerge as public health leaders after completing the program. It appears that advantage was not taken of this opportunity to create a program similar to the ones offered by some schools in the US, with a specific focus on leadership and management skills or, at the very least, one that included more relevant courses.

Comparing the students from the Epidemiology/Biostatistics track with those from the Health Promotion and Disease Prevention track provided interesting findings with regards to the contribution of the program to development and strengthening of leadership and management skills. Students in both tracks appeared to have similar benefit from the program with regards to communication skills, but, for all other skills, the HPDP students reported a higher impact of the program. This may be attributable to the Health Promotion and Diseases Prevention track-specific courses, which appear to have included slightly more opportunities for focusing on leadership and management competencies. It also may be attributable to the fact that the students in the Health Promotion and Diseases Prevention track are employed in positions that allow for more application of these skills than those in the Epidemiology/Biostatistics track.

While the program may not have included a specific focus on leadership and management competencies, it has contributed to some improvement in skills, knowledge and performance of the students in this program in their positions as public health leaders. It has not, however, clearly established a new cadre of public health leaders. The consensus is that this program has helped students to perform their individual jobs better, but has not necessarily formed the public health

leadership needed in Suriname to implement the health sector reform. This is only partly attributable to the lack of leadership and management competencies gained in the program. Some of the students experienced as a major challenge the lack of qualified health professionals and the heavy workload that results from this shortage. This challenge will only be addressed by increasing the number of health professionals. Graduating future cohorts of the MPH program would begin to alleviate this barrier, but some of the challenges reported by the students might only be addressed by developing or strengthening specific leadership and management skills. As demonstrated through evaluation of several leadership and management programs leadership and management skills can be developed or strengthened. This does require a deliberate effort by the MPH program administration to include these competencies in the program. If this is not feasible, the MOH may need to provide additional training to the students in this program.

Strengths and Limitations

This study included an assessment of the impact of a specific MPH program on its graduates and, as a result, the findings are not generalizable to graduates from other MPH programs. However, the findings and recommendations resulting from this study may be valuable to the administration of the MPH program at the University of Suriname. The data and recommendations can be used by the MPH program administration to strengthen the program and by the Ministry of Health and the Bureau of Public Health to address the training needs of public health officials in Suriname. The findings will also be transferable to contexts such as other MPH programs, especially those set up primarily to provide public health professionals who are already in leadership positions, but lacking a public health degree, with the required graduate level training. These MPH programs could incorporate lessons learned from this research and adjust their curricula accordingly.

Another potential limitation of the study was the small sample size. A larger sample size for the first cohort might not have significantly changed the findings of this study, assuming that data saturation has been met with this sample size. Guest, Bunce and Johnson performed a literature review of guidelines for qualitative research in 2006. While this review did not provide a description of how saturation might be determined, nor practical guidelines for estimating sample sizes for purposively sampled interviews, their study posits that data saturation was achieved at twelve interviews. In addition, they indicated that even a sample of six interviews would have been sufficient to enable development of meaningful themes and useful interpretations. They also referred to consensus theory

developed by Romney, Batchelder and Weller, which states that small samples can be quite sufficient in providing complete and accurate information within a particular context²³. Another option for gathering more information would have been the formation of a second cohort. A comparison between two cohorts might have provided additional insights, as there might have been changes to the program based on the feedback and experiences from the first cohort. Unfortunately, there has only been one cohort at ADEKUS to date, so the option to include other students in the study was not available. However, a high number of the students in the program participated in the study and, as a result, this study likely captured the opinions of the entire cohort.

Also of some concern is that Suriname has a rather small population, and the cadre of public health professionals is very small. The researcher knew several of the graduates personally, which may have influenced the responses they provided. The researcher had intended to address this issue through use of an anonymous survey, but use of a web-based anonymous survey was not feasible due to time constraints. As a result, the responses of the research subjects to the questionnaire may have included a reporting bias, with students providing responses they might have thought were more acceptable. At the same time, the familiarity of the subjects with the researcher may also have influenced their willingness to participate and provide valuable information. In fact, one student specifically indicated she only participated in research done by foreigners if there was a benefit to Suriname. The researcher explained her personal and professional connections to Suriname, which convinced this student to participate. Subjects may not have taken the research as seriously if this relationship did not exist.

An additional concern was related to the fact that graduates have been employed in public health functions while enrolled in the MPH program. As a result, it may be difficult to attribute any improvements in performance to participation in the program. Other factors such as on-the-job training, increased familiarity with the program/project they are working, shifts in human resources, and life events may also have impacted their performance. The students also indicated this possibility during the follow-up discussions.

Finally, the MPH program has been challenged by a lack of continuity, lack of faculty and other resources, and, as a result, none of the students from the first cohort have been able to finalize their program. Also, a second cohort has not started at ADEKUS under the Institute of Graduate Studies and Research. A different MPH program was started at the Faculty of Medicine (FMEW) in October 2010.²⁴

It is too soon to evaluate whether this program, which utilizes an online method in collaboration with the Tulane University, School of Tropical Medicine, has a different impact on participating students. This program also does not offer a leadership and management concentration, but, similar to the IGSR MPH program, it does offer some relevant courses. These likely include leadership and management concepts such as Health Systems Management, Program Monitoring & Evaluation in International Health, Crisis & Emergency Communication and Essential Public Health Functions. See Appendix VI for the complete program listing. It might be a worthwhile follow-up study to compare the impact of the FMEW program with that of the program under study in order to assess which is the most cost-effective and most impactful program for addressing the capacity and training needs of the Suriname public health system.

RECOMMENDATIONS

The results of this study clearly indicate that the MPH program at the Anton de Kom University of Suriname has had a limited impact on the development and strengthening of leadership and management competencies of the students of the first cohort. Consequently, one recommendation is to offer additional leadership and management training to this group. For this training to have an effect on the leadership and management capacity of public health professionals already in leadership positions, it will be essential to do further in-depth research as to which topics within the broad field of leadership and management would be most appropriate for this group. While there are basic skills and knowledge any public health professional with an MPH degree should possess, these students are in different types of positions with differing demands on their leadership and management time. In order to provide the most rewarding experience for students and the Suriname public health system, a needs assessment should be performed before designing a leadership and management curriculum for these students. This study measured the students' capacity on a variety of basic leadership and management competencies, but it did not provide an in-depth analysis of which of these competencies are specifically required by each student for the performance of their individual jobs. It also did not determine the competencies in which they need additional training in order to achieve improvements in performance. It might not be an efficient use of time and other resources to offer these students a standard leadership and management course without taking into account the specific needs of each student. A follow up survey would be the appropriate next step in the process of providing the required leadership and management training to this group of public health professionals.

In addition to surveying the students about their needs for additional training, supervisors and leaders in these public health entities should be questioned about the competencies they require of these students. The competencies identified by these stakeholders should be included in the leadership and management training customized for the first cohort of the MPH program, as well as incorporated in the curriculum for future cohorts of the MPH program.

The researcher will share findings of this research with the Director of the MOH Suriname and will engage in further discussions about additional research and future opportunities to provide leadership and management training to the students from the first cohort. This training might be offered through institutions that the MOH already has a relationship with, such as the Caribbean Leadership Health

Institute (based at the University of the West Indies) or the Leadership and Management Initiative of the University of Washington (UW) International Training and Education Center for Health. UW distance education courses such as DGH #521: Global Program Management and Leadership provide an excellent opportunity for the students in this initial cohort to develop or strengthen valuable basic leadership and management competencies. However, as mentioned previously, the researcher recommends follow up assessment of specific leadership and management competencies needed by these students and the development of a customized course.

The researcher hopes to use her skills and experience to contribute to strengthening of public health capacity in Suriname by continuing to be involved in follow-up research and leadership and management training for public health professionals.

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APPENDICES

Appendix I: Suriname Demographic Information

Basic Data on Geography, Population, Economic Sectors and Forms of Government of the Republic of Suriname

Location	Northern South America, bordering the North Atlantic Ocean, between French Guiana, Brazil and Guyana	
Area and topography	163,820 sq km mostly rolling hills; narrow coastal plain with swamps	
Population (total)	524.143 (ABS, mid-year 2009)	
Population 0-19	198.028 (ABS, 2009)	
Population per sq. km	3.2	
Life expectancy	69.9 years (71.9/67.7 f/m)	
Climate	Tropical; moderated by trade winds; two rainy seasons; and two dry seasons	
Main towns	Paramaribo (capital), Nieuw-Nickerie, Albina,	
Ethnic groups	Hindustani – 27.4% Creole – 17.7% Maroon – 14.7% Javanese – 14.6% Mixed – 12.5%	Indigenous – 3.7% Chinese – 1.8% White – 0.8% Other – 0.5% Unknown – 6.6% (ABS, Census 2004)
Religions	Christian – 40.7% Hindu – 19.9% Islam – 13.5% Other – 10.2% Unknown – 15.7% (ABS, Census 2004)	
Languages	Dutch (official), Sranan Tongo (Surinamese), Sarnami (a dialect of Hindi), Javanese, Chinese, Portuguese, English and a number of Maroon and indigenous languages	
Form of government	Constitutional democracy	

Appendix II: Curriculum ADEKUS MPH Program

REQUIRED CORE COURSES GENERAL (60 ECTS)	
<ol style="list-style-type: none"> 1. Public Health principles, theory and practice (8 ECTS) 2. Principles of Epidemiology (8 ECTS) 3. Biostatistics in Public Health (6 ECTS) 4. Social and behavioral aspects of Public Health (6 ECTS) 5. Health Economics (5 ECTS) 6. Public Health Administration and Policy (5 ECTS) 7. Introduction to occupational and environmental Health (6 ECTS) 8. Public Health Ethics (5 ECTS) 9. Public Health and Globalization (5 ECTS) 10. Planning, implementation and evaluation of Public Health programs (6 ECTS) 	
Required courses per track (30 ECTS/5 ECTS per course)	
Epidemiology/Biostatistics	Health promotion & disease prevention
Advanced epidemiology	Principles and theories of health behavior
Infectious disease epidemiology	Planning and implementation of health promotion and disease prevention programs
Chronic disease epidemiology	Evaluation of health promotion and education programs
Advanced biostatistics	Health education in clinical setting
Public health surveillance	Health communication
Health informatics	Health behavior research: an anthropological approach
Electives (12 - 15 ECTS)	
<ul style="list-style-type: none"> - Cultural competence in public health - Applied Epidemiology - Proposal Writing - Family Health: a life-cycle approach - Public Health Seminar - Substance Abuse Prevention - Control and prevention of HIV, malaria & TB 	<ul style="list-style-type: none"> - Stress Management - Aging - Injury & Violence - Consumer Health - Mental Health - International nutrition - Maternal & child health in developing countries - Health and human rights - Clinical Epidemiology
Thesis (15 - 18 ECTS)	

Appendix III: Objectives Relevant Courses ADEKUS MPH Program

Course: Public Health Administration and Policy

Objectives: By the conclusion of this course, students will be able to understand and critically discuss key concepts relating to:

1. Understanding of the Public Health Systems approach
2. Identifying scope and goals of national, regional and international public health organizations/institutions;
3. Administration of public health programs and Ministries of Health.
4. Management and monitoring of public health programs and projects.
5. Leadership functions and concepts related to Public Health
6. How public health policy is being developed and implemented on the national, regional and international level.
7. Comprehension of health policy and policy analysis
8. Analysis of contemporary health and business policy issues
9. Understanding important sources of information for health services

Course: Planning, Implementation and Evaluation of Public Health Programs

Objectives: Students, having completed this course, will be expected to be able to:

1. Elicit input from those who will affect or be affected by the program.
2. Develop plans for promoting collaborative efforts among health agencies and organizations with mutual interests.
3. Use research results when planning programs.
4. Formulate appropriate and measurable program objectives.
5. Design strategies, interventions and programs consistent with specified objectives.
6. Design developmentally appropriate interventions
7. Select appropriate strategies and methods to meet objectives.
8. Analyze technologies, methods and media for their acceptability to diverse groups.
9. Determine the availability of information and resources needed to implement health promotion programs for a given audience.
10. Incorporate demographically and culturally sensitive techniques when promoting programs.
11. Implement intervention strategies to facilitate health related change.
12. Develop plans for evaluation and efficacy research.
13. Evaluate research designs, methods and findings presented in the literature.
14. Use data collection and other research methods appropriate for measuring stated objectives.
15. Implement appropriate qualitative and quantitative evaluation techniques
16. Obtain acceptance and support for programs.

Course: Public Health Principles, Theory and Practice

Objectives: By the conclusion of this course, students will be able to understand and critically discuss key concepts relating to:

1. The mission and core functions of public health and the importance of history for understanding contemporary and future public health issues;
2. Define and Understand Public healthcare classification and systems.
3. The determinants of health status in Suriname, the Caribbean, and in the world.
4. The major definitions of health promotion/disease prevention/health protection.
5. The basic elements of theories of behavior change.
6. Describe the importance of culture, class, and gender on
 - (a) Objective measures of health,
 - (b) Perceptions of health and illness, and
 - (c) Access to health services.
7. Understand issues related Public health national and international law.
8. Examine both quantitative and qualitative approaches for assessing health status and perceptions of health in non-Western populations around the world.
9. Identify the key players in international public health.
10. Discuss the main public health issues in the developing world.
11. Discuss future strategies to improve health in Suriname.

Course: Social & Behavioral Aspects of Public Health

Objectives: By the conclusion of this course, students will be able to understand and critically discuss key concepts relating to:

- Social sciences theory
- Factors influencing health disparities
- Policies and strategies for addressing health disparities
- Health behavior theory
- Theoretical foundation of health promotion and disease prevention programs

Course: Public Health and Globalization

Objectives: Students who successfully complete this course will have developed the following core competencies:

1. Understanding that globalization is a multi-faceted phenomenon posing challenges on health risks and social protection in health
2. Knowledge about the global health agenda and agreements, health diplomacy, global governance and international organizations
3. Skills to critical analyze cases of health policies and health care models in the context of globalization's challenges on health.

Appendix IV: Template Questionnaire - Leadership/Management Competencies Assessment

This is a questionnaire sent to all students of the first cohort of the MPH program at the University of Suriname. The results of this questionnaire will help inform whether, by participating in this program, students have developed or strengthened the recommended leadership and management competencies to improve their performance in positions of public health leadership in Suriname. Please complete this questionnaire by placing an X in the appropriate box next to the competency listed. You may return this questionnaire (Word document) via email to me at nicole66@uw.edu. **Please note that your responses will not be shared with anyone.**

Part 1: In your opinion, how important are the following skills for effective leadership and management in public health leadership positions? Please add additional skills if missing.

Competency	Very Important	Important	Useful But Not Essential	Of Minimal Importance
Strategic Thinking and Planning Skills				
Ability to think critically to analyze a problem				
Ability to develop a coherent plan for a project or program				
Ability to set priorities for program goals				
Ability to think boldly and come up with "out of the box" ideas				
Willingness to take risks in order to be an "agent of change"				
Management Skills				
Ability to organize the logistics to implement a program				
Ability to develop a budget and defend it				
Ability to select effective employees and handle HR issues				
Ability to prioritize concerns for your organization in contrast to personal goals and needs				
Communication Skills				
Ability to write clearly and concisely				
Ability to speak clearly and be easily understood				
Ability to define audience and prepare presentations relevant to the audience				
Ability to speak in a logical and persuasive manner				
Ability to communicate with the media and other external groups				
People Skills				
Being a good listener				
Ability to maintain confidentiality where appropriate				
Ability to establish rapport with your colleagues				
Ability to develop consensus among group or team				
Ability to mediate disagreements among your staff or colleagues				
Ability to mentor and coach others				
Personal Characteristics				
Personal Integrity				
Reliability and on-time completion of tasks				
Consistency				
Transparency and openness				
Being a self-starter who takes initiative				
Being innovative				
Charisma				

Part 2: How would you rate your personal leadership and management skills? Please add additional skills if missing.

Competency	Excellent	Strong	Moderate	Weak
Strategic Thinking and Planning Skills				
Ability to think critically to analyze a problem				
Ability to develop a coherent plan for a project or program				
Ability to set priorities for program goals				
Ability to think boldly and come up with "out of the box" ideas				
Willingness to take risks in order to be an "agent of change"				
Management Skills				
Ability to organize the logistics to implement a program				
Ability to develop a budget and defend it				
Ability to select effective employees and handle human resource issues				
Ability to prioritize concerns for your organization in contrast to personal goals and needs				
Communication Skills				
Ability to write clearly and concisely				
Ability to speak clearly and be easily understood				
Ability to define audience and prepare presentations relevant to the audience				
Ability to speak in a logical and persuasive manner				
Ability to communicate with the media and other external groups				
People Skills				
Being a good listener				
Ability to maintain confidentiality where appropriate				
Ability to establish rapport with your colleagues				
Ability to develop consensus among group or team				
Ability to mediate disagreements among your staff or colleagues				
Ability to mentor and coach others				
Personal Characteristics				
Personal Integrity				
Reliability and on-time completion of tasks				
Consistency				
Transparency and openness				
Being a self-starter who takes initiative				
Being innovative				
Charisma				

Part 3: Did the MPH program contribute to the development and/or strengthening of these skills? Please add additional skills if missing.

Competency	Very Much	Somewhat	A Little	Not At All
Strategic Thinking and Planning Skills				
Ability to think critically to analyze a problem				
Ability to develop a coherent plan for a project or program				
Ability to set priorities for program goals				
Ability to think boldly and come up with “out of the box” ideas				
Willingness to take risks in order to be an “agent of change”				
Management Skills				
Ability to organize the logistics to implement a program				
Ability to develop a budget and defend it				
Ability to select effective employees and handle human resource issues				
Ability to prioritize concerns for your organization in contrast to personal goals and needs				
Communication Skills				
Ability to write clearly and concisely				
Ability to speak clearly and be easily understood				
Ability to define audience and prepare presentations relevant to the audience				
Ability to speak in a logical and persuasive manner				
Ability to communicate with the media and other external groups				
People Skills				
Being a good listener				
Ability to maintain confidentiality where appropriate				
Ability to establish rapport with your colleagues				
Ability to develop consensus among group or team				
Ability to mediate disagreements among your staff or colleagues				
Ability to mentor and coach others				
Personal Characteristics				
Personal Integrity				
Reliability and on-time completion of tasks				
Consistency				
Transparency and openness				
Being a self-starter who takes initiative				
Being innovative				
Charisma				

Appendix V: Results Questionnaire

Table 5: Importance of leadership and management competencies for public health professionals in leadership positions.

	Very Important	Important	Useful But Not Essential	Of Minimal Importance
Strategic Thinking and Planning Skills				
Ability to think critically to analyze a problem	72%	28%	0%	0%
Ability to develop a coherent plan for a project or program	61%	39%	0%	0%
Ability to set priorities for program goals	83%	11%	0%	0%
Ability to think boldly and come up with “out of the box” ideas	56%	28%	17%	0%
Willingness to take risks in order to be an “agent of change”	61%	39%	0%	0%
Average score	67%	29%	3%	0%
Management Skills				
Ability to organize the logistics to implement a program	50%	33%	17%	0%
Ability to develop a budget and defend it	44%	50%	6%	0%
Ability to select effective employees and handle HR issues	33%	50%	17%	0%
Ability to prioritize concerns for your organization in contrast to personal goals and needs	39%	44%	17%	0%
Average score	42%	44%	14%	0%
Communication Skills				
Ability to write clearly and concisely	61%	33%	6%	0%
Ability to speak clearly and be easily understood	72%	28%	0%	0%
Ability to define audience and prepare presentations relevant to the audience	67%	28%	6%	0%
Ability to speak in a logical and persuasive manner	83%	17%	0%	0%
Ability to communicate with the media and other external groups	56%	39%	6%	0%
Average score	68%	29%	3%	0%

People Skills	Very Important	Important	Useful But Not Essential	Of Minimal Importance
Being a good listener	72%	28%	0%	0%
Ability to maintain confidentiality where appropriate	83%	17%	0%	0%
Ability to establish rapport with your colleagues	56%	44%	0%	0%
Ability to develop consensus among group or team	56%	44%	0%	0%
Ability to mediate disagreements among your staff or colleagues	44%	50%	6%	0%
Ability to mentor and coach others	50%	44%	6%	0%
Average score	60%	38%	2%	0%
Personal Characteristics	Very Important	Important	Useful But Not Essential	Of Minimal Importance
Personal Integrity	72%	28%	0%	0%
Reliability and on-time completion of tasks	61%	39%	0%	0%
Consistency	72%	28%	0%	0%
Transparency and openness	56%	44%	0%	0%
Being a self-starter who takes initiative	50%	50%	0%	0%
Being innovative	50%	50%	0%	0%
Charisma	39%	44%	17%	0%
Average score	57%	40%	2%	0%

Table 6: Students' self-assessment of their leadership and management competencies.

Strategic Thinking and Planning Skills	Excellent	Strong	Moderate	Weak
Ability to think critically to analyze a problem	17%	56%	28%	0%
Ability to develop a coherent plan for a project or program	6%	50%	44%	0%
Ability to set priorities for program goals	11%	50%	39%	0%
Ability to think boldly and come up with "out of the box" ideas	22%	22%	50%	0%
Willingness to take risks in order to be an "agent of change"	17%	33%	44%	0%
Average Score	14%	42%	41%	0%
Management Skills	Excellent	Strong	Moderate	Weak
Ability to organize the logistics to implement a program	17%	50%	22%	11%
Ability to develop a budget and defend it	6%	44%	39%	11%
Ability to select effective employees and handle human resource issues *	11%	28%	28%	17%
Ability to prioritize concerns for your organization in contrast to personal goals and needs *	28%	50%	6%	6%
Average Score	15%	43%	24%	11%
Communication Skills	Excellent	Strong	Moderate	Weak
Ability to write clearly and concisely	6%	56%	33%	6%
Ability to speak clearly and be easily understood	11%	56%	28%	6%
Ability to define audience and prepare presentations relevant to the audience	11%	56%	28%	6%
Ability to speak in a logical and persuasive manner	6%	56%	33%	6%
Ability to communicate with the media and other external groups	11%	17%	67%	6%
Average Score	9%	48%	38%	6%
People Skills	Excellent	Strong	Moderate	Weak

Being a good listener	28%	44%	28%	0%
Ability to maintain confidentiality where appropriate	67%	28%	6%	0%
Ability to establish rapport with your colleagues	22%	61%	11%	6%
Ability to develop consensus among group or team	17%	61%	22%	0%
Ability to mediate disagreements among your staff or colleagues	6%	44%	44%	6%
Ability to mentor and coach others	17%	39%	39%	6%
Average Score	26%	46%	25%	3%
Personal Characteristics	Excellent	Strong	Moderate	Weak
Personal Integrity	33%	50%	17%	0%
Reliability and on-time completion of tasks	11%	44%	44%	0%
Consistency	11%	72%	17%	0%
Transparency and openness	33%	50%	17%	0%
Being a self-starter who takes initiative	17%	44%	28%	11%
Being innovative	22%	33%	33%	11%
Charisma	0%	50%	28%	11%
Average Score	18%	49%	26%	5%

Table 7: Contribution of MPH program to development or strengthening of leadership and management competencies.

Strategic Thinking and Planning Skills	Very Much	Somewhat	A Little	Not At All
Ability to think critically to analyze a problem	39%	56%	6%	0%
Ability to develop a coherent plan for a project or program	44%	56%	0%	0%
Ability to set priorities for program goals	44%	33%	22%	0%
Ability to think boldly and come up with “out of the box” ideas	11%	39%	22%	28%
Willingness to take risks in order to be an “agent of change”	11%	44%	28%	17%
Average Score	30%	46%	16%	9%
Management Skills	Very Much	Somewhat	A Little	Not At All
Ability to organize the logistics to implement a program	39%	39%	11%	11%
Ability to develop a budget and defend it	17%	39%	11%	33%
Ability to select effective employees and handle human resource issues	17%	22%	11%	50%
Ability to prioritize concerns for your organization in contrast to personal goals and needs	17%	22%	28%	28%
Average Score	22%	31%	15%	31%
Communication Skills	Very Much	Somewhat	A Little	Not At All
Ability to write clearly and concisely	44%	33%	17%	6%
Ability to speak clearly and be easily understood	28%	33%	22%	17%
Ability to define audience and prepare presentations relevant to the audience	28%	22%	28%	22%
Ability to speak in a logical and persuasive manner	22%	22%	28%	28%
Ability to communicate with the media and other external groups	11%	28%	33%	28%
Average Score	27%	28%	26%	20%
People Skills	Very Much	Somewhat	A Little	Not At All

Being a good listener	17%	39%	17%	28%
Ability to maintain confidentiality where appropriate	33%	39%	11%	17%
Ability to establish rapport with your colleagues	28%	28%	28%	17%
Ability to develop consensus among group or team	33%	17%	33%	17%
Ability to mediate disagreements among your staff or colleagues	11%	11%	50%	28%
Ability to mentor and coach others	11%	22%	33%	33%
Average Score	22%	26%	29%	23%
Personal Characteristics	Very Much	Somewhat	A Little	Not At All
Personal Integrity	17%	33%	33%	17%
Reliability and on-time completion of tasks	22%	39%	28%	11%
Consistency	28%	33%	22%	17%
Transparency and openness	28%	17%	39%	17%
Being a self-starter who takes initiative	17%	22%	39%	22%
Being innovative	11%	17%	50%	22%
Charisma	11%	17%	28%	44%
Average Score	19%	25%	34%	21%

Appendix VI: FMEW MPH Program Course Listing



Anton de Kom University of Suriname
Faculty of Medical Sciences
Master of Public Health (Oct 2010-Aug 2012)



Programme Course Listing

Semester 1 (Nov 1, 2010 – Feb 25, 2011):

1. Introduction to Epidemiology – J. Lybarger (3 credits)
2. Introduction to Biostatistics – A. Shankar (3 credits)
3. Health Systems Management – R.Newman (3 credits)
4. Social and Behavioral Aspects of Global Health – K.Schoellmann (3 credits)

Semester 2 (March 21 – July 15, 2011):

5. Program Monitoring & Evaluation in International Health – J.Keating (3 credits)
6. Intermediate Epidemiology – J.Lybarger (3 credits)
7. Biological Basis of Disease – M.Lichtveld, J.Adhin, S.Vreden, S. van Dijk, R.Bipat, E.Irving (3 credits)
8. Environmental Health – M.Lichtveld (3 credits)

Semester 3: (Oct 31, 2011 – March 2, 2012)

9. Public Health in Global Context: From Planning to Disaster Management – J.Clinton (3 credits)
10. Research Methods in Epidemiology – J.Lybarger (3 credits)
11. Intermediate Biostatistics – A.Shankar (3 credit)

Semester 4: (March 26 – July 20, 2012)

12. Crisis & Emergency Communication – B.Reynolds (3 credits)
13. Advanced Topics in Public Health – K.Miner (3credits)
14. Public Health Law – K.Orie (3 credits)

Fundamentals of Public Health Practice (all semesters) – 3 credits

- Public Health concepts and history – W.Bakker (semester 1)
- Essential Public Health Functions – W.Bakker (semester 1)
- Vital Statistics Suriname – M.Mohan-Algoe (semester 2)
- Introduction to Occupational Health – J. van Charante (semester 2)
- Information on Ethical Board Review Suriname - D. Stijnberg (semester 2)
- Computer skills (MS Word, MS Powerpoint, MS Excel) (semester 1, 3)
- Practicum Orientation Session (semester 2)
- Scientific Writing Seminar – D. Mans (semester 3)
- The relation between Public Health & Law – C. Dijksteel (semester 3)
- ***Thesis Presentations (to be planned at the end of semester 4)***

Total number of credits: 45

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